Impaired Health
ITS CAUSE AND CURE

A Repudiation of the Conventional Treatment of Disease

BY

J. H. TILDEN, M.D.

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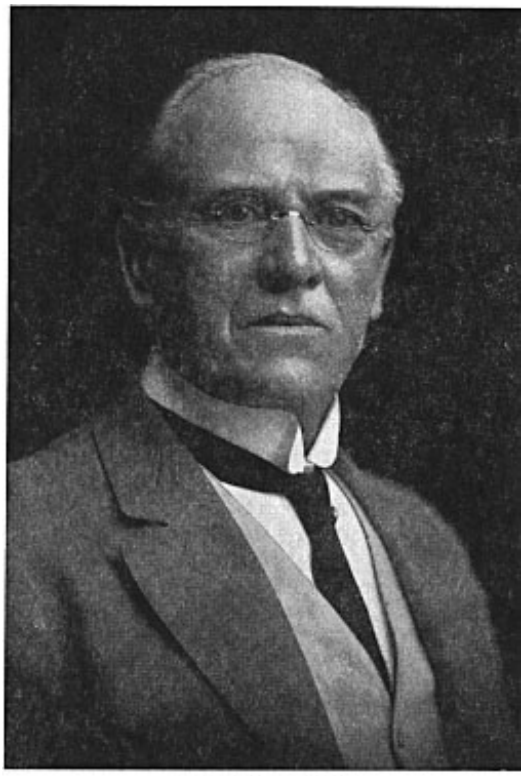
VOLUME ONE

I have found no better definition for disease than the following: Disease is the morbid process considered in its entire evolution from its initial cause to its final consequence; affection is a morbid process considered in its actual manifestations, apart from its cause.

J. H. TILDEN, M.D.



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THIRD EDITION

Publisher's Foreword

The reprinting of this Volume and Volume II has been made possible through a former patient of Dr. Tilden's. This grateful patient (now in his mid-eighties) wishes to leave these teachings of Dr. Tilden's to humanity, We are grateful for the trust bestowed upon us to distribute these volumes.

The text in Volume I has been completely reset and rebound. It is otherwise unchanged in anyway. It now matches the third edition of Volume 11 (revised in 1938 by Dr. J. H. Tilden before his death in 1940).

Health Research,

Mokelumne Hill, California

January 15, 1960

Publisher's Preface

Dr. John H. Tilden, the son of a physician, was born in Van Burenburg, Illinois, on January 21, 1851. He received his medical education at the Eclectic Medical Institute, Cincinnati, Ohio, a medical school founded in 1830 as a protest against the allopathic and homeopathic schools of medicine of that time. He was graduated in 1872, with the degree of doctor of medicine. From the best information we can obtain, his father was a Dr. Joseph G. Tilden, who came from Vermont in 1837 to Kentucky, in which State he married.

Dr. John H. Tilden started the practice of medicine at Nokomis, Illinois, then for a year at St. Louis, Missouri, and then at Litchfield, Illinois, until 1890, when he moved to Denver, Colorado. In Denver he located in the downtown business section, in an office with other doctors. Later he established a sanitarium in an outer section of the city. This sanitarium and school he conducted until 1924, when he sold the Institution, for about half of what he had plowed back into its development, to a Dr. Arthur Voss, of Cincinnati, Ohio, intending to devote himself to writing and lecturing. However, he soon became discontented without his school and after a period he bought two residences on Pennsylvania Avenue, in Denver, united them into one and opened a new sanitarium and school, having to borrow from a friend a part of the money with which to make the purchases. This probably was in 1926. This school continued until the Doctor's death, on September 1, 1940.

It was during the early years of his practice in Illinois, that Dr. Tilden began to question the use of medicine to cure illness. His extensive reading, especially of medical studies from European medical schools, and his own thinking, led him to the conclusion that there should be some way to live so as not to build disease, and in this period his thoughts on toxemia began to formulate and materially develop. From the beginning of his practice in Denver, the Doctor used no medicine but practiced his theory of clearing the body of toxic poison and then allowing nature to make the cure, teaching his patients how to live so as not to create a toxic condition and to retain a healthy body free of disease. An uncompromising realist and a strict disciplinarian, the Doctor wasted no time on those who would not relinquish degenerating habits, but to his patients and disciples he was both friend and mentor.

In 1900 he began the publication of a monthly magazine called "The Stuffed Club," which continued until 1915, when he changed the name to "The Philosophy of Health," and in 1926 the name was changed to "Health Review and Critique." His writing for his publication was almost entirely done in the early morning hours, from three until seven. The purpose of the publication was not to make money but to spread knowledge of the Doctor's teachings. In time it attained a wide circulation, not only in this country but also abroad, even in Australia, but it never produced revenue, for the Doctor refused to make it an advertising medium, as often urged to do by advertising firms. As his death revealed, after sixty-eight years of practice, the Doctor had accumulated only an exceedingly modest estate. His life was pre-eminently one of self-sacrifice and of devotion to service, searching after truth, with an indomitable will and with an intense fortitude to adhere to the truth when discovered. In his day the Doctor's thoughts received no support from the established medical profession but brought the strongest of opposition and condemnation.

Frederic N. Gilbert

Preface

In writing a book, the author should have an object. it has been my endeavor to make my object so plain in the first volume that he who runs may read it. In spite of this fact, however, I have resolved to say a few words regarding what I wish to accomplish, hoping in doing so that I may induce someone, who otherwise might not read beyond the preface, to read at least the first volume.

Certainly my object cannot be to give to the public the only semi-professional book on the subject of health, thereby filling a long-felt want; for there are hundreds preceding.

My object would not bespeak rational judgment if it should be to make money; for my reading public is too small to make so selfish a desire feasible. I admit that I should not despise any contingent that would sweep the sales into such a grand total as to put thousands of old Croesus' dollars on the credit side of my bank account; for I do not believe I should have any trouble in finding many more ways than I have of using them in choking, strangling, and even killing a "bit" of the withering and blighting influences of medical superstition on many of the human race who are now, and will be, physically and mentally doomed by it. I shall not be disappointed in this matter; for well I know that King Croesus has no dollars to be spent in lessening his power and fame, which are founded on error, ignorance, selfishness, and superstition. He has billions with which to build institutions for educating mankind into, and perpetuating, mental slavery; but not a sou--not even a widow's mite--to free a single thought that might break the spell of superstition on mankind, and start an influence that would bring rationalism--a mental breadth and understanding--which could see the absurdity of an ethics and religion that breed disease and wars as legitimate offspring. The most benighted henchmen of our present system talk most of cures and freedom; but the only cures they know are habit and disease-building, and the only freedom they ask for in their prayers is to have their God perpetuate their superstitions.

My object is to aid those who care to have a rational understanding--those who would have more than a slave's or a child's conception--of cause and effect as applied to disease and cure; not only on matters of health, but to aid a little in gaining an inspiration point for an understanding of nature which must be the road to Good--to an understanding of God!

It is painful to see people, who appear to have reasoning power, babbling and reaching for prescriptions and formulas, as a spoiled child reaches for the moon, and who are as disappointed in not getting the cure-alls as the child is when not served to the moon. It is not mind-stupefying formulas that man needs; he needs knowledge of fundamental principles--then he can make his own formulas. The world has been overrun by all kinds of cures and curers--charmers, exorcists, enchanters, diviners, conjurers, manipulators of fetiches, magicians, and medicine-men. And how far advanced is modern medical science today? Have we not doctors of thaumaturgy--sleight-of-hand--doing wonderful things in transforming "fallen mankind" into immunized beings who are no longer subject to the laws of nature, by vaccination, inoculation, and serum injections; are not our drug stores full of magical remedies; and have we not days set apart for invoking divine guidance? Are we not heathens in our thinking? Are we not barbarians in our actions? Are we not Antichrist in practice?

The child-mind cannot understand why it cannot be told in a few words just how to get well and stay well; how to be saved from its sins, and continue saved in spite of its sinning; for it cannot conceive other than that disease and sin must be entities which can be overpowered by an antidote and forever done away with. The people are not so much to blame for such childish beliefs, when we see a great and supposed-to-be wise profession teaching specific causes, specific immunities and cures-when we see a commercialized surgical profession cutting out effects without; knowledge or even thought of cause, and having the honors of knighthood conferred on them by a public that is more benighted, if that be possible.

Neither profession nor people appear to have the slightest conception that they might, with a

small mental effort, secure a few fundamental principles that would lead them out of the wilderness of haphazard and make them safely their own physicians. First of all, however, they must learn that the really good physician prevents disease; that he cannot cure anything. Because of a lack of this knowledge, sickness has become more natural, or more to be expected, than health. Sickness is looked upon by the people, the state, the nation, as inevitable; and precautions, immunizations, and preventions are in keeping with these false ideas. The reverse is true. If we live for health, and seek health instead of disease, we find it. Post-mortems, vivisections, and laboratory investigations are all in the line of looking for disease-and we have found disease galore. If we look for health, it can be found.

Is there any excuse for all the sickness, and for the supposed scientific technique that is formulated for doctors and nurses to carry out in such heathenish, grandiose manner as we see it in grandly conducted hospitals and sanitariums as well as in private life? None whatever. This is an instance of reversion of the natural order--where the doctors, nurses, and institutions are the cause, and the patients and patrons of the institutions are the effect. Little do the public and those who run these supposed-to-be necessary institutions know that each and every such plant is a college for educating the people into the sick habit. Every graduate of one of these institutions goes out an advocate and teacher of the fallacy.

These statements will fall, for the most part, on stony understandings, and will fail to take root immediately and grow; but they are as true as the eternal verities, and will some day be common knowledge. Meantime the horrors of the sick-chamber and surgical rack will continue.

As a refutation of the necessity for all the so-called remedies carried into the sick-room--surgery, drugs, prescriptions, vaccination, serum injections; faith, suggestion, and mind cures; the laying on of hands, and every other device known and used as remedial--I offer my simple methods; namely, that of taking nothing into the sick-room, and of doing nothing that can be likened to the modern conception of healing. My methods are devoid of any suggestion of mysticism or supernaturalism, and are not above the understanding of the most commonplace mind, unless its simplicity appears uncanny to distorted understandings.

I go into the sick-room without a so-called remedy, and, what is best of all, without the need of one. There is no faith cure offered; there is no hocuspocus, legerdemain, nor play on the superstition or credulity of the patient. There is nothing resorted to which may give the impression that unusual or supernatural power is to be used.

After getting the history of the case, I explain how the patient happened to get sick, how his life differs from nature's requirements, and how he may get well. No drugs, no manipulations--nothing but keep still and don't build disease by foolish acts of mind or body!

When cause is known, the remedy will be self-suggested to the most commonplace mind. This being as fundamental as truth always is, it has been my endeavor, in writing this book, to lead the reader's mind into such an understanding of the human body that the cause of sickness will be understood and the cure become a natural sequence.

It has been my endeavor to show that matter, in its transformation into being, is attended throughout life by two handmaids; namely, unorganized ferment--enzyme-and organized ferment--the bacterium or microbe.

Both of these ferments are necessary. One, the enzyme, presides over the physiological processes, and the other, the bacteria, presides over the pathological processes. Both work together. For instance, in an inflammation or a wound, the building or reparative material is brought to the diseased process by the circulation, and fitted for being molded into cells, and the cells into tissue, by enzymes; the waste products are liquefied and fitted for discharge by the bacteria. With a suspension of either of these processes, reparation cannot be made. Digestion, assimilation--nutrition--must be attended by the two ferments. A variation of either disturbs and perverts health, and this is what we call disease.

Disease is health thrown out of an ideal state by the thousand-and-one environmental (exogenous) and internal (endogenous) influences.

I have tried to, explain all these influences, their causes and their effects. If I have succeeded as I hope, the reader will be put in possession of a self-protecting knowledge that will make sickness and inefficiency unnecessary. At least I have tried to make health and its sequels optional with an intelligent people who are favored with an opportunity to read this book**--Impaired Health--Its Cause and Cure.**

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INTRODUCTION

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Introduction

In the olden times the wiseacres--the teachers, the professors, the learned men of the healing profession, priests, and lawyers--declared that disease was a punishment sent upon man by his God for being wicked. Epidemics were sent by God to kill many people because they had incurred His divine wrath. The cure, of course, was logical; namely, appease the wrath of God. And, as divine wrath required human sacrifice, the doctors, priests, and their allies put the people to the rack. If they had not performed their duty in this respect, they would have become "participes criminis," and in turn would have brought punishment upon themselves.

It is unnecessary to enter very largely into a description of the therapeutics (the cures) of that day. Those who would have a minute history of the cause and cure of disease in those days should read the sacred and secular histories of that time. And those who would have the whole truth should not neglect reading history on down to the "History of Celebrated Crimes" by Alexandre Dumas. Then, while engaged in that study, it would be well to follow it down to the anointed of today, and behold the greatest of all great wars--a logical sequence of all that has gone before. In it, behold a drastic and most heroic treatment of almost the entire world for the commonest and least understood diseases of mankind--namely, selfishness, ignorance, stupidity, and incorrigibility!

Disease is not an entity, the nature and cause of which can be summed up as is done in the profession's "blue book," known as "Medical Nomenclature," which starts with "abasia" (lost power to stand) and "adenoids," and ends with "yellow fever" and "yellow jaundice." No name ever fits a disease; for cause is multiple--many-factored--and the causes and factors vary in quantity and quality.

The commonest cause of disease is, first, last, and all the time, overindulgence of appetites and passions. In the primitive age, man was protected by the simple life. Instinct and absence of imagination controlled him sensually. As social life or civilization advanced, morality evolved. Up to this time man had been unmoral. The ABC of morality is self-consciousness; and the first act, after selfconsciousness is born, is to clothe nakedness. It is obvious to the discerning that sexuality is the rock on which morality is based, and alimentation is the rock on which life, health, and body development are built.

Fundamentally, then, the life of man rests on sexuality and nutrition: he must be begotten, and then he must be fed.

In the subconscious state these processes are carried on by the cosmic urge--the subtle, developmental energies of nature. We see the birds in the springtime mating, nesting, and raising young. If the nest is destroyed with the eggs, another nest is built and other eggs are laid; with nothing to account for the whole procedure except want, or the developmental urge. It is long after this before ratiocination comes on the psychological stage.

Man has the cosmic urge manifesting in want of food and want of family. Around and about these fundamental wants springs up everything in man's life. The manner in which he satisfies these wants determines his moral status, and his moral status marks the degree of health and the length of life which he enjoys. The world is taught a morality separated and apart from health and its fundamentals, but it is stupidly idealistic and devoid of sense and reason. When we know enough, we shall be able to see that all our physical and mental woes are brought upon us because of such false reasoning. World-wars are built out of such morality.

At the birth of man's freedom from the slavery of the subconscious rule, he interprets his freedom as license, and his conduct is governed by brutal selfishness; he glories in satisfying

appetite and passion, and to the protesting voice his answers are sneers and curses. The first check that comes to him in the drunken revel with which he celebrates his freedom to eat, drink, and be merry, is religion. Religion brings its appeal to his moral, esthetical, and intellectual nature before these potentialities are evolved. Instead of appealing to the physical--the base on which these higher qualities depend--and preparing this base for the evolution of the ethical, esthetical, moral, and religious, the whip of fear has been held over him. He has been taught that he must love God--and that, too, without anything except a grotesque knowledge of the Deity; he has been forced to acknowledge a love he could not feel, and to worship without desire; for, when man worships intelligently, he must know the being worshiped, and this being must have qualities of character that draw respect, love, and worship. Respect is founded on knowledge; love springs up when the object possesses lovable qualities; worship comes when the object loved proves to be the embodiment of perfection, as we understand it.

Man has been forced to confess respect, love, and worship for a formulary morality, creed, and God, under penalty of future punishment, or, what is worse, social ostracism. This coercion made a slave of him, and he has secretly rebelled. 'This rebellion has grown a hypocrisy that may be described as an immorality dolled up to give a presentable appearance. A religion and morality by title only is a monstrosity without sense or reason--a thing professing one thing and living another. Man is suffering in body and mind from this fallacious education, and he will get rid of it as soon as he awakens to a knowledge of his horrible predicament. Man is certainly suffering from respectable false teachings which have made him mentally blind.

Is nature, by this World War, endeavoring to wake man out of his moral lethargy? If it kills forever our slavery to a morality that builds hypocrisy as its principal asset, impoverishing the earth and killing off the flower of our manhood may be as small a price as can be asked for so great a service; but would it not be the irony of hen if our reconstruction would be on the same old ethical conception? This will certainly be our fate, unless autocracy, imperialism, Caesars, kings, presidents, and all classes of rulers who have a God as a silent partner, are put out of business.

Man has made the mistake of attempting to bridge the distance from aboriginal ignorance to a state of intelligence and moral responsibility that can never be realized until appetite and passion are controlled through intellect, and not through sentiment, emotionalism, or fear of God.

Disease is ignorance--the greatest foe to Truth, to Nature, to Nature's God, to the Universe.

Ignorance per se is not dangerous to truth. Indeed, truth would have no trouble with ignorance, if it were not for the retinue of lieutenants and attendants who hover about this great mass of intellectual stone--of undifferentiated mental protoplasm--which selfish jugglers--moral perverts-convert into a veritable King Juggernaut.

Chief among the hordes of advisers on the staff of King Ignorance is the commander-in-chief, Knave, who is not ignorant, but who finds rebellion against truth more to his liking, and to serve his purpose best. It is he who upholds "law and order," the better to fleece the public. He is in the forefront of every reform. His culminating influence is always faced opposite the direction in which he appears to be going. He is the eyes, ears, and tongue of King Ignorance. His selfishness, vanity, jealousy, and dishonesty prejudice Ignorance against Truth to such a degree that the great king of the nether world remains hopelessly blind and deaf. Surely there is no blindness so blind as the blindness that will not see, and deafness so deaf as the deafness that will not hear.

Now that we have defined, in as concise a statement as we can, the reason why truth is so slow in delivering humanity out of the bondage of ignorance, we shall try to show why appetite, passion, and license are the slogans that win and keep the majority on the side of ignorance.

As stated before, the first great cause of disease, as interpreted by selfish ignorance, was an

offended Deity who sent disease as a punishment. The cure had to be procured through an intermediary who had power, through grace, to change the mind of the Deity. There never has been a time, since man could begin to do anything for himself in the line of interpreting his relationship to nature, or turn his eyes within to interpret law for himself, that there has not been a priest, a doctor, a lawyer, or some other self-opinionated interpreter, to obstruct his vision and mystify his understanding. These obstructionists are there ostensibly for the glory of God and the good of the people.

The criminal type of selfishness is always doing something great and glorious for the dear people, which, when understood, means more shackles of slavery.

Autocracy is another name for theocracy. Both assume the right to impose their conceits on mankind. Autocracy has always been handed down to the people in a capsule of religion. The people have been made to believe that they cannot save themselves without a vice-regent. Governments have been in partnership with God in fooling the people. We have a republican form of government, but the pollen of autocracy has blown over us until much of our democracy is fertilized by imperialism. These are truths that are not understood, because we are blind to our faults and are possessed of a maudlin sentimentality regarding our religion.

In the matter of disease and healing, the people have been treated as serfs. The doctor is a dictator who knows it all, and the people are stupid, dumb, driven cattle, fit for nothing except to be herded together, bucked, and gagged when necessary to force medical opinion down their throats or under their skins.

When I was quite young I looked upon the medical profession as a noble, benevolent, philanthropic institution, to which I desired to belong, that I might do good and feel the thrills which come to a man who can be proud of his work. There are a lot of good men in the profession who have been deluded in the same way, and who are doing their best to right errors; but the knaves predominate.

I soon found that darkness prevailed where I thought light was to be found. I found that professional dignity was more often pomposity, sordid bigotry, and gilded ignorance. But I flattered myself that growing knowledge would do away with professional bigotry, and that good will, liberality, and democracy would prevail. But that belief has proved a pipe-dream of youth. I could not see how far down the roots of selfishness, ignorance, and bigotry went. I have learned since they go too deep for man to remedy. We know now that medical, religious, legal, political, and social bigotry is of imperial origin, and that imperialism has the power and unvarying persistence to convert all knowledge into an autocratic aristocracy, which makes itself the moral, intellectual, and material master of independent, individual thought and action. Czarism and Kaiserism have never been more autocratic, in controlling the people, than the medical profession of the United States is attempting today, and no rule has been founded on more ignorance and bigotry.

The "right to life, liberty, and the pursuit of happiness" is one of many fundamental, self-evident aphorisms which are beautiful, sentimental, and humane, and which we use in decorating memorials, constitutions, and like instruments that we adopt, resolve, and preamble, while we are receiving a fresh baptism of democracy, and are hysterically ecstatic and flushed with the heat of success in vanquishing the enemies of our freedom--our liberties. But while we are celebrating our right to life and liberty, the medical profession, backed by state law, is herding our children to the vaccinator and serum-injector, and teaching medical opinions in our schools that are as false as the imperialism that makes such an outrage on human rights possible. Would it be possible to have a rational physiology adopted in our schools? Whoever believes it is laboring under a delusion. Can a liberal medical educator lecture in our public schools or before mothers' meetings the second time? Whoever believes it is laboring under a delusion. Could a play in opposition to the teachings of "Damaged Goods" be licensed to go before the people, as that scientific fallacy has been? I do not believe it. And, in the face of this imperialism, we, as a people, are stupid enough to boast of our "right to life, liberty, and the pursuit" of

knowledge!

In medical matters, the imperial noose is being insidiously drawn tighter and tighter, under the pretense of protecting the dear people from disease. The plan is well organized. Little by little the rights of the people are being usurped, and the will of the usurper is being enforced.

Unless republican imperialism goes out with the kaiseristic and czaristic imperialism of Europe, which is now, we hope, preparing for its death-throes, we shall have saddled upon us a medical hierarchy, with its pope in the cabinet.

What right has American medical science to imperialistic dominancy? None whatever, unless it can prove its infallibility--which it has not done and which it cannot do. The truth of this assertion I shall endeavor to set forth by showing that modem medical science, as taught and practiced today, is a fallacy, and can never be anything else until it changes its fundamental beliefs on **etiology** and **therapeutics.**

What is disease and its cure? I shall attempt to show that disease is not an entity, not an evil spirit, not a willful secession of one or more organs out of the union of organs which go to make up man's body, but simply a derangement of the normal functioning of the body, brought about by physical and mental influences which, when understood, can be avoided or controlled by the individual himself.

This being true, it should be obvious to all that, if the cause of disease can be understood by anyone, prevention and cure are within the reach of anyone--even the most simple-minded. Instead of the theory and practice of medicine being an occult science, mysterious and hard to understand, it should be simply a matter of common sense that is within the grasp of any sane mind, educated or not.

What is health? Certainly not an entity; it is a state of the body in which a feeling of well-being is experienced.

There cannot be perfect health; for that would mean a perfect balancing of the forces within and the forces without; and that cannot occur outside of a vacuum--and life cannot continue in a vacuum.

Health being a state of the body, it varies from good to bad; and bad health is what we call disease.

Any influence of a physical or mental character may be health-building or disease-building; or the influence may be good or bad, depending upon its extent.

Man a Digestive Apparatus

The simplest definition for man is that he is a digestive apparatus. Food is taken into the stomach and bowels, where it is dissolved--brought to the liquid state--and then absorbed into the circulation and distributed throughout the body. From this circulating medium the cells of the various tissues of the body select the food elements required to do their work.

This process is called nutrition. When nutrition is going on normally, the standard of health is normal. Any influence that decreases, increases, or prevents nutrition is disease-producing, or, in better words, lowers the health standard.

The detrimental influences of nutrition may begin in the stomach; yet, farther back, the chewing may be imperfect; and, farther back still, the food may be imperfectly prepared.

The common cause of gastro-intestinal indigestion is enervation and overeating.

Nerve energy is required to digest food; nerve energy is required to keep up secretions and

excretions; nerve energy is required to **prepare** enzymes for digesting our food intake and keeping up a normal resistance to environmental influences as well as those that are autogenerated.

When this nerve energy is up to the standard, we are poised--or balanced, as it were, with our environments--and we can eat a maximum amount of food, and take care of it. This being true, it should be obvious to those who care to reason that any influence which uses up nerve energy lowers the digestive powers of the body, and that an amount of food which can be utilized when the nerve energy is up to standard must necessarily be too much when the energy is used up in work, play, or sensual indulgence.

It should be obvious to any reasoning mind that a full dinner taken into a tired body cannot be digested properly; that a full meal, or any meal at all, eaten by one in great mental anguish over some great trouble, cannot be digested. **And, when food is not digested, it becomes a poison.**

It should never be forgotten that food taken into the body is man's food or bane. There is no neutral ground. This explains why enough food at one time may be too much at another time.

When food is taken into the stomach in too great quantities--more than the digestive secretions (enzymes) can dissolve--digestion takes place on the outside of the ingested meal, and continues until the digestive energy is used up. As fast as the food is liquefied, it passes out through the pylorus, where, in the duodenum, it meets with other enzymes and is further fitted for absorption. Absorption is going on as fast as the food is liquefied enough to fit it for absorption, which is in a very short time after leaving the stomach.

When enzymic fermentation--digestion---ends, bacterial fermentation of the remainder of the food in the stomach begins. One or the other of these fermentative processes must go on, or eating will end; for, unless the food is liquefied, it cannot get out of the stomach and bowels.

Bacteria Necessary

There is no question about the necessary and beneficial action of the bacteria that are in us and about us all the time. The germs that infest our bodies, our food, our atmosphere, our soil, are necessary to our existence. If they were not, they would not be there. Nature never stultifies herself; there is a reason for everything, and that reason is backed by the logic of the Absolute.

The weakest point in modern medical science is its teachings on bacteriology. It teaches that germs cause disease. If that could be proved, it would establish demonology, and chaos would reign supreme. Good and bad entities cannot exist in the same universe. Good, when ill-used, is made less good; but good is a state, and all states fluctuate from what we call good to what we call bad. The two extremes, however, are two points of view of the same state. There is no room for bad, except as a figure of speech with which to measure or contrast degrees of good. There is no disease per se--only different degrees of health. There is no bad per se--only different degrees of good.

Germs, food, sunshine, air, all the elements, are friends or foes to man. They are his health or his disease, depending entirely upon how they are used.

Germs are as necessary as water. If we are deprived of water, we soon die; if we are submerged into water, we die quickly; if deprived of a reasonable amount of germs, we are made sick, or, if infested with too many, we are made sick or die.

The Sterilized Are Sick and Die

The only two men who persistently practiced sterilizing their food and drink lived semi-invalid lives, and died at that time in life when mind should be at the acme of value. I have reference to Professors Pasteur and Metchnikoff. There may have been others--perhaps Koch--but I do not now recall them. These two men were the fathers of bacteriology.

We :have seen that **digestive secretions--enzymes--unorganized ferments--are necessary to dissolve food and prepare it for absorption, and that bacteria--organized ferments--are necessary to dissolve food and prepare it for expulsion from the body. Bacteria are necessary to dissolve food taken in excess of what can be liquefied and utilized by enzymic digestion.** Organized ferments--germs--belong to the health department of our bodies; they keep the sewers, gutters, and alleys clean. If they ever become a menace, it is when they become too officious and try to dictate, as the health departments of our cities sometimes do. Their failure, however, is often due to an oversupply of work.

The bacteria cause acetic and alcoholic fermentation of the carbohydrate (starchy) foods; and the same bacteria cause a putrefactive decay in the nitrogenous or proteid (animal) foods, with the development of toxin and the giving-off of offensive gases which are toxic.

Fermentation and Decomposition Defined

Bacterial fermentation of carbohydrate foods develops toxin which causes acidosis (the scurvy or scorbutus of former days), and is the cause of simple irritations, catarrhal inflammations, and ulceration. Fermentation of animal proteid foods develops toxin which causes putrefactive irritations, inflammations, ulcerations, and cancers. In both forms of fermentation, at an early day, the normal alkalinity of the blood is reduced, causing such minor systemic derangements as irritability, despondency, fault-finding, general nervousness, headaches, tired feelings, backache, gas in the bowels, constipation, and, to cover the whole subject with a blanket term, neurasthenia.

This is a state of malaise or dysphoria that makes its victim easy prey to the palliation of overstimulation. At first relief is found in more eating, because all food is more or less stimulating; but with the increase in food stimulation come more and more discomfort, more wants; in a word, more dysphoria. If not used before, tobacco, coffee, tea, and perhaps light alcoholics, are now resorted to, to find surcease from discomfort.

This is man's state of being, brought about by life's labors, pleasures, and griefs. Here is where he parts company with normal comfort, and begins to cultivate abnormal, artificial, or toxic comfort. It is here that more food than is needed for health and well-being is taken. **From this point, food develops acid, alcohol, and toxins.** It is at this stage that the Caucasian seeks relief in alcoholics, tobacco, coffee, tea, and a few of the various palliative remedies of the world; while the Chinaman begins to woo his "white lady"--the extract of the poppy flower, the East Indian to chew his bhang, the West African his kola, the Yemen Arab his khat; and other peoples resort to some sort of anesthesia. Since the world began, man has endeavored in some way to secure relief from his discomforts by resorting to ecstasy, incantations, drugs, hypnotism, or any unnatural palliation, rather than earnestly to search for cause and remove it.

Average men would rather live under anesthesia and enjoy half-efficiency than live twice as long and enjoy full efficiency by dropping the habits that bring discomfort and make stimulants necessary. There is a fascination about deadened sensation, and the mental indifference it brings, which average human beings cannot rise above when once under the spell. The drug system of treating disease appeals to this maudlin sentiment; hence its great popularity--it appeals to the vagabond in man.

After palliation has kept dysphoria, malaise, discomfort, and pain subdued until disorganization threatens, the victim of sensuality must retrace his steps and pay for health with the pain and discomfort he refused to bear in his fool's errand after surcease and cures (?).

In the advanced state-when enervation is established--there are developed the so-called contagious and infectious diseases; in children, enlarged tonsils and lymphatics, and the development of adenoids; in adults, ulcerative catarrhal inflammations of the mucous membranes, chronic inflammations and ulcerations of the lymphatic glands, pulmonary tuberculosis, syphilis, and cancer. It is well to keep in mind that microbic differentiation is in

keeping with the chemic medium. Instead of the germ individualizing pathologic processes, it is individualized by the medium in which it is fortuitously placed. In other words, microbic individuation is wholly dependent upon environment; not as bacteriology, in its most refined state, would have us believe, namely, that environment is dictated by the microbethat germs determine the character of the disease. Without giving the subject any thought, almost anyone will jump to the conclusion, after hearing the advocates of the system declare that germs cause disease, that the claims of bacteriology must be true; but when we realize that a ferment is capable of bringing about a change in a chemical medium without itself taking on change, and that, when the ferment is placed in a fruit medium, a starch medium, and a proteid medium, the change in each medium is peculiar to the medium and not to the ferment, it begins to cause doubt to spring up in our minds concerning the germ theory; and when we learn from experience that by withholding food from a typhoid, a diphtheria, or a syphilitic patient, the symptoms begin almost immediately to show amelioration, it is then we know that the claims of bacteriology are false; for, if they were true, the withholding of food--the depleting of the body in any way--would subject it to the ravages of germs.

Stopping food allows the enzymic secretions to catch up with the **pathologic** tissue change brought about by bacterial fermentation, and as soon as the enzymes are equal to the digestive requirements the germs subside.

It should be known that the reproductive products of all parasites are digested by normal digestive secretions, and the power to start fermentation by the bacteria is made impossible by a full and normal enzymic secretion.

The germs undoubtedly unite with the enzymes for the purpose of bringing about perfect digestion. If food is cooked, the enzymes (unorganized ferments) and germs (organized ferments), which find a welcome host in the food, are killed; and the tendency is for cooked food to go into a state of fermentation much earlier than raw food. **The germs, when unopposed by the body's enzymes, cause acetous fermentation in carbohydrate foods, and putrefactive fermentation in nitrogenous foods.** The acetous fermentation, when kept up for any length of time, causes catarrhal diseases, while the putrefactive decay causes glandular inflammations and ulcerations of the mucous membrane, and tuberculosis in those of tuberculous diathesis.

In this correlation of germs with the chemic medium we see the different points of view of the good involved and evolved by each element.

The influence of bacteria is good when it helps the enzymes to perfect digestion; then we see the same germ causing the breaking-down and liquefying of the surplus food, the purpose being to get it out of the bowels. Before a toleration to this irritation--toxin poisoning--is developed, diarrhea, carrying off the fermenting food, is developed. But **enervation follows if the habit of overeating is continued,** and the diarrhea--which is a conservative effort to rid the body of offending debris--is abandoned as a conservative measure; and such affections as gastritis, duodenitis, pancreatitis, jaundice, inflammation of the gall-bladder, liver insufficiency causing diabetes, and other affections, such as pelvic inflammation, ulcerations, etc., are developed.

These so-called diseases (affections is a better word) are caused by the toxins generated from the action of bacteria setting up fermentation in carbohydrate foods. The constant acidulation from toxin absorption builds every catarrhal disease known.

At first the acid stimulates nerve resistance--over-stimulates--and an extra secretion of enzymes, which are alkaline, to combat the toxin, which is acid poisoning. This overwork causes enervation and inhibition of secretions and excretions, which total autotoxernia. Before a toleration evolves, we see the toxins eliminated by an exanthematous process--a diarrhea or an eruptive fever. The evolution of this entire phenomenon starts with indigestion, which develops acid. The local effect of the acid is to irritate the mucous membrane, causing an inflow of secretion to neutralize the acid or cause a diarrhea, coryza, bronchorrhea; or, instead of elimination by the mucous membrane, the toxin may be thrown out by the skin in the form of

eczema or eruptive fevers. When elimination takes place through the mucous membrane, it is called catarrh. In these cases the throat and nose may become inflamed, the tonsils enlarge, and adenoids develop. Any of the mucous membranes may become involved in this elimination. In the developing of these affections, the influence of germs may be said to be bad; but even the feeble-minded should see that the evil resulting from the influence of the bacteria is the result of an overworked good.

When the same bacteria cause putrefaction of the nitrogenous foods, when those foods are taken in larger quantities than can be digested, offensive gases are given off, which irritate the mucous membrane, causing a resistance to absorption similar to that which we see resulting from the fermentation of the carbohydrates. But when the conservative effort fails, and the toxins are absorbed, they cause inflammation of the lymphatic glands; and, as these glands are everywhere, all parts of the body are more or less affected. It is the special function of these glands to arrest the toxins of acetous or of putrefactive fermentation, and neutralize their effects; but where the cause of infection is kept in operation for a great length of time, the body's conservative defenses are overcome, and we see those of the tuberculous diathesis developing pulmonary tuberculosis, or tubercular inflammations of other parts of the body; those of the gouty diathesis building rheumatism, arthritis, stone in those organs where stone is usually formed, **limy deposits in the heart** and arteries, and old-age diseases, such as arteriosclerosis, cancer, etc.; and those of the nervous diathesis building neurasthenia, tabes dorsalis, and other cerebro-spinal affections. Organic diathesis will be manifesting in the giving-down of vulnerable organs.

All influences that break down resistance become allies of the first and primary cause of inflammations- namely, bacterial fermentation of the food taken in excess of digestive power.

What is the real part played by bacteria? That of auxiliaries to the unorganized ferments--enzymes. The time must come when the germ, which is now believed by most of the profession to be the cause of disease, will be recognized as necessary to the perfect action of the enzymes; and when bacteria appear to be the cause of disease, it is when, through enervation, the digestive ferments fail to be generated in sufficient quantities to meet the requirements. The simplest form in which I can state the truth about this question is this: Germs act as pollen to the various enzymes of the body, aiding digestion and assimilation--cell-building; when there are not enough bacteria, tissue renewal is slow and imperfect; when there are too many, tissue retrogression is too rapid. Cooked food favors bacterial, or organized, ferment preponderance, because cooking kills the unorganized and organized ferments, and both are needed to carry on the body's digestion. **Raw foods--fruit and vegetables--favor unorganized-ferment digestion, because these foods carry vitamins, which are unorganized ferments--enzymes.**

In states of enervation, enzymic secretions run low, and, as a result, so-called bacterial fermentation and infection take place. What is bacterial infection? Poisoning by absorption of the toxins of putrefaction, set up in animal foods by the bacteria of fermentation. Bacteriology declares that infection is caused by germs through the toxins they secrete. But this is as impossible as producing something out of nothing. How can yeast raise dough? It cannot. Yeast causes fermentation of starch; as a result of fermentation, gas is formed, and the gas lifts the dough; the bacteria do not lift; the starch cannot lift; but a third element, which is liberated by the combining of the two principal elements, can and does lift the dough.

The Philosophy of Toxin Poisoning

When meat is eaten beyond the digestive capacity, bacteria, which are omnipresent, set up fermentation in the undigested portion. As a consequence, toxin is liberated. Toxin is a potentiality of meat, but without the influence of the bacteria of fermentation this particular potentiality would never be developed. Meat without bacterial fermentation is non-toxic; bacteria without protein and an environment favoring fermentation are free from ptomain or toxin poisons. This poison is potential in meat, but, to cause it to materialize, a compounding of four elements is necessary--namely, bacteria, protein, moisture, and heat. Without this

compounding, the potential--toxin--may never develop; or, if sufficient enzyme be added, the energy, instead of developing as toxin, becomes body and lifegiving.

Bacteria are not toxic per se; carbohydrates are not toxic per se; bacteria and carbohydrates combined are not toxic until the environment favors fermentation--until moisture and heat are added; then alcohol or acid is evolved. These two evolved elements did not exist before, except in potentiality.

Another very important point to keep in mind is that alcohol and acetic acid inhibit the action of unorganized ferments, while organized ferments--bacteria--build and thrive for a time in such an environment; but when fermentation is ended, the germs which caused it are consumed by their own products.

The Limitation of Putrefactive Fermentation

While on this subject, it may be well to observe that vaccine, syphilitic and other viruses from various forms of putrefaction, are inhibited in their action, if not entirely annulled, when the one vaccinated is normal in energy, and has a normal amount of enzymes and alkalinity of the fluids and tissues of the body. If putrefaction has spent its force, the toxins of vaccine and syphilis virus are impotent. Cadavers are not poison all the time.

Bacterial fermentation flourishes in a state of the body where acidity predominates. If no food be taken, however, the fermentation comes to an end, and the bacteria, like Alexander the Great, sigh for more worlds to conquer. Fasting and elimination prevent the body from becoming pickled.

The so-called contagious diseases attack only those who have been living on a dietary devoid of the baseforming elements.

Why Contagious and Infectious Diseases Have Declined

In the past twenty-five years there have been a constant decline of all contagious diseases, an increase in cleanliness, sanitation, and the consumption of raw fruits and vegetables, and, neither last nor least, a decline in the use of drugs. Vegetable and fruit salads are furnished by all first-class eating-houses today, whereas a properly constructed vegetable salad was almost unknown twenty-five years ago.

Cleanliness, correct sanitation, and proper eating will annul the influences that build contagious diseases, and will pretty nearly, if not quite, annul or make void the vaccination disease--vaccinea.

Food properly balanced--given a preponderance of base, or alkaline, elements--prevents fermentation; and, as fermentation is the exciting cause of inflammation and the development of all diseases or affections, such food establishes immunization--rational immunization.

Instead of bacteria stamping disease with individuality, the germs take on individuality in keeping with the chemic changes in the medium. For example, in carbohydrate fermentation the evolved toxin is acetic acid or alcohol; and in nitrogenous fermentation the evolved toxin is putrescin, cadaverin, or sepsin. The bacteria are the same, but the elements on which they act vary very widely. The specificity of the bacterium is that of yeast, capable of starting fermentation; while the toxic properties of starch and meat are potential, and would not evolve without the yeast of fermentation--the bacterium or microbe.

Bacteriologists declare it is no wonder that bacterial toxins (secretions) provoke numerous nutritive changes. The road is no longer to travel back, and so it is no wonder that there are so many kinds of bacteria, when we consider the great variety of chemic mediums in which they are developed. The bacteria not only have their individuality determined for them by the peculiar chemistry of the environment, but also their physical development.

If bacteria were the cause of disease, withholding food would allow them to destroy the patient; whereas the reverse is true. A fed patient is in danger of being overwhelmed by the poison caused by bacterial fermentation, because in disease there is little or no secretion of enzymes to counteract the organized ferments.

Typhoid fever affords a most splendid opportunity to prove that bacterial activity declines with the cessation of the intake of food; and this is true of every disease--of every form of inflammation and fever. Bacterial activity increases or decreases along with the increase and decrease of the intake of food. After the fever is gone, there is a gradual increase in enzymal power, and soon food can be taken and digested.

It should be obvious to every person that the question of overeating must be settled by each individual for himself; for it is a question of personal power--the same as mental and physical efficiency. The fact that one person is efficient is no proof that his next-door neighbor is. The fact that Brown can eat so and so is no reason why Smith can do the same. That Jones can smoke twelve cigars a day is no proof that Johnson can smoke one. It is all a question of energy and enzymal efficiency. Two men of equal power may start life together, and possibly eat the same food in the same amounts. In twenty years they meet. One is full of life and vigor, and up with the times; while the other has deteriorated--gone back in every way. What is the cause? The one who made no progress has broken down his nerve energy by secret vices or mind inactivity. The mind and body must both be active to evolve full efficiency.

Everything else being equal, why should the man who smokes have as much resistance and efficiency as the man who does not? If two men of equal nerve energy smoke, and one adds coffee to his dissipations, it stands to reason that the one who has but one bad habit has the more resistance.

Two men of equal power start life together. One worries; the other does not. The one who worries dies of hardening of the arteries, twenty-five years before the other.

Two men persist in overeating and taxing their resistance with equal amounts of toxin poisoning. Both have headache. One takes drugs for relief, and dies of heart paralysis at thirty to thirty-five; the other takes no relief, gets over his headaches at fifty, and dies of premature old age at sixty.

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Introduction

In the olden times the wiseacres--the teachers, the professors, the learned men of the healing profession, priests, and lawyers--declared that disease was a punishment sent upon man by his God for being wicked. Epidemics were sent by God to kill many people because they had incurred His divine wrath. The cure, of course, was logical; namely, appease the wrath of God. And, as divine wrath required human sacrifice, the doctors, priests, and their allies put the people to the rack. If they had not performed their duty in this respect, they would have become "participes criminis," and in turn would have brought punishment upon themselves.

It is unnecessary to enter very largely into a description of the therapeutics (the cures) of that day. Those who would have a minute history of the cause and cure of disease in those days should read the sacred and secular histories of that time. And those who would have the whole truth should not neglect reading history on down to the "History of Celebrated Crimes" by Alexandre Dumas. Then, while engaged in that study, it would be well to follow it down to the anointed of today, and behold the greatest of all great wars--a logical sequence of all that has gone before. In it, behold a drastic and most heroic treatment of almost the entire world for the commonest and least understood diseases of mankind--namely, selfishness, ignorance, stupidity, and incorrigibility!

Disease is not an entity, the nature and cause of which can be summed up as is done in the profession's "blue book," known as "Medical Nomenclature," which starts with "abasia" (lost power to stand) and "adenoids," and ends with "yellow fever" and "yellow jaundice." No name ever fits a disease; for cause is multiple--many-factored--and the causes and factors vary in quantity and quality.

The commonest cause of disease is, first, last, and all the time, overindulgence of appetites and passions. In the primitive age, man was protected by the simple life. Instinct and absence of imagination controlled him sensually. As social life or civilization advanced, morality evolved. Up to this time man had been unmoral. The ABC of morality is self-consciousness; and the first act, after selfconsciousness is born, is to clothe nakedness. It is obvious to the discerning that sexuality is the rock on which morality is based, and alimentation is the rock on which life, health, and body development are built.

Fundamentally, then, the life of man rests on sexuality and nutrition: he must be begotten, and then he must be fed.

In the subconscious state these processes are carried on by the cosmic urge--the subtle, developmental energies of nature. We see the birds in the springtime mating, nesting, and raising young. If the nest is destroyed with the eggs, another nest is built and other eggs are laid; with nothing to account for the whole procedure except want, or the developmental urge. It is long after this before ratiocination comes on the psychological stage.

Man has the cosmic urge manifesting in want of food and want of family. Around and about these fundamental wants springs up everything in man's life. The manner in which he satisfies these wants determines his moral status, and his moral status marks the degree of health and the length of life which he enjoys. The world is taught a morality separated and apart from health and its fundamentals, but it is stupidly idealistic and devoid of sense and reason. When we know enough, we shall be able to see that all our physical and mental woes are brought upon us because of such false reasoning. World-wars are built out of such morality.

At the birth of man's freedom from the slavery of the subconscious rule, he interprets his freedom as license, and his conduct is governed by brutal selfishness; he glories in satisfying

appetite and passion, and to the protesting voice his answers are sneers and curses. The first check that comes to him in the drunken revel with which he celebrates his freedom to eat, drink, and be merry, is religion. Religion brings its appeal to his moral, esthetical, and intellectual nature before these potentialities are evolved. Instead of appealing to the physical--the base on which these higher qualities depend--and preparing this base for the evolution of the ethical, esthetical, moral, and religious, the whip of fear has been held over him. He has been taught that he must love God--and that, too, without anything except a grotesque knowledge of the Deity; he has been forced to acknowledge a love he could not feel, and to worship without desire; for, when man worships intelligently, he must know the being worshiped, and this being must have qualities of character that draw respect, love, and worship. Respect is founded on knowledge; love springs up when the object possesses lovable qualities; worship comes when the object loved proves to be the embodiment of perfection, as we understand it.

Man has been forced to confess respect, love, and worship for a formulary morality, creed, and God, under penalty of future punishment, or, what is worse, social ostracism. This coercion made a slave of him, and he has secretly rebelled. 'This rebellion has grown a hypocrisy that may be described as an immorality dolled up to give a presentable appearance. A religion and morality by title only is a monstrosity without sense or reason--a thing professing one thing and living another. Man is suffering in body and mind from this fallacious education, and he will get rid of it as soon as he awakens to a knowledge of his horrible predicament. Man is certainly suffering from respectable false teachings which have made him mentally blind.

Is nature, by this World War, endeavoring to wake man out of his moral lethargy? If it kills forever our slavery to a morality that builds hypocrisy as its principal asset, impoverishing the earth and killing off the flower of our manhood may be as small a price as can be asked for so great a service; but would it not be the irony of hen if our reconstruction would be on the same old ethical conception? This will certainly be our fate, unless autocracy, imperialism, Caesars, kings, presidents, and all classes of rulers who have a God as a silent partner, are put out of business.

Man has made the mistake of attempting to bridge the distance from aboriginal ignorance to a state of intelligence and moral responsibility that can never be realized until appetite and passion are controlled through intellect, and not through sentiment, emotionalism, or fear of God.

Disease is ignorance--the greatest foe to Truth, to Nature, to Nature's God, to the Universe.

Ignorance per se is not dangerous to truth. Indeed, truth would have no trouble with ignorance, if it were not for the retinue of lieutenants and attendants who hover about this great mass of intellectual stone--of undifferentiated mental protoplasm--which selfish jugglers--moral perverts-convert into a veritable King Juggernaut.

Chief among the hordes of advisers on the staff of King Ignorance is the commander-in-chief, Knave, who is not ignorant, but who finds rebellion against truth more to his liking, and to serve his purpose best. It is he who upholds "law and order," the better to fleece the public. He is in the forefront of every reform. His culminating influence is always faced opposite the direction in which he appears to be going. He is the eyes, ears, and tongue of King Ignorance. His selfishness, vanity, jealousy, and dishonesty prejudice Ignorance against Truth to such a degree that the great king of the nether world remains hopelessly blind and deaf. Surely there is no blindness so blind as the blindness that will not see, and deafness so deaf as the deafness that will not hear.

Now that we have defined, in as concise a statement as we can, the reason why truth is so slow in delivering humanity out of the bondage of ignorance, we shall try to show why appetite, passion, and license are the slogans that win and keep the majority on the side of ignorance.

As stated before, the first great cause of disease, as interpreted by selfish ignorance, was an

offended Deity who sent disease as a punishment. The cure had to be procured through an intermediary who had power, through grace, to change the mind of the Deity. There never has been a time, since man could begin to do anything for himself in the line of interpreting his relationship to nature, or turn his eyes within to interpret law for himself, that there has not been a priest, a doctor, a lawyer, or some other self-opinionated interpreter, to obstruct his vision and mystify his understanding. These obstructionists are there ostensibly for the glory of God and the good of the people.

The criminal type of selfishness is always doing something great and glorious for the dear people, which, when understood, means more shackles of slavery.

Autocracy is another name for theocracy. Both assume the right to impose their conceits on mankind. Autocracy has always been handed down to the people in a capsule of religion. The people have been made to believe that they cannot save themselves without a vice-regent. Governments have been in partnership with God in fooling the people. We have a republican form of government, but the pollen of autocracy has blown over us until much of our democracy is fertilized by imperialism. These are truths that are not understood, because we are blind to our faults and are possessed of a maudlin sentimentality regarding our religion.

In the matter of disease and healing, the people have been treated as serfs. The doctor is a dictator who knows it all, and the people are stupid, dumb, driven cattle, fit for nothing except to be herded together, bucked, and gagged when necessary to force medical opinion down their throats or under their skins.

When I was quite young I looked upon the medical profession as a noble, benevolent, philanthropic institution, to which I desired to belong, that I might do good and feel the thrills which come to a man who can be proud of his work. There are a lot of good men in the profession who have been deluded in the same way, and who are doing their best to right errors; but the knaves predominate.

I soon found that darkness prevailed where I thought light was to be found. I found that professional dignity was more often pomposity, sordid bigotry, and gilded ignorance. But I flattered myself that growing knowledge would do away with professional bigotry, and that good will, liberality, and democracy would prevail. But that belief has proved a pipe-dream of youth. I could not see how far down the roots of selfishness, ignorance, and bigotry went. I have learned since they go too deep for man to remedy. We know now that medical, religious, legal, political, and social bigotry is of imperial origin, and that imperialism has the power and unvarying persistence to convert all knowledge into an autocratic aristocracy, which makes itself the moral, intellectual, and material master of independent, individual thought and action. Czarism and Kaiserism have never been more autocratic, in controlling the people, than the medical profession of the United States is attempting today, and no rule has been founded on more ignorance and bigotry.

The "right to life, liberty, and the pursuit of happiness" is one of many fundamental, self-evident aphorisms which are beautiful, sentimental, and humane, and which we use in decorating memorials, constitutions, and like instruments that we adopt, resolve, and preamble, while we are receiving a fresh baptism of democracy, and are hysterically ecstatic and flushed with the heat of success in vanquishing the enemies of our freedom--our liberties. But while we are celebrating our right to life and liberty, the medical profession, backed by state law, is herding our children to the vaccinator and serum-injector, and teaching medical opinions in our schools that are as false as the imperialism that makes such an outrage on human rights possible. Would it be possible to have a rational physiology adopted in our schools? Whoever believes it is laboring under a delusion. Can a liberal medical educator lecture in our public schools or before mothers' meetings the second time? Whoever believes it is laboring under a delusion. Could a play in opposition to the teachings of "Damaged Goods" be licensed to go before the people, as that scientific fallacy has been? I do not believe it. And, in the face of this imperialism, we, as a people, are stupid enough to boast of our "right to life, liberty, and the pursuit" of

knowledge!

In medical matters, the imperial noose is being insidiously drawn tighter and tighter, under the pretense of protecting the dear people from disease. The plan is well organized. Little by little the rights of the people are being usurped, and the will of the usurper is being enforced.

Unless republican imperialism goes out with the kaiseristic and czaristic imperialism of Europe, which is now, we hope, preparing for its death-throes, we shall have saddled upon us a medical hierarchy, with its pope in the cabinet.

What right has American medical science to imperialistic dominancy? None whatever, unless it can prove its infallibility--which it has not done and which it cannot do. The truth of this assertion I shall endeavor to set forth by showing that modem medical science, as taught and practiced today, is a fallacy, and can never be anything else until it changes its fundamental beliefs on **etiology** and **therapeutics.**

What is disease and its cure? I shall attempt to show that disease is not an entity, not an evil spirit, not a willful secession of one or more organs out of the union of organs which go to make up man's body, but simply a derangement of the normal functioning of the body, brought about by physical and mental influences which, when understood, can be avoided or controlled by the individual himself.

This being true, it should be obvious to all that, if the cause of disease can be understood by anyone, prevention and cure are within the reach of anyone--even the most simple-minded. Instead of the theory and practice of medicine being an occult science, mysterious and hard to understand, it should be simply a matter of common sense that is within the grasp of any sane mind, educated or not.

What is health? Certainly not an entity; it is a state of the body in which a feeling of well-being is experienced.

There cannot be perfect health; for that would mean a perfect balancing of the forces within and the forces without; and that cannot occur outside of a vacuum--and life cannot continue in a vacuum.

Health being a state of the body, it varies from good to bad; and bad health is what we call disease.

Any influence of a physical or mental character may be health-building or disease-building; or the influence may be good or bad, depending upon its extent.

Man a Digestive Apparatus

The simplest definition for man is that he is a digestive apparatus. Food is taken into the stomach and bowels, where it is dissolved--brought to the liquid state--and then absorbed into the circulation and distributed throughout the body. From this circulating medium the cells of the various tissues of the body select the food elements required to do their work.

This process is called nutrition. When nutrition is going on normally, the standard of health is normal. Any influence that decreases, increases, or prevents nutrition is disease-producing, or, in better words, lowers the health standard.

The detrimental influences of nutrition may begin in the stomach; yet, farther back, the chewing may be imperfect; and, farther back still, the food may be imperfectly prepared.

The common cause of gastro-intestinal indigestion is enervation and overeating.

Nerve energy is required to digest food; nerve energy is required to keep up secretions and

excretions; nerve energy is required to **prepare** enzymes for digesting our food intake and keeping up a normal resistance to environmental influences as well as those that are autogenerated.

When this nerve energy is up to the standard, we are poised--or balanced, as it were, with our environments--and we can eat a maximum amount of food, and take care of it. This being true, it should be obvious to those who care to reason that any influence which uses up nerve energy lowers the digestive powers of the body, and that an amount of food which can be utilized when the nerve energy is up to standard must necessarily be too much when the energy is used up in work, play, or sensual indulgence.

It should be obvious to any reasoning mind that a full dinner taken into a tired body cannot be digested properly; that a full meal, or any meal at all, eaten by one in great mental anguish over some great trouble, cannot be digested. **And, when food is not digested, it becomes a poison.**

It should never be forgotten that food taken into the body is man's food or bane. There is no neutral ground. This explains why enough food at one time may be too much at another time.

When food is taken into the stomach in too great quantities--more than the digestive secretions (enzymes) can dissolve--digestion takes place on the outside of the ingested meal, and continues until the digestive energy is used up. As fast as the food is liquefied, it passes out through the pylorus, where, in the duodenum, it meets with other enzymes and is further fitted for absorption. Absorption is going on as fast as the food is liquefied enough to fit it for absorption, which is in a very short time after leaving the stomach.

When enzymic fermentation--digestion---ends, bacterial fermentation of the remainder of the food in the stomach begins. One or the other of these fermentative processes must go on, or eating will end; for, unless the food is liquefied, it cannot get out of the stomach and bowels.

Bacteria Necessary

There is no question about the necessary and beneficial action of the bacteria that are in us and about us all the time. The germs that infest our bodies, our food, our atmosphere, our soil, are necessary to our existence. If they were not, they would not be there. Nature never stultifies herself; there is a reason for everything, and that reason is backed by the logic of the Absolute.

The weakest point in modern medical science is its teachings on bacteriology. It teaches that germs cause disease. If that could be proved, it would establish demonology, and chaos would reign supreme. Good and bad entities cannot exist in the same universe. Good, when ill-used, is made less good; but good is a state, and all states fluctuate from what we call good to what we call bad. The two extremes, however, are two points of view of the same state. There is no room for bad, except as a figure of speech with which to measure or contrast degrees of good. There is no disease per se--only different degrees of health. There is no bad per se--only different degrees of good.

Germs, food, sunshine, air, all the elements, are friends or foes to man. They are his health or his disease, depending entirely upon how they are used.

Germs are as necessary as water. If we are deprived of water, we soon die; if we are submerged into water, we die quickly; if deprived of a reasonable amount of germs, we are made sick, or, if infested with too many, we are made sick or die.

The Sterilized Are Sick and Die

The only two men who persistently practiced sterilizing their food and drink lived semi-invalid lives, and died at that time in life when mind should be at the acme of value. I have reference to Professors Pasteur and Metchnikoff. There may have been others--perhaps Koch--but I do not now recall them. These two men were the fathers of bacteriology.

We :have seen that **digestive secretions--enzymes--unorganized ferments--are necessary to dissolve food and prepare it for absorption, and that bacteria--organized ferments--are necessary to dissolve food and prepare it for expulsion from the body. Bacteria are necessary to dissolve food taken in excess of what can be liquefied and utilized by enzymic digestion.** Organized ferments--germs--belong to the health department of our bodies; they keep the sewers, gutters, and alleys clean. If they ever become a menace, it is when they become too officious and try to dictate, as the health departments of our cities sometimes do. Their failure, however, is often due to an oversupply of work.

The bacteria cause acetic and alcoholic fermentation of the carbohydrate (starchy) foods; and the same bacteria cause a putrefactive decay in the nitrogenous or proteid (animal) foods, with the development of toxin and the giving-off of offensive gases which are toxic.

Fermentation and Decomposition Defined

Bacterial fermentation of carbohydrate foods develops toxin which causes acidosis (the scurvy or scorbutus of former days), and is the cause of simple irritations, catarrhal inflammations, and ulceration. Fermentation of animal proteid foods develops toxin which causes putrefactive irritations, inflammations, ulcerations, and cancers. In both forms of fermentation, at an early day, the normal alkalinity of the blood is reduced, causing such minor systemic derangements as irritability, despondency, fault-finding, general nervousness, headaches, tired feelings, backache, gas in the bowels, constipation, and, to cover the whole subject with a blanket term, neurasthenia.

This is a state of malaise or dysphoria that makes its victim easy prey to the palliation of overstimulation. At first relief is found in more eating, because all food is more or less stimulating; but with the increase in food stimulation come more and more discomfort, more wants; in a word, more dysphoria. If not used before, tobacco, coffee, tea, and perhaps light alcoholics, are now resorted to, to find surcease from discomfort.

This is man's state of being, brought about by life's labors, pleasures, and griefs. Here is where he parts company with normal comfort, and begins to cultivate abnormal, artificial, or toxic comfort. It is here that more food than is needed for health and well-being is taken. **From this point, food develops acid, alcohol, and toxins.** It is at this stage that the Caucasian seeks relief in alcoholics, tobacco, coffee, tea, and a few of the various palliative remedies of the world; while the Chinaman begins to woo his "white lady"--the extract of the poppy flower, the East Indian to chew his bhang, the West African his kola, the Yemen Arab his khat; and other peoples resort to some sort of anesthesia. Since the world began, man has endeavored in some way to secure relief from his discomforts by resorting to ecstasy, incantations, drugs, hypnotism, or any unnatural palliation, rather than earnestly to search for cause and remove it.

Average men would rather live under anesthesia and enjoy half-efficiency than live twice as long and enjoy full efficiency by dropping the habits that bring discomfort and make stimulants necessary. There is a fascination about deadened sensation, and the mental indifference it brings, which average human beings cannot rise above when once under the spell. The drug system of treating disease appeals to this maudlin sentiment; hence its great popularity--it appeals to the vagabond in man.

After palliation has kept dysphoria, malaise, discomfort, and pain subdued until disorganization threatens, the victim of sensuality must retrace his steps and pay for health with the pain and discomfort he refused to bear in his fool's errand after surcease and cures (?).

In the advanced state-when enervation is established--there are developed the so-called contagious and infectious diseases; in children, enlarged tonsils and lymphatics, and the development of adenoids; in adults, ulcerative catarrhal inflammations of the mucous membranes, chronic inflammations and ulcerations of the lymphatic glands, pulmonary tuberculosis, syphilis, and cancer. It is well to keep in mind that microbic differentiation is in

keeping with the chemic medium. Instead of the germ individualizing pathologic processes, it is individualized by the medium in which it is fortuitously placed. In other words, microbic individuation is wholly dependent upon environment; not as bacteriology, in its most refined state, would have us believe, namely, that environment is dictated by the microbethat germs determine the character of the disease. Without giving the subject any thought, almost anyone will jump to the conclusion, after hearing the advocates of the system declare that germs cause disease, that the claims of bacteriology must be true; but when we realize that a ferment is capable of bringing about a change in a chemical medium without itself taking on change, and that, when the ferment is placed in a fruit medium, a starch medium, and a proteid medium, the change in each medium is peculiar to the medium and not to the ferment, it begins to cause doubt to spring up in our minds concerning the germ theory; and when we learn from experience that by withholding food from a typhoid, a diphtheria, or a syphilitic patient, the symptoms begin almost immediately to show amelioration, it is then we know that the claims of bacteriology are false; for, if they were true, the withholding of food--the depleting of the body in any way--would subject it to the ravages of germs.

Stopping food allows the enzymic secretions to catch up with the **pathologic** tissue change brought about by bacterial fermentation, and as soon as the enzymes are equal to the digestive requirements the germs subside.

It should be known that the reproductive products of all parasites are digested by normal digestive secretions, and the power to start fermentation by the bacteria is made impossible by a full and normal enzymic secretion.

The germs undoubtedly unite with the enzymes for the purpose of bringing about perfect digestion. If food is cooked, the enzymes (unorganized ferments) and germs (organized ferments), which find a welcome host in the food, are killed; and the tendency is for cooked food to go into a state of fermentation much earlier than raw food. **The germs, when unopposed by the body's enzymes, cause acetous fermentation in carbohydrate foods, and putrefactive fermentation in nitrogenous foods.** The acetous fermentation, when kept up for any length of time, causes catarrhal diseases, while the putrefactive decay causes glandular inflammations and ulcerations of the mucous membrane, and tuberculosis in those of tuberculous diathesis.

In this correlation of germs with the chemic medium we see the different points of view of the good involved and evolved by each element.

The influence of bacteria is good when it helps the enzymes to perfect digestion; then we see the same germ causing the breaking-down and liquefying of the surplus food, the purpose being to get it out of the bowels. Before a toleration to this irritation--toxin poisoning--is developed, diarrhea, carrying off the fermenting food, is developed. But **enervation follows if the habit of overeating is continued,** and the diarrhea--which is a conservative effort to rid the body of offending debris--is abandoned as a conservative measure; and such affections as gastritis, duodenitis, pancreatitis, jaundice, inflammation of the gall-bladder, liver insufficiency causing diabetes, and other affections, such as pelvic inflammation, ulcerations, etc., are developed.

These so-called diseases (affections is a better word) are caused by the toxins generated from the action of bacteria setting up fermentation in carbohydrate foods. The constant acidulation from toxin absorption builds every catarrhal disease known.

At first the acid stimulates nerve resistance--over-stimulates--and an extra secretion of enzymes, which are alkaline, to combat the toxin, which is acid poisoning. This overwork causes enervation and inhibition of secretions and excretions, which total autotoxernia. Before a toleration evolves, we see the toxins eliminated by an exanthematous process--a diarrhea or an eruptive fever. The evolution of this entire phenomenon starts with indigestion, which develops acid. The local effect of the acid is to irritate the mucous membrane, causing an inflow of secretion to neutralize the acid or cause a diarrhea, coryza, bronchorrhea; or, instead of elimination by the mucous membrane, the toxin may be thrown out by the skin in the form of

eczema or eruptive fevers. When elimination takes place through the mucous membrane, it is called catarrh. In these cases the throat and nose may become inflamed, the tonsils enlarge, and adenoids develop. Any of the mucous membranes may become involved in this elimination. In the developing of these affections, the influence of germs may be said to be bad; but even the feeble-minded should see that the evil resulting from the influence of the bacteria is the result of an overworked good.

When the same bacteria cause putrefaction of the nitrogenous foods, when those foods are taken in larger quantities than can be digested, offensive gases are given off, which irritate the mucous membrane, causing a resistance to absorption similar to that which we see resulting from the fermentation of the carbohydrates. But when the conservative effort fails, and the toxins are absorbed, they cause inflammation of the lymphatic glands; and, as these glands are everywhere, all parts of the body are more or less affected. It is the special function of these glands to arrest the toxins of acetous or of putrefactive fermentation, and neutralize their effects; but where the cause of infection is kept in operation for a great length of time, the body's conservative defenses are overcome, and we see those of the tuberculous diathesis developing pulmonary tuberculosis, or tubercular inflammations of other parts of the body; those of the gouty diathesis building rheumatism, arthritis, stone in those organs where stone is usually formed, **limy deposits in the heart** and arteries, and old-age diseases, such as arteriosclerosis, cancer, etc.; and those of the nervous diathesis building neurasthenia, tabes dorsalis, and other cerebro-spinal affections. Organic diathesis will be manifesting in the giving-down of vulnerable organs.

All influences that break down resistance become allies of the first and primary cause of inflammations- namely, bacterial fermentation of the food taken in excess of digestive power.

What is the real part played by bacteria? That of auxiliaries to the unorganized ferments--enzymes. The time must come when the germ, which is now believed by most of the profession to be the cause of disease, will be recognized as necessary to the perfect action of the enzymes; and when bacteria appear to be the cause of disease, it is when, through enervation, the digestive ferments fail to be generated in sufficient quantities to meet the requirements. The simplest form in which I can state the truth about this question is this: Germs act as pollen to the various enzymes of the body, aiding digestion and assimilation--cell-building; when there are not enough bacteria, tissue renewal is slow and imperfect; when there are too many, tissue retrogression is too rapid. Cooked food favors bacterial, or organized, ferment preponderance, because cooking kills the unorganized and organized ferments, and both are needed to carry on the body's digestion. **Raw foods--fruit and vegetables--favor unorganized-ferment digestion, because these foods carry vitamins, which are unorganized ferments--enzymes.**

In states of enervation, enzymic secretions run low, and, as a result, so-called bacterial fermentation and infection take place. What is bacterial infection? Poisoning by absorption of the toxins of putrefaction, set up in animal foods by the bacteria of fermentation. Bacteriology declares that infection is caused by germs through the toxins they secrete. But this is as impossible as producing something out of nothing. How can yeast raise dough? It cannot. Yeast causes fermentation of starch; as a result of fermentation, gas is formed, and the gas lifts the dough; the bacteria do not lift; the starch cannot lift; but a third element, which is liberated by the combining of the two principal elements, can and does lift the dough.

The Philosophy of Toxin Poisoning

When meat is eaten beyond the digestive capacity, bacteria, which are omnipresent, set up fermentation in the undigested portion. As a consequence, toxin is liberated. Toxin is a potentiality of meat, but without the influence of the bacteria of fermentation this particular potentiality would never be developed. Meat without bacterial fermentation is non-toxic; bacteria without protein and an environment favoring fermentation are free from ptomain or toxin poisons. This poison is potential in meat, but, to cause it to materialize, a compounding of four elements is necessary--namely, bacteria, protein, moisture, and heat. Without this

compounding, the potential--toxin--may never develop; or, if sufficient enzyme be added, the energy, instead of developing as toxin, becomes body and lifegiving.

Bacteria are not toxic per se; carbohydrates are not toxic per se; bacteria and carbohydrates combined are not toxic until the environment favors fermentation--until moisture and heat are added; then alcohol or acid is evolved. These two evolved elements did not exist before, except in potentiality.

Another very important point to keep in mind is that alcohol and acetic acid inhibit the action of unorganized ferments, while organized ferments--bacteria--build and thrive for a time in such an environment; but when fermentation is ended, the germs which caused it are consumed by their own products.

The Limitation of Putrefactive Fermentation

While on this subject, it may be well to observe that vaccine, syphilitic and other viruses from various forms of putrefaction, are inhibited in their action, if not entirely annulled, when the one vaccinated is normal in energy, and has a normal amount of enzymes and alkalinity of the fluids and tissues of the body. If putrefaction has spent its force, the toxins of vaccine and syphilis virus are impotent. Cadavers are not poison all the time.

Bacterial fermentation flourishes in a state of the body where acidity predominates. If no food be taken, however, the fermentation comes to an end, and the bacteria, like Alexander the Great, sigh for more worlds to conquer. Fasting and elimination prevent the body from becoming pickled.

The so-called contagious diseases attack only those who have been living on a dietary devoid of the baseforming elements.

Why Contagious and Infectious Diseases Have Declined

In the past twenty-five years there have been a constant decline of all contagious diseases, an increase in cleanliness, sanitation, and the consumption of raw fruits and vegetables, and, neither last nor least, a decline in the use of drugs. Vegetable and fruit salads are furnished by all first-class eating-houses today, whereas a properly constructed vegetable salad was almost unknown twenty-five years ago.

Cleanliness, correct sanitation, and proper eating will annul the influences that build contagious diseases, and will pretty nearly, if not quite, annul or make void the vaccination disease--vaccinea.

Food properly balanced--given a preponderance of base, or alkaline, elements--prevents fermentation; and, as fermentation is the exciting cause of inflammation and the development of all diseases or affections, such food establishes immunization--rational immunization.

Instead of bacteria stamping disease with individuality, the germs take on individuality in keeping with the chemic changes in the medium. For example, in carbohydrate fermentation the evolved toxin is acetic acid or alcohol; and in nitrogenous fermentation the evolved toxin is putrescin, cadaverin, or sepsin. The bacteria are the same, but the elements on which they act vary very widely. The specificity of the bacterium is that of yeast, capable of starting fermentation; while the toxic properties of starch and meat are potential, and would not evolve without the yeast of fermentation--the bacterium or microbe.

Bacteriologists declare it is no wonder that bacterial toxins (secretions) provoke numerous nutritive changes. The road is no longer to travel back, and so it is no wonder that there are so many kinds of bacteria, when we consider the great variety of chemic mediums in which they are developed. The bacteria not only have their individuality determined for them by the peculiar chemistry of the environment, but also their physical development.

If bacteria were the cause of disease, withholding food would allow them to destroy the patient; whereas the reverse is true. A fed patient is in danger of being overwhelmed by the poison caused by bacterial fermentation, because in disease there is little or no secretion of enzymes to counteract the organized ferments.

Typhoid fever affords a most splendid opportunity to prove that bacterial activity declines with the cessation of the intake of food; and this is true of every disease--of every form of inflammation and fever. Bacterial activity increases or decreases along with the increase and decrease of the intake of food. After the fever is gone, there is a gradual increase in enzymal power, and soon food can be taken and digested.

It should be obvious to every person that the question of overeating must be settled by each individual for himself; for it is a question of personal power--the same as mental and physical efficiency. The fact that one person is efficient is no proof that his next-door neighbor is. The fact that Brown can eat so and so is no reason why Smith can do the same. That Jones can smoke twelve cigars a day is no proof that Johnson can smoke one. It is all a question of energy and enzymal efficiency. Two men of equal power may start life together, and possibly eat the same food in the same amounts. In twenty years they meet. One is full of life and vigor, and up with the times; while the other has deteriorated--gone back in every way. What is the cause? The one who made no progress has broken down his nerve energy by secret vices or mind inactivity. The mind and body must both be active to evolve full efficiency.

Everything else being equal, why should the man who smokes have as much resistance and efficiency as the man who does not? If two men of equal nerve energy smoke, and one adds coffee to his dissipations, it stands to reason that the one who has but one bad habit has the more resistance.

Two men of equal power start life together. One worries; the other does not. The one who worries dies of hardening of the arteries, twenty-five years before the other.

Two men persist in overeating and taxing their resistance with equal amounts of toxin poisoning. Both have headache. One takes drugs for relief, and dies of heart paralysis at thirty to thirty-five; the other takes no relief, gets over his headaches at fifty, and dies of premature old age at sixty.

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CHAPTER I

Medicine

THE SCIENCE AND ART OF MEDICINE

Medicine is supposed to be a scientific study and its practice an art.

The study of disease requires the aid of science. Consummate art is required to effect a cure when nature is no longer able to help herself. Understand, nature does the curing herself, all the time. Even if nature has to be helped, she does the curing. When nature is beaten down too greatly, there is no chance of getting back.

"Medicine.--The healing art. The art of preventing, curing, or alleviating diseases."--Century Dictionary.

"Medicine.--The science which relates to the cure and palliation of disease. "--Webster.

"Medicine.--The science and art of preserving health and preventing and curing disease. "--Gould.

Rogers, in his "Introduction to the Study of Medicine," says: "Medicine is sometimes considered a science, and sometimes an art, The object of medical science is to study disease." This is a mistake. Man should be studied in life and health--the influences on the body of food, clothing, bathing, and the daily care of the body. A live man, well understood, is worth more from a health standpoint than thousands of dead men. The aim of medical art is to restore and maintain health.

A better definition would be hard to find; for the fundamentals--such as chemistry, anatomy, biology, physiology, hygiene (confined to sanitation), the mechanics of obstetrics and surgery--are scientific studies, and impart a knowledge of the animal and the human body; but the most important part of the animal or human body is life, and this subtle element cannot be analyzed, measured, or dealt with objectively. Like electricity, it must be controlled through an understanding of its agencies. It will be necessary to understand the agencies used by life when at rest-when in the static state--as seen in the egg, seed, ovum, etc., and the character of all environments in which life manifests in the active or dynamic state; also the character of environments out of which life has passed. This knowledge is necessary before the art of medicine can be applied. Hence a correct definition of the word "medicine" is:

An understanding of all circumstances under which life manifests, and the scientific and artistic skill to adjust them to life's needs--the understanding of life's needs, and the knowledge and adeptness of supplying them.

We know the difference between life and death. We become acquainted with life by studying the phenomena of life and death. We learn to recognize what life is by studying objects that possess it and objects that are deprived of it.

We learn to know what life is by carefully studying the live body; and, on the other hand, we learn to know what life is not by studying the body after life has gone out.

The study of the dead body gives us knowledge of the elements, organs, their construction and arrangement, their relation to each other.

The study of a dead organ gives its mechanical construction. A study of the construction of organs, their location, their connection with each other, gives a mechanical understanding of the functions of the body. When this is known, we are ready to observe the functions of these organs, and the functions of the union of organsthe body.

The student of mechanics and physics can readily see what an organ or community of organs will do when the energy is turned on--when animated by life.

Those who are thoroughly scientific can take hold of a heart or other organ and tell about its attributes. Why? Because one who is thoroughly master of mechanics can tell what a piece of mechanism is for.

The study of the dead body is a study in mechanics--physics. In no sense is it a study of medicine, using the word "medicine" to signify an understanding of the cause of disease.

The study of physiology is the study of the mechanics of the organ or organs and the body in life. This study is chemical: analyzing the waste products--the secretions and excretions--and the amount of organic and systemic work done under the use of different foods; the action of elements and the action of every environmental influence on the body.

All of this study is mechanical, hence can be measured by the hard and fast lines of science. It must be said that a thorough study along these lines gives a scientific knowledge of the body, its structure and functions, so far as the mere human machine is concerned; but this study is only half of the knowledge required to fully understand the human animal.

Man's body has sensation and mind, and every tittle of the body is supplied with nerves that control the mechanism of every tittle or cell. Whether the work of the cell is done well or poorly depends entirely on the energy imparted by the nerves.

The amount of energy depends upon the health of the mind and nervous system. If the mental state is not favorable--if its influence is for overstimulation or depression--all cells are overstimulated or depressed. If the food or drink causes overstimulation or depression, the cell-life and its work are perverted. These influences cannot be weighed or measured, for they vary; they come and go with the thousands of influences to which man is subjected in his daily life.

There are glands in the body, the secretions of which cannot be analyzed; for they pass into the blood without being deposited in a receptacle. But, as man is a digestive apparatus, it is safe to predict that all secretions that are not lubricants are auxiliary to the enzymes, or they are enzymes.

In the body there are developed elements which are protective--which give the body power to resist unfavorable outside influences.

The only knowledge that can be gained of these autogenerated elements is gained by observing the body when these glands are diseased or removed, and when they are natural.

If there were no new developments, nor ductless glands in the body, the mind, or the functions of the cerebro-spinal system, would furnish quite enough of the speculative, unknown and unknowable, to remove forever cause and cure from the realm of science.

Hence the great subject of healing--cure--health and disease--must be approached with great reverence from the standpoint of art. I say it must be approached with reverence, because art belongs to the flower of mind.

The artist is attuned to the subtle in nature. He has the potentiality of becoming acquainted with the subtle elements and making the world acquainted with phenomena that would pass undiscovered were it not for his powers.

There is nothing supernatural about the artist and the secrets he inveigles from nature. The elements whose individuality are hidden from us objectively must manifest through elements that are within the grasp of our senses. This, however, does not mean that they are not of the same kind and order as the gross elements. Indeed, every thing points to a universal monism--a oneness of all things.

There is no secret in all nature that will not some day be delivered to mind; but the mind that discovers it must be free from the influences of gross matter.

The artist's mind, like the refined elements with which he deals, is attuned to their rhythm.

The mind of the hodcarrier is below that of the mason, that of the mason is below that of the contractor, and that of the contractor is below that of the architect. The architect's mind is mechanical--scientific--and artistic. The more artistic, the more beautiful his work. If he is not artistic, his work may be good from a scientific standpoint, but he can never be anything except an imitator.

The physician may be scientific, but if he is not artistic, his work will be gross indeed--far more gross than that of the scientific architect; for the latter deals with gross, inanimate matter, while the former not only has to deal with matter, but that matter is potentialized by a subtle element which is not subject to the hard and fast lines of mechanical science, and it causes matter, over which it presides, to disappoint the expectations of the medical scientist.

The above explanation should be welcomed by all who care anything for truth; for it gives the key to the confusion--Babel--that is seen everywhere on the subject of medicine.

This explanation accounts for schools; for theories that are poles apart; for cures that are diametrically opposite.

Medicine, so far as aiding people to get well is concerned, is artistic pure and simple. The artist must, however, have a foundation of scientific knowledge; but if he is not artistic, or if his artistic sense is suppressed by gross habits, his work will be gross indeed, and instead of being a healer, he will be a scientific killer.

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CHAPTER II

Disease -What Is It?

While health and disease are talked of and written about as though they were two distinct entities, they should be looked upon as one and the same thing; that is, states of health. Two extremes may be named: that of good health and bad health, and the variations from very good to very bad.

Disease is a state, not an entity. Cause of disease may be an entity or a delusion, and it may be exogenous or endogenous. When cause has set up a morbific process, this is disease proper. After disease is established it becomes a cause, and its effects should be called affections. Affections are functional derangements which may become organic diseases.

Organic diseases should be recognized as affections--functional derangements--continued until organic change--structural change--has taken place.

It is common to speak of affections of the heart, lungs, and kidneys as heart diseases, lung diseases, and kidney diseases. But the truth is that these and other organs are not diseased per se; they are affected by a morbific agent acting from without or within the organism,

A pneumonia is an affection of the lungs which represents the culmination of many morbific influences. Heart disease is an affection of the heart brought on by morbific agents turned loose in the blood from imperfect digestion, or the affection is brought on from sympathetic influence. The entire organism is so constructed that an irritation at one point is distributed to all other points. An irritation of the stomach causes many functional synergies and morbid sympathies. No disease can remain local; sooner or later the entire organism becomes involved.

When the body is functioning comfortably, it can be said that health exists; when functioning uncomfortably, disease or affection exists. Disease, then, is a state of health--a state of life.

Perfect health does not exist; for a child is no sooner born than it begins to die. A cell is no sooner developed than it begins to die. In the midst of life we are in the midst of death.

Life may be described as the kinetic state of the body. If it were possible to have no change in the relation of the body and its environments, equilibrium would be established. This would bring the body into a latent or static state. The moment a change takes place, however, latency is transformed into activity; the static state becomes dynamic; and again the struggle for existence begins--growth and decay fight, so to speak, for supremacy.

To live means to die. The question, then, to determine is how to strike a balance between disintegration and building up, so as to maintain a comfortable state of the body and mind; which, interpreted correctly, means a high state of health and efficiency and the longest life.

If environing influences on the body vary slightly--only slightly--the body is not taxed greatly to keep its equilibrium; but as great change takes place the body is taxed severely to keep its equilibrium.

For example: When the weather temperature varies ten degrees between noon and midnight, the human body does not expend so much energy in keeping its equilibrium as it would be compelled to do if the variation in temperature should be fifty or more degrees.

If a person spends all his nerve energy in keeping warm, he has none left for taking care of

food. All other influences work the same way. Anything that reduces the nerve energy lowers the digestive function. When any part of the nerve energy is used up in keeping warm, there is just that much less for digesting and assimilating food.

When man is wise he will endeavor to know all the influences in his environments--the cosmic as well as all other influences; and when adjusted to them he will use his knowledge to prevent the shock of great changes.

A reserve or strong resistance is the privilege of well-born youths and young manhood; but if the resistance is carried into middle life or beyond, this splendid reserve should not be battered down because of its quantity. Only the fool can believe that a good constitution can be abused with impunity.

Disease is the morbific influence of external or internal agents on the body; and the effect of those influences depends entirely upon the virulence of the influences and the amount of resistance.

Disease may be mental or physical. As mind is built from external influences, it is necessary to look for external influences as the cause of mental diseases.

Disease seldom, if ever, comes from one influence. An injury may be sustained by a hundred-per-cent-efficient man, and, although severe, the recovery is thorough and quick. If a person of low resistance receives a similar injury, he will be a long time recovering, and his affections--his systemic derangement--may have to be corrected before he can get over his injury.

The habitual use of alcohol or tobacco may show no apparent effect on a hundred-per-cent-efficient man; but if he loses his resistance, becomes enervated, his accustomed drink, cigar, or cup of coffee strangely and powerfully affects him.

A telegram that causes no interruption--no increase of heart action--at one time may kill another.

Germs that are said to cause disease do so only when resistance is broken. At most, germs and parasites must take their place among auxiliary or secondary causes.

The prime cause of all diseases is enervation; and enervation has as many causes as there are influences in man's environment.

Whatever the first cause, enervation follows--spent resistance is another name. Then such causes as germs may act. When energy is gone, man becomes a prey to any pathological influences; even health- and life-imparting influences become disease- and death-imparting when enervation is great; it is then that food becomes bane. The first cause must be enervation, and that can be brought about in a thousand ways. The man who has spent his resistance is the man who makes friends with the germs

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CHAPTER III

The Study Of Medicine

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The study of medicine is divided into four subjects, namely

I. Pathology: that part of medical science which studies disease.

A. Etiology: the investigation of morbific causes.

B. Pathogeny: an explanation of the mode of action of causes-how cause produces the development of disease.

C. Pathological Physiology: morbid reactions under disease-producing causes.

D. Pathological Anatomy: which reveals the structural change resulting from disease.

E. Symptomatology: which accounts for disturbances.

F. Nosology: which describes and classifies disease.

II. Diagnosis: which determines the place where a given disease belongs in Nosology.

III. Prognosis: which fortells the outcome of disease.

IV. Therapeutics: which endeavors to relieve, modify, and cure disease.

I. PATHOLOGY

According to medical science, pathology is the science of disease--that branch of medical science which treats of the modifications of function and structure of organs caused by disease. Disease defined is: inharmonious action of one or more of the various organs, owing to functional or structural change.

There is special pathology, which means analyzing disease. This is divided into internal or medical, and external or surgical, pathology. Then there is comparative pathology, which considers a study of diseases in man, animals, and vegetables; experimental pathology, and general pathology.

General pathology defines terms and fixes meanings; determines the laws of morbid phenomena, determines causes, defines symptoms, names diseases.

Pathology is a description of the body, and the organs which compose it, when they are laboring under the effects of abnormal, unusual, and perverting influences.

Physiology is the study of the body and its organs in that state known as health, and under influences that give health and strength.

Pathology, then, is that state of the body known as bad health, while physiology is that state of the body known as good health.

Disease is inharmony, and health is harmony. Both are different states of one and the same thing.

When we study pathology in connection with the influences that produce it, we learn in time to recognize real cause in its effect.

To study effectually the phenomenon pathology--disease--we must combine with it physiology--health--and etiology--cause.

To study pathology--to note change in function and structure--without a correct understanding of the cause of the change, leads nowhere. To study physiology-to study the secretions and excretions from men en masse, like a composite picture--will show an average--show about what an average individual should secrete and excrete under a given environment and a measured dietary. This is good as far as it goes, but no approximation can do more than give general knowledge of physiology and pathology. This generalization will give a like knowledge of dietetics, hygiene, and all branches of medical science.

Morbific effects will be found following certain morbific causes; but on closer investigation it will be found that there are exceptions to every cause--that there is no cause that always produces the same effect; hence pathology, physiology, their causes and effects, must be studied, not only in a general way, but in a special way, and the reason for exceptions must be as thoroughly understood as the rules.

Health and disease are related in that they are two phases of one state, and neither can be known without contrasting it with the other.

Living organisms are unstable. Their state must vary with the changes that take place in the environing influences.

The phenomena recognized as different acts of life are not dependent on some mysterious force outside of the body--some vital energy animating the body--but are simply actions and reactions produced by external agents.

For example, when external variations are slight, adjustments are readily made in those of a full measure of health, but not so readily adjusted in those with resistance broken down. Where the temperature falls forty to sixty degrees in a day or night, the most robust will suffer more or less from the adjustment, and the delicate may be killed.

Pathology given exclusive attention is a fruitless study. Health in all its phases must be studied, and cause and effect must be found in everything that affects the body.

The general study of pathology today too frequently starts with an established state of the blood or the organs of the body. The primary causes are ignored or not thought of. For example: Typhoid fever is thought of as cause, which leaves, when over, modifications which persist; being too slight to be recognized, they nevertheless continue their evolution. Ten to fifteen years later a heart, lung, liver, or kidney disease develops, which is ascribed to the changes wrought by the initial fever. A correct way to view these phenomena is to recognize the typhoid as an accidental but possible link in a morbific chain started in perverted nutrition, back perhaps in childhood, or back farther in a nutritional diathesis, that makes the development of a morbid chain of perverted nutrition, with possible links of typhoid, pneumonia, catarrhal inflammations, et al.

Crises.--Life is made up of crises. The individual establishes a standard of health peculiarly his own, which must vary from all other standards as greatly as his personality varies from others. The individual standard may be such as to favor the development of indigestion, catarrh, gout, rheumatic and glandular inflammations, tubercular developments, congestions, sluggish secretions and excretions, or inhibitions of various functions, both mental and physical, wherever the environmental or habit strain is greater than usual. The health standard may be

such--the standard of resistance may be opposed so strenuously by habits and unusual physical agencies--that the body gives down under the strain. This is a crisis. Appetite fails, discomfort or pain forces rest, and, as a result of physiological rest (fasting) and physical rest (rest from daily work and habits), a readjustment takes place, and an unusual standard is attained for a short time--the patient is "cured." This is what the profession and the people call a cure; and it is for the time being--until the customary habits and usual style of living have had time to establish the regular ante-crisis standard. This standard is maintained until an unusual enervation is brought on from accident or dissipation; then another crisis. These crises are the ordinary sicknesses of all communities--all catalogued diseases. Cold and hay-fever are simply forms of crises belonging to a chronic state of toxin poisoning characterized by catarrhal inflammations of mucous membranes. When the cold is gone, or the hay-fever fully relieved, it does not mean that the patient is cured. Indeed, he is as much diseased as before he suffered the attack (?)--the crisis--and he never will be cured until the habits of life that keep up toxin poisoning are corrected. If the intoxicating habits are continued, nature will undertake to cure by hardening the tissues--sclerosis. Arterio-sclerosis is one of nature's cures. Such a cure will not take place before old age, if not forced to.

A standard of health may be such as to be forced into frequent small crises, such as colds, frequent headaches, neuralgias, toothache, acute fevers, throat affections diarrheas, constipation, etc. Each of these attacks may be looked upon as a crisis. To recover from a crisis is not a cure; the tendency is back to the individual standard; hence all crises are self-limited, unless nature by maltreatment is prevented from reacting.

All so-called healing systems ride to glory on the backs of self-limited crises, and the self-deluded doctors, and their credulous clients, believe, when the crises are past. that a cure has been wrought, whereas the real truth is that the treatment may have delayed reaction. This is largely true where anything has been done except rest. A cure consists in changing the manner of living to such a rational standard that full resistance and a balanced metabolism are established.

One hundred per cent efficiency is seldom seen. No one with an established sensual habit is one hundred per cent efficient.

Tobacco, coffee, tea, cocoa, alcohol, drug habits of all kinds lower the standard of resistance and personal efficiency; and if the habitue starts life with less than one hundred per cent efficiency, his habit or habits will bring him into more pronounced inefficiency and more frequent crises.

Any habit of mind or body that uses energy faster than it is generated must establish a resistance and an efficiency below the normal standard. Then, if the normal standard is below the ideal one hundred per cent, it must be obvious to all thinking minds that those who belong to this class must have a very precarious hold on health, and must be of the class forced into a crisis at every unusual change of environmental influences. Babies will have the diseases peculiar to nursing and teething; older children will develop the so-called contagious diseases; while grownup people will have crises peculiar to, and in keeping with, their diatheses.

All of the above concerning crises is demonstrable. Indeed, so self-evident is it that it has taken a lot of selfish conceit and dogmatism to prevent these simple truths from becoming commonplace.

I suppose it is not quite human to expect those of a standardized school of healing to give utterance to discovered truth which, if accepted by the people, would rob them of the glory of being curers of disease. Indeed, nature, and nature only, cures; and, as for crises, they come and go, whether or not there is a doctor or healer within a thousand miles. For the good of most patients, it would be well if the schools of slightly varying phases of fallacious therapeutics were driven into the sea of oblivion.

If typhoid or any disease is managed correctly, the patient will recover, and if the habits of life are corrected and the patient continues to live right, there can be no sequel from the typhoid; but if the style of living followed before the fever be continued after it, other diseases will be developed; and if an organic change has been caused by the interpolated disease, then certainly the organs so affected is most liable to give down from years of toxic infection.

Disease, functional or organic, must be looked upon as interpolated affections. The real disease is in faulty nutrition, and is of daily development.

Intestinal intoxication, from bacterial fermentation due to overeating, improper eating, and eating potentially acid foods, and foods devoid of enzyme, is a constant source of toxin poisoning. This condition is added to by retained excretions, which will always take place when the organism is enervated. The amount of food intake may not be too great under correct conditions, but the subject's power to digest and assimilate is impaired by overwork, worry, venereal excess, alcoholics, tobacco, coffee, tea, and other stimulants.

Without impaired nutrition, which is initiated by toxins introduced from without, or developed in the body, diseases, acute or chronic, cannot develop.

Suppose we take heart disease. It may have developed with rheumatism, typhoid fever, or other diseases. The effects on the heart are identical. The new disorder--the heart disease--is not caused by the rheumatism, the fever, or any other disease, but evolves from the same cause that evolved the rheumatism or other diseases--namely, the toxemia.

To treat any disease correctly, its cause must be understood. To say that the heart was diseased by rheumatism is an etiological error. The heart was poisoned by the toxins that created the rheumatism, and the drugs and other treatment for rheumatism joined the, toxins to put the heart out of commission.

The leading authorities say that visceral diseases take their origin from some antecedent cause, but that the initial disease is not always easy to find. They declare that the disease may be dormant, or develop silently, for twenty or thirty years before manifesting. This is true and it is not true. A tuberculous diathesis favors the development of tuberculosis, and the gouty diathesis favors the development of gouty diseases; but the primary cause is the same--namely, chronic toxin poisoning. This state of the blood and other fluids of the body must exist before any of the organs can go into a state of degeneration.

If the subject is scrofulous, scorbutic, or has developed a state of acidosis, and the glandular system has once been septically infected from a syphilis, gonorrheal bubo, carbuncle, vaccination, or wound infection, the gland lesions will get well under proper treatment; but if the subject becomes careless in his habits, and builds back the chronic autotoxemia, it would be the natural thing for the glands to become diseased. When the glands are once infected, they are made sensitive and will respond to toxic influences more readily.

A. ETIOLOGY

Post-mortems are held for the purpose of discovering the cause of death, and the cause is found. It may be an organic change of the heart, liver, lungs, or some other organ. Suppose an abscess is found in the liver, spleen, pleura, or elsewhere; suppose apoplexy is found; without doubt a reasonable cause for death has been discovered. But what light has been shed on the real cause of disease?

None whatever. Post-mortern revelations are as silent on the subject of ancestry as they are on the cause or causes of disease.

To find an abscess of the liver or spleen may account for death, but the very important knowledge of what caused the abscess, or what caused the cause of the abscess, is not found. On knowledge of morbid processes that would help the living to shun a like fate, all post-mortems

are as silent as death--except in deaths from injury, and in those cases only the cause of death is found; the dead tell no tales regarding the cause or causes bringing about the accident.

How is anyone who has not studied the history of morbid processes to know that a slight injury to the neck of the womb twenty years ago is one cause of cancer today? Or that the habit of drinking hot coffee twenty years ago caused chronic inflammation of the stomach that ends today in cancer of the stomach?

After having gained the knowledge that injuries, such as related above, are the cause of a fatal disease twenty years or more afterward, it is rather confusing to be confronted with the truth that only a few of those who have suffered a like cause have also suffered a like effect. Hence there must be collateral causes which are not considered, and without which the true causes and effects leading to the final fatal effect remain speculative. The profession moves in a diagnostic circle of misapprehension, always coming back to the starting point with no more true knowledge of cause than at the start.

So very obscure are the real causes of disease that it is not strange that nearly all professional men willingly disregard anything pertaining to disease except the symptoms which palpably present.

1. Enviromnent in Its Relationship to Health and Disease

The two words "health" and "disease" are used daily, but few know anything, except in a general way, of what either means.

The general conception is that health is a fixed, ideal state or entity, and that disease is a fixed state or entity whose particular purpose it is to war on health.

In aboriginal man's conception, disease was an evil spirit. In the early days epilepsy was caused by the devil. According to the Bible, an epileptic was a person possessed of the devil, or of devils.

A doctor in Cincinnati has discovered that epilepsy is caused by a particular germ, which the doctor has named "bacillus epilepticus."* (* Since this was put in type the doctor has recanted.) This devil germ takes up his abode in the colon, and from this throne torments his victim.

The Bible doctors cast out the devil Epilepticus in the name of the Lord. The Cincinnati doctor advocates casting the throne or habitat of this devil bacillus out by a surgical operation, on the theory that by destroying his abode Mr. Devil will depart forever.

It takes about as much faith to accept the germ theory as the devil theory. Indeed, both are conceptions built out of hypotheses that have their foundation in the false theory that the universe is governed by two Deities--namely, God and Devil. The whole germ theory is a refined and modernized demonology.

Cell-Life

As soon as a cell is born it begins to die. Man's body is made up of cells, and his continuance in life depends entirely upon cell renewal and cell integrity.

The cell is in an ideal state only at the instant of completion; then it begins to wear out. Man's body during his fetal life is in as near a state of equilibrium as is possible; for the temperature of the mother's body is maintained at about ninety-nine degrees F., and his life is carried on by proxy, so to speak. When born, he is subjected sooner or later to all the influences of his environment.

Health is an abstract idea. It cannot be well defined, for it necessarily must vary from birth to the grave.

Living organisms never more than approach a state of equilibrium. Indeed, no man would accept life if he could be guaranteed equilibrium; for that would be a neutral state devoid of experience, consequently with no knowledge. He could not enjoy; he could not love; he could not hate; he could not eat; he could not lose his temper; he could not be happy; he could not have friends or enemies; all of which are necessary to his development.

All man's pleasures and displeasures--happiness and unhappiness--come from the varying of his environment. Through attention, thought, and reflection on these influences is he educated. Man too often goes through life giving no attention whatever to the influences, from a health standpoint, of these various shocks to his nervous system. Indeed, very few recognize the sense of pleasure as a shock, and that evil can come from it. Just a few of the people are beginning to realize that taking food into the system is a shock, notwithstanding the fact that it is a pleasure to take it into the system, and a necessity from a building and repairing point of view. When this subject receives the serious thought and consideration of laymen, as well as professional men, there will be more inquiry for knowledge of just how far stimulation can be carried without harm, and when people get sick they will know that they have been imprudent and gone beyond the point where health can be maintained in eating and caring for the body.

When man is born in the backwoods, and his mental and physical experiences are confined to a very limited environment, the number of pleasurable and disagreeable shocks which he experiences must be almost nil compared with what he would experience in the heart of population.

Everything else being equal, he should live longer in his secluded home; but such is not the experience of mankind. The limited experience--the limited shocks--in this restricted home fail to interest him, and he grows old young, and tires of life, and dies. We cannot live longer than we want to. Books and music help to fill the life and will prolong it.

The metropolitan man is shocked by so much of love and hate, and his experiences are so educational, that life has too much of interest for him to leave it. This does not apply to the sensualist--the man who lives for pleasure; for he becomes ennuied and dies from lack of interest. The man who lives for gain will live long if he continues to be interested in gain; but if he fails, and hope is gone, his health fails and death comes soon. Unfortunately, those who have the faculty for making money--becoming wealthy--are exceedingly unwise in placing it where it will do them the greatest good, or the greatest good to the greatest number.

The body is made stronger by the shock of exercise and work. Too much exercise pushes development beyond the normal. Most athletes are overdeveloped, and as a consequence die early.

Men, after they pass middle age, should have a certain amount of exercise; but those who live a sedentary life will not live as long if their exercise is pushed to a hardening of the muscles as they will if they exercise just enough to keep the muscles well shaped--keep the tissues from falling down. Old men never have muscles that stand up and are individual, such as the athlete prides himself upon. A man who is in a trade or business that requires continuous hard work will keep his muscles well up into old age, if he is regular about his work. If he works up to sixty years of age, keeping his muscles hard from his labor, and then retires, he will not live many years--not nearly so many as he would live if he should continue his work, perhaps not doing quite so much; yet, on account of his being accustomed to work, he will live very much longer if he keeps at his labor than he will if he stops and retires.

Most men of sedentary lives are underdeveloped; their organic life runs down, and many die early.

Over-mental development always means early death. This is especially true where the knowledge is not of a character to make one wise about his proper relation to his environment.

When a great physician dies too early because of lime deposit in his arteries, what is the reason? He has not had the proper conception of his relationship to his environment.

The riddle of health in its varying stages must be known before man can brace himself against the over- and under-effects of environmental shock.

We have seen that development means shock. The shock of too much nourishment, and of too much exercise, produces disease. Neither of these causes is disease-producing within itself. Food is necessary. The body cannot live long without the stimulation (shock) which it gets from food, and certainly it must have the building material that food furnishes. When food and exercise are given within the needs of the body, everything else being equal, the body may be said to be in a state of health.

When food and exercise are supplied beyond the needs of the system, or below the needs of the system, disease is said to prevail.

There is but one deduction from these facts, and that is that health and disease come from the same cause.

Perfect health does not exist. The state varies from one that is known as robust health to fatal disease. Yet both extremes are states of health.

How can there be an entity, disease, coming out of food, exercise, pleasure, work, or anything that affects man in his environment? The answer is: There cannot be. As stated before, life is made worth while because of the various influences affecting man.

Once it was thought that the force which animated living matter was an autogenerated vital energy, but now it is thought to be reactions produced by various agents.

About as good a definition for health as can be given, according to the foregoing, is: an equilibrium established between external stimulation and internal reaction.

The temperature of the body in health is about 37' C., or 98-1/2° F. If the temperature of the room or weather is about 60, and is kept at that point, the body becomes adjusted. If the temperature rises or falls slowly, reaction on the external medium will be gradual. Where the change is sudden, either plus or minus, it upsets the heat equilibrium and may cause much disorder, resulting in disease. What is the disease? Enervation and retention of excretion. This produces toxic poisoning.

Becoming adjusted to any sudden changes causes so much agitation that life may be endangered.

The cause of disease, or the cause of a departure from health, or health perverted, is not some mysterious entity; it comes from shocks imparted by environmental agents, which cause reactions; and the reactions are for the purpose of modifying the shocks and making them compatible with life's requirements.

2. Physical Agents

Air.--Air is not classed as a food; yet it is the most important food. We can live without the ordinary foods from thirty to forty days, and we can live without water for a few days, but we cannot live without air for more than a few minutes.

Air is the gaseous substance that envelops the earth and forms its atmosphere. It consists almost entirely of the gases oxygen and nitrogen, which are merely mixed and not chemically combined.

An ordinary-sized man is supposed to take through the lungs about two thousand cubic feet of

air each twenty-four hours. It is from the air that we secure our greatest supply of oxygen.

Air at sea-level has a pressure of about fourteen and three-fourths pounds to the square inch. It decreases about one-twentieth of a pound per square inch for every ninety feet of altitude. High altitudes cause a quickening of the pulse and breathing. Most people have an idea that there is much danger in going to a high altitude quickly. There is very little discomfort, and almost no danger, to persons in good health.

It is said that, whatever the altitude, the composition of the air is always the same; namely, 21 parts of oxygen, 78.06 of nitrogen, 0.94 of argon, and a trace of carbonic acid.

The only change in the composition of the air in high altitudes is an increase in ozone. Ozone is an allotropic (allotropism: the existence of an element in two or more distinct forms--distinct physical properties).and more active form of oxygen. The variations of the chemical composition of the air do not account for the evil effects experienced in high altitudes; hence the effects must be caused by temperature, pressure, and the action of the sun's rays, which strike more perpendicularly in high than in low altitudes. At an altitude of 4,500 to 5,000 feet the temperature will mark a difference of ten to twelve degrees Fahrenheit in the sun and in the shade. If the bulb of the thermometer be covered with black cotton, the difference will often reach sixty degrees Fahrenheit. This should warn. those in delicate health to prepare themselves with a proper amount of clothing when going into high altitudes. It should not be forgotten, however, that the cold of high altitudes is more tolerable than that of low altitudes, because the air is drier.

The sun, however, does not melt snow unless accompanied with warm air. Black or dark clothes retain the sun's heat and enable the traveler to keep warm in a temperature that would be very uncomfortable at sea level.

The absence of wind and humidity in high altitudes gives comfort, whereas in low altitudes, with a much higher temperature, those who are sick and of low resistance will suffer from the cold.

Altitude.--Snow does not melt in high altitudes, even when the sun's rays are quite warm, until the air becomes warm. Snow, or white clothing reflects the sun's rays; hence dark clothing should be worn in winter, and white or light-colored clothing in summer.

As an experiment: Place a dry leaf on a bank of snow where the sun is shining; in a little while it will be seen that the snow under the leaf is melting.

Absence of wind and humidity causes high altitudes to be comfortable places to live.

Mountain air is so dry that putrefaction does not occur to the same extent as at sea level. In high altitudes meat will dry and cure without salt. Desiccation is effected before decomposition can set in. At St. Bernard, in the Swiss Alps, the corpses of men and animals never decay. The dead are placed in morgues, where they are preserved indefinitely--a form of immortality.

The air is so rarefied in high altitudes that patients are made quite nervous because of the absence of noise. Sound does not carry, because the air is not dense enough to transmit it.

It is said that the absence of noise causes a feeling of sadness.

The effect of altitudes ranging from six to twelve thousand feet, on one seeking health, will be at first, while becoming acclimated, that of a feeling of warmth on the skin. The lips will redden, and the eyes will flush. For a while one will be troubled with insomnia; a slight palpitation; or, if the heart is weak, the palpitation may be severe. There will be a feeling of dyspnea (shortness of breath); dizziness; and sometimes headache. The urine is dark, and constipation is the rule; and, from the first, the appetite is increased.

In a short time the skin becomes a tan color. The lips, nose, and hair become so dry that salves and vaseline are used to secure relief from the dryness. Strength increases, and long walks, and even mountain-climbing, do not fatigue until overeating brings on the tired feeling peculiar to food poisoning.

There is mountain sickness, which is said to be unavoidable in altitudes of from twelve to fifteen thousand feet, but not equally in all countries--probably the result of overeating and fatigue. The exhilaration caused by the mountain atmosphere induces the traveler or sightseer to exercise to excess; this uses up so much nerve energy that imperfect digestion results, following which comes intestinal toxin infection; and that is what mountain fever is.

Mountain-climbers are not equally subject to mountain sickness. This, of course, is true of every section of the country. It is said that the lack of oxygen, the increased cold, and the fatigue have much to do with bringing on mountain sickness. Obviously harm must follow an increased appetite and a decrease in oxygen supply. A decrease of oxygen favors decomposition; this is one reason for auto-intoxication.

The symptoms of mountain sickness are a feeling of growing malaise; pains in the legs, especially the knees; the mouth fills with saliva; sickness of the stomach, followed by vomiting of food; and, in severe attacks, bilious and even blood vomiting. In the advanced stages of the disease, pain in the bowels and diarrhea set in.

According to Paul Bert: "The quantity of oxygen in the blood diminishes as the atmospheric pressure diminishes. If the rarefaction corresponds to pressure existing at 6,000 feet of altitude, the oxygen diminishes thirteen per cent; at 9,000 feet, twenty-one per cent; at 25,000 feet, fifty per cent." He thinks oxygen starvation causes death in these high altitudes, and experiments that he has carried out have proved that he is right.

By "becoming acclimated" is meant that the blood acquires an increased capacity for absorbing oxygen; which means an increase in the red corpuscles and an increase in the iron contents. This being true, patients suffering from anemia, and especially chlorosis, will find benefit in living in high altitudes. They will also suffer much in traveling in high altitudes.

This is according to the best medical authority. I will say in this connection, however, that such diseases are brought on from imprudent eating. My experience is that anemic and chlorotic patients eat foods that are devoid of oxygen, until they lose their power for carrying oxygen. Why should not this be true? Nature removes an organ no longer used. If oxygen is not taken into the system in large enough quantities to supply work for the red corpuscles, there will be a gradual diminution of these corpuscles to correspond with requirements. High altitudes force breathing; hence the demand for more blood corpuscles, and the supply.

To those who are anemic or chlorotic I will say: If resort to a high and dry altitude cannot be taken, do not be discouraged; stay at home and get well. Stop sugar-, candy-, and cake-eating; use sugar in foods very sparingly. Eat uncooked fruit, also salads made from fresh, crisp vegetables, or a slaw, every day; and teach yourself deep breathing.

An increased capacity for absorbing oxygen may be developed in low as well as high altitudes by getting rid of toxins in the blood. This can be done by correcting the eating: by lessening the amount of the so-called staples--meat, bread or cereals, pudding, pie, cake, etc.--and eating more fresh fruit and vegetable salads; and exercise should not be forgotten.

Pulmonary tuberculosis is a disease supposed to be best treated when sent to high and dry altitudes. This supposed benefit is not without its drawbacks. All lung cases with a high pulse-rate should seek as dry a climate as possible, but avoid altitudes more than a mile above sea level.

Almost irreparable harm is done to blood-making and nutrition before the tubercular bacillus

is discoverable in the lungs. Prevention of this disease must start in childhood, with those of the tubercular diathesis. After adenitis (lymphatic infection) has been developed in a tuberculous diathesis, it will require unusually good judgment on the part of the patient, and unusual medical skill on the part of the medical adviser, to bring the patient back to the normal. To stay normal with a diathesis and a record of one breakdown will require great good judgment--certainly more than a residence in a high altitude, etc.

I have learned from observation that those who are well advanced with pulmonary tuberculosis, and who have a high pulse-rate, die off very rapidly when brought to Denver.

If we are to believe in the eternal logic of the universe, we must believe that sound judgment is an accompaniment of a sound body. This being true, all tubercular subjects should be directed by the wisest minds; for their own is as prone to go wrong as the sparks are to fly upward.

Curing this disease means correcting the mind and body-it means right thinking and acting.

If it is a fact that more lung capacity is needed in high altitudes, is it wise to force diseased lungs to expand? Oxygen starvation is one of the symptoms of tuberculosis, due to imperfect lung action. The lungs of these subjects are not used to their full capacity, and, as the disease advances, breathing grows more shallow, because the lungs grow more sensitive to the air. Cold air irritates and causes coughing, and, to avoid coughing, the patient learns to breathe in a more shallow manner all the time; and, of course, the less oxygen taken in, the less food is digested, and the farther away from health the victim drifts.

Sleeping-porches and other devices for furnishing fresh air and a greater oxygen consumption have been a dominating fad since a few years ago, when it was the custom to have patients sit out-of-doors in the coldest weather--wrapped, of course, enough to keep warm.

Obviously both plans are rather more detrimental than good. The object is fine, for it is necessary to have as pure air as possible; but the good is, according to my way of thinking, more than offset by the irritating effect of the cold on the lungs. Reader, stop and think: These patients are in heated houses all day, and some of them in superheated houses. At night they breathe an atmosphere many degrees colder than it is throughout the day. The house temperature through the day is seventy degrees Fahrenheit, or more; while on the porch it ranges, in Denver, from thirty-two degrees above to ten degrees below zero. The range is from thirty-eight to eighty degrees. Can anyone with common sense believe that a weak, diseased lung will thrive subjected every twenty-four hours to such extremes of temperature?

If the above is true, the modem treatment of this disease could not possibly be much worse.

If houses are as clean as they should be; if bedding is as clean as bedding should always be, patients will do much better in a closed house--closed up for the entire night--and fire enough to keep the night temperature within ten or twenty degrees of the day temperature.

All of us (doctors and laymen) must go through the fresh air insanity. Converts to new thoughts, or old thoughts, are always nearsighted, enthusiastic, and even fanatical in their loyalty in following literally and not wisely such fads. The fresh air craze has surely killed its quota. Filthy houses have done their share. Now sensible people should split the difference and keep both foul and cold air out of their lungs. To encourage those who read this, I will say: The composition of the atmosphere is always the same,* and, like all organs, it is maintained at the same composition, and must remain so until destroyed; and along with its destruction must go all animal life. (*This does not mean that the air of proper composition cannot be made the vehicle of filth. Houses, bedding, clothing, and the body must be clean.)

It is all nonsense to talk about burning up or breathing out of the atmosphere all the oxygen. If houses are clean, no harm will come to the sick by closing doors and windows to prevent them from chilling their lungs and blood by breathing an atmosphere much colder than their bodies.

Harm from breathing cold air does not end with simply causing irritation; the patient's nerve energy is used up in resisting the cold. It takes nerve energy to resist cold; it takes nerve energy to digest food. This being true, should not sick people be kept in a warm atmosphere, and fed on food that will nourish the body at the least expenditure of energy in digestion?

The nervous system of a plithisical patient should not be severely taxed in resisting cold. It must be remembered that digestion cannot be carried on with a bodily temperature varying much from 99' F.

It is a mistake for sick people to live in an atmosphere so cold that wool or other heavy, impervious underwear is thought to be necessary to keep the body warm. Air is a tonic and stimulant to the skin, and, neither last nor least, it is a disinfectant. To keep the surface of the body sweet and clean, air must get to it, and it cannot when the body is swathed in tight-fitting woolen or other underwear. Open-woven cloth is better; no underwear at all is best.

It matters not how clean a housewife may be-if she does not air her closets and clothing, she cannot boast of her cleanliness. Men who ruin their homes with tobacco smoke, rendering them unfit for women and children to live in, certainly pay a lot for their pleasure. I have known of invalid wives who could get well if their homes could be freed from stale tobacco smoke. Invalid wives are expensive.

A part of humanity live in ill-smelling houses and clothing. Many men think they are excused for ill-smelling bodies because their work is dirty. This is not necessary. Grease, smoke, dust, and iron rust or filings will make the clothes, hands, and face dirty; but I deny that it is necessary for any man to emit an odor that is offensive.

Women who take advantage of dirty work as an excuse for making themselves a nuisance from malodor should be boycotted. It is no disgrace to do work that makes one's body and clothes dirty; but there never can be any excuse for filth, and the odor that accompanies it. People who are filthy are a menace to society and should be taken care of by the health authorities, in the same manner that all decomposition is cared for.

Air and dust, sometimes called dirt, are aseptic and antiseptic. Dust is fought against by housewives, and cities hold it down with the sprinkling cars. In this way one of nature's health-imparting agencies is made inefficient.

Winds and storms are necessary; they are nature's sanitary measures. Wind is necessary for lowlands and low altitudes. Canyons are frequently swept by windsthe reason given being that they act as chimneys for conveying hot air out of the plains: the hot air rises and the cold air goes to the bottom, creating currents. These winds are sanitary; they carry out of the canyons malodors, and antisepticize the accumulated decomposition.

Vegetation grows more luxuriantly, everything being equal, in a windy country than it does in a windless country. Trees grow more rapidly in Kansas because of its winds. Chicago is noted for large, fine-looking girls, and wind. The relationship is obvious.

Walls of wood and stone around private residences in cities are menacing to the health of the neighborhood.

Houses for stock and chickens should be nothing more than windbreaks--never airtight pens or houses. All that animals need are windbreaks; they do not need warm houses, notwithstanding the fact that such protection is often given as a matter of economy--the warmer the animal is kept, the less food is needed. But this is economy at the expense of health. Warm houses and tuberculosis are close friends, and are found among the human animals as well as the brute creation.

The more air we breathe, the better our digestions will be. Warm, close houses are not so menacing to health as people generally believe. The real health-destroyer in our houses is dirt

that is taking on septic change: dirty clothes, kept in closets that cannot be ventilated and are not cleaned; decaying food, and never thoroughly cleaned pantries and ice-chests; old beds that are dressed with nice, white pillows and spreads--veritable whited sepulchers; and then the habit of keeping an ill-smelling cesspool under the diaphragm, from eating beyond the digestive capacity.

Keep the home, in every comer and recess, sweet and clean; keep dirty clothing from accumulating; keep the body and mind clean; then, when cold weather comes, it will not be necessary to keep doors and windows open or to sleep out-of-doors. Keep clean and comfortable, and avoid shocking the lungs and nervous system by breathing air seventy to eighty degrees colder at night than at midday. When necessary to breathe cold air, do so in action--when walking, exercising, or at work. Do not sit out-of-doors wrapped up, or sleep out-of-doors.

In all things it is worth while to take a commonsense view; and in the care of the body, moderation--avoiding fanaticism, which is another name for ignorance--is the safer practice, and much more conducive to long life and success.

Heat.--Heat is not food; yet it is one of food's most important allies.

A temperature of the body of approximately ninety-eight degrees Fahrenheit is necessary to insure digestion and assimilation. A continuous temperature of one degree less than normal will lead to physical destruction sooner than a continuous temperature of one degree above normal.

Just what causes the increased temperature in fevers is an unsolved problem; and it is doubtful whether it ever will be solved. Every case of fever will have to be settled individually; for, as in all things connected with health and disease, there are no unitary causes. Every effect depends upon multiple causes.

The nervous system presides over organic functioning. When nerve energy is below normal, the functions of secretion and excretion are impaired. As secretions are necessary to digestion and assimilation, these functions are impaired, and, excretions being imperfect, the waste products are retained and act as inhibitors of functioning.

Following this state will be cold hands and feet. People are said to have poor circulation, which, indeed, is true; but poor circulation must have an explanation, for those two words are meaningless in themselves. Poor circulation means enervation; means that nerve energy is low; means that the nerves distributed to the blood vessels fail to impart tonicity to their muscular and fibrous coats, stimulating normal contraction.

Heart and blood-vessels in health act rhythmically--contract and relax--under the influence of nerve energy; and this causes what we know as circulation of the blood.

Nerve energy is necessary to keep up the blood circulation and the normal temperature of the body indicated by warm feet and hands.

Anything that uses up nerve energy brings on enervation and, as hinted before, impairment of the functions of secretion and excretion. The lungs fail to exchange carbonic-acid gas for oxygen gas. When there is imperfect exchange of gases in the lungs, digestion is impaired; for perfect digestion requires that oxygen be brought in by the lungs.

Nerve energy and heat are generated when the oxygen in the blood of the arteries acts upon the carbon in the veins; and when, from any cause, the supply of oxygen is low, heat is not generated, and cold hands and feet follow. The remedy must be to remove the first cause of enervation. What is it? Excessive eating, drinking, enjoying, working, or what not. The feeding must be in keeping with digestive limitations, not in keeping with the bodily needs. There is little science and less sense in advising an enervated patient to eat "lots of good, nourishing food." The chasm that exists between my dietetic system and every other system that I have

heard of is too great to be bridged with any possible compromise. I feed my patients in keeping with their digestive capacity, while all others endeavor to force feeding in keeping with apparent systemic needs, without respect or consideration for the patient's ability to digest and assimilate.

The foods that furnish heat are the carbohydrates. Sugar is the most rapid heat-producer, fat next, and starch next.

An oversupply of heat-producing foods, indulged in continually, will end in great enervation and whatever disease the individual has a predisposition to develop.

When sugar is eaten beyond the system's needs, it will not be acted upon. If all were used up and heat generated, life would be put out from hyperpyrexia, or overheating. The amount taken above the body's needs will go out of the body by way of the kidneys or bowels; not, however, without more or less injury to these organs of excretion. It is a mistake to believe that we may indulge ourselves beyond the system's needs, with any food or drink, with impunity. Indeed, the surplus is a tax on energy to get rid of it, and this tax divides the work of nutrition. Ideal nutrition cannot be had when its work is interfered with by the work of eliminating a lot of unnecessary material.

It should be bome in mind that the law of correlation of forces must govern in the matter of food and nutrition, the same as in dealing with natural law anywhere in the realm of knowledge and science.

Heat is being consumed when the body is in pain; when overclothed or overworked; and when mentally worried, depressed, or overjoyed.

Fever is not an indication of the generation of surplus heat. Indeed, quite the contrary is true; for the body is not generating so much as when normal. The reason for the excessive temperature is that nerve energy is impaired; elimination by the skin, lungs, and kidneys is suspended, and, as a result, the excretions are retained. One of the functions of the skin and lungs is to radiate heat. If, through food or other poisoning, the nerve energy supplied to these organs is cut off, heat is retained in the body. If the cause is infection from an injury, or pent-up decomposition in the bowels, the source of infection must be got rid of as soon as possible; then the temperature will run down. Physicians in general practice often see an increase of temperature from two or three to five and six degrees Fahrenheit following indigestion caused by overeating, and if the indiscretion is not repeated, the fever may subside in twelve to twenty-four hours.

After childbirth or abortion, if from any cause the uterine discharge becomes pent up, pain and fever will quickly follow. If understood, however, and the womb washed out, and drainage established, pain and increased temperature will be controlled at once, never to return, unless the cause is allowed to return.

Pain inhibits the physiological manufacture of heat, and if it did not stop radiation, the patient would probably die from refrigeration--from loss of all bodily heat. Hence fever may be looked upon as one of the most remarkably uniquely conservative acts in all the world of pathological conservatism.

Health and long life cannot be looked for by those who are careless and indifferent about keeping their extremities warm. Cold, clammy hands and feet indicate malnutrition, and must be cured by correcting the bad daily habits that build this symptom.

Until the extremities keep warm from restored circulation, following the correcting of the disease-producing habits, artificial heat must be used to keep the feet warm. Covering on the feet and legs to the knees should be double the weight of that over the body and shoulders; or a jug of hot water may be kept in the foot of the bed to use when necessary. Do not sleep with the

feet against the heater. Through the day, if sitting much, an electric pad should be used. Keep the feet warm, and prevent further decline in health.

Do not overclothe in an effort to keep warm. Lightweight, open-woven underwear, with heavy top clothing when going out, is the proper way to meet the cold. When riding in cold weather, the feet must be kept warm. Overeating and chilling spell pneumonia.

Heat of summer can be easily borne--in fact, enjoyed--if the eating is correct. Cut the heat-producing foods down to the minimum; meat, with all fat trimmed away, not oftener than once a day or three times a week; fruit and salads, with milk and cheese; bread once a day for those who are not overweight. Wear only the lightestweight, open-woven underwear.

People who persist in overeating make themselves very uncomfortable, and they are the people who meet with prostrations and sunstrokes.

Workmen who are subjected to great heat should leave starch, fats, and sugar, or any form of sweets, alone. Drink freely of pure water--positively no alcoholics; for lunch, ice cream and fruit. The ice cream is sweet and fat and evolves heat. its effects should be watched, and if the heat is harder to endure on days that the ice cream is used, it would be wise to stop it.

Ices may be used too often, and to the detriment of health. The injurious effects of all classes of foods are so little known by laymen, and even by physicians, that few are willing to believe that their favorite "bonnes bouches" cause the discomfort they experience. I see people daily suffering so greatly that they are driven to seek relief and cure; yet they are unwilling to part with the habit that causes their unhappiness. Indeed, it is almost impossible to convince them that ill can come from so simple a pleasure.

Iced drinks should be taken in great moderation. The cold drink habit is like all other habits--it grows on what it feeds. The more ice used, the stronger the demand. A drink of ice water taken an hour after a hearty meal often generates an insatiable thirst, which, if satisfied, will positively cause indigestion, and not infrequently start a derangement that may end in typhoid fever or some other acute malady; or a chronic irritation may be started that will end in ulcer or cancer of the stomach.

Extremely cold drinks and extremely hot drinks are equally injurious. The very sick should always be watched, and artificial heat used continually to keep the extremities warm.

Thousands and thousands have died who would have lived if that one little chore of keeping their feet warm had been attended to properly.

If it could be generally known and remembered that the function of heat-making is suspended during sickness, and that the very old, the very young, and those who are greatly run down are liable to freeze up--collapse--in the hottest weather, deaths from this cause might be prevented by seeing to it that they are kept comfortably warm.

Many cholera-infantum cases die every summer--July and August--because those who care for them believe the babies feel the heat as other people do, and no attention is given to keeping them warm. Death in such cases comes from chilling or freezing to death.

Dry heat is more endurable than moist heat. A humid atmosphere is very enervating.

Every summer nearly all cities of this country suffer deaths from heat strokes.

Sunstroke usually occurs among those who are dissipated. Sensuality perhaps covers the whole class. I do not believe any suffer from this disease who are not enervated from sensuality.

Those who work in overheated places and are food- or alcohol-poisoned are in line for heat prostrations.

Various disorders may persist after a recovery from heat stroke; namely, neuralgia, headache, and sometimes strange ideas or notions. These troubles, however, result as much from wrong daily life as from the previous sickness . Indeed, such cases may be cured of these relics of former sickness if the patients will follow a proper style of living.

Cold.--Cold climates are said to be more healthful than warm climates. I am not prepared to accept that statement without qualifications. Under correct sanitary control, I believe that warm countries are more conducive to long life than are cold countries; but under neglected and bad dietetic, hygienic, and sanitary conditions, cold countries are better. And, of all countries, those of high altitudes are best. Decomposition is the menace to health in warm countries; the people die of sepsis--blood poisoning--and hepatic derangements; whereas in cold countries health and life are menaced by overstimulation and its consequent enervation.

It is true that heat is enervating, but the bad habit of eating heat-producing foods in hot countries causes hot climates to be more unhealthful than is natural. Investigation will show that there are more people who grow old in warm countries. Cold is hard on old, and on very young, people.

Explorers of the polar regions state that they stood a temperature of from forty to fifty degrees Fahrenheit below zero, without suffering, when there was no wind. It is said that life may be maintained at from seventy to ninety-five degrees Fahrenheit below zero. Authors of this statement, however, counsel against exaggerating the importance of this fact. On an average, about seven hundred persons perish every year in Russia from cold.

All ages do not stand cold equally well. Adults resist the cold best. The old and young chill easily.

The enervated, or those with weakened nutrition, must keep warm.

Discouragement, overwork, starvation, or any influences that depress the mind as well as the body, render the individual unfit to stand exposure to cold. Any enervating habit removes resistance to cold. Drinking of alcoholics overcomes man's resistance. Brandy-drinking, as practiced in Russia, often causes serious suffering, and a few fall dead on being exposed to extreme cold after indulging.

There still persists a popular obstinacy or ignorant belief that alcoholics, or so-called stimulants, are an advantage to those who are exposed to cold, or subjected to fatiguing labor. The truth is exactly the opposite of this belief; for alcohol, in any form, enervates by removing the normal tonicity. Man in a full state of health has tone--a normal irritability or excitability--that enables him to act and react on his environment. A man in full vigor can control or react of strike back, but the impotent man has no control and cannot react or strike back. The rage of King Lear marks the acme of senile impotency. Indeed, anger means impotency; the greater the lack of self-control, the more impotency is marked.

Alcohol is not a stimulant nor a tonic; it is a drug that deadens sensation. Hence its first, last, and only effect is to paralyze. The reason why drinkers like it is because it deadens sensation. The more enervated the alcoholic habitue, the less responsible he is for his acts.

To send a drunkard or a drug fiend to the electric chair is certainly the acme of social stupidity. We have quit legally killing those whom we know to be insane; yet we are slow to recognize the drunk or the dope fiends as artificially and temporarily insane.

Fever often produces mental hallucinations, but these states of aberration are not so often due to fever as to drugs. Alcohol and opium have sent many patients through windows to their death. Suicides and homicides are oftener the acts of brains crazed with drugs than the result of viciousness. And society is so ignorantly stupid as to license drug and gin shops, and clothe physicians with authority to build lunatics for our courts to run into the penitentiaries, hang, or

electrocute.

Habits are easily formed. It is an easy matter to go from alcohol to morphine. These drugs do not act the same, yet both of them deaden sensation and are habit-forming, and both produce physical and mental impotency. It matters not in what quantities taken, they weaken resistance and render those who use them less and less efficient for their work.

There is nothing except food that gives man strength. And too much food--eating beyond the digestive capacity--will cause weakness. When food is taken beyond digestive capacity, and a habitual intestinal fermentation is established, the individual loses his power to keep warm. Victims of this state may put on the heaviest clothing--indeed, they usually wear heavy woolen underwear, often two suits, and the heaviest top clothing--yet the more clothing they put on, the more they may. Still there is no comfort for them; for the more clothing put on the body, beyond just enough to protect from wind and weather, the more such people suffer from cold. Heavy clothes break down resistance, and if the habit of wrong eating and heavy clothing is continued, the refrigeration of death will relieve the unfortunate victims of this health-destroying habit.

When a man is in full health, nothing can add to his strength. Emotional excitement may cause him to use all the power he has for the moment, but the result is enervation that will require more than the usual amount of rest to restore. The same is true of protection with clothing. The body in health has power to protect itself from the varying temperatures. It can adjust itself to all degrees of heat and cold, and needs no protection except from inclemency. And when these facts are ignored and artificial protection is indulged in, self-protection is lost, which results in disease.

Food and clothing beyond necessity, close houses, artificial heat, stimulants (?), and tonics (?), make a conglomeration of influences that spell d-i-s-e-a-s-e and early death.

The body should be protected from wind and weather, but not from contact with the air. The body must live in the air. Open-woven cotton or linen underwear, or a sleeveless and legless light-weight garment that stands for cleanliness rather than bodily protection, is all that is necessary; then the top clothing may be adjusted to be in keeping with the weather conditions.

This is quite the opposite of what is recommended by modem medical science. But it should be known that modem medical science is a wonderfully wroughtout system of palliation which in every particular "borrows from Peter to pay Paul;" breaks down health to relieve suffering; builds a fatal disease by relieving or palliating an innocent one.

In the matter of prescribing for those who are breaking themselves down--becoming so enervated that the chill of death is sending its messengers of warning--the really up-to-date doctor will prescribe heavy woolen underwear and more "good, nourishing food;" and, as auxiliaries, stimulants and tonics to quicken the circulation and give strength! Such trifling with health and life is a disgrace to our civilization. Patients applying for advice--for relief from such symptoms--should be educated into health habits; not turned off with short-lived palliatives that will become allied with the patient's bad habits to hasten his destruction.

Those who find themselves distressed by a weather temperature that does not appear to inconvenience those about them should get busy correcting bad eating, clothing, and housing habits.

Do these people need heat-producing foods? Most of them have broken themselves down by overindulgence in these very same foods. Will they be benefited by eating more of them? This is exactly what modem medical science declares; and the result is more breaking-down, more disease, and at last premature death.

Rest--physiological and physical--whole or partial withdrawal of food, and quiet in bed, with artificial heat, and food only when comfortable, will soon right such patients.

As soon as habitual decomposition in the bowels is overcome, these patients begin to warm up; feet and hands gradually grow warm; the mind and body grow more active; the outlook becomes brighter. Often this change not only restores physical and mental health, but it puts the victim on a solid financial basis. People poisoned with alcohol or drugs, or who are toxin-infected, stumble over opportunities every day; they see others succeeding by, perhaps, picking up the opportunities over which they themselves have stumbled.

Those who are cultivating cold feet must not be surprised to find themselves lagging behind in the affairs of life; and they will certainly grow more diseases from day to day.

Death is a coldness that knows no warming; and the unfortunate person who has cultivated cold hands and feet is started toward that final state.

The greater the intensity of cold, the more pronounced its effects on the parts exposed. At three or four degrees below zero, redness is excited; treble the amount will cause swelling; and six times that amount of cold will result in gangrene.

The first effect of cold is a feeling of fatigue and a desire to sleep. But if sleep be indulged in, there will be no awaking.

Light.--Light is necessary for health. Germ life is destroyed by it. Plants do not thrive any better than animals in the absence of light.

Light is a stimulant, and of course can do injury to those who overindulge in it. Those who chase fad cures, and who are not happy until everyone is in the ground too deep for resurrection, will, while taking the sun-bath cure, blister their bodies and torture themselves in every way, that the sun's rays may be used. When this so-called cure ceases to be disagreeable, they will decide that the remedy has lost its effect, and away they go searching for a new cure that will be disagreeable enough to be curative. A cure with them is valued according to the extent of its disagreeableness. The cure idea with such people has not evolved away from exorcism--disease and cure still being a system of demonism. With the profession the demon has dwindled to a microscopic germ.

Clothes keep the light away from the body, and, because of this, man suffers more or less from light starvation. When such subjects are persuaded by a monomaniac healer to expose their delicate bodies to the direct rays of the sun, they will be very uncomfortable.

When people become accustomed to living in Colorado, and have cultivated the sunshine habit, they are not satisfied to make their homes in a country where the sunlight is shut out by clouds and rain. Light builds optimism, while cloudiness or shade causes more or less pessimism.

Light increases the amount of carbonic acid thrown off. It is said that when the body is brought into the light with the eyes shaded, carbonic acid rises twelve per cent; then, if the eyes are bared and the body covered, the carbonic acid rises to fourteen per cent; when eyes and body are exposed simultaneously, this acid rises to thirty-six per cent, exceeding the combined separate exposures by ten per cent. This increase indicates more combustion; and, in fact, there is a slight elevation of temperature. In children it ranges from one-tenth to one-half degree Centigrade.

The sun's rays, either direct or reflected, will cause a skin irritation--erythema--accompanied by an elevation of the epidermis, with serous liquid; that is, the skin blisters and causes great discomfort. When the sun's rays are reflected from water, the action on the skin in one day is very pronounced.

Pellagra is supposed by a few to be caused by the sun's rays; by others, to be caused by consuming spoiled maize--corn. It has not been my privilege to see more than one or two cases of pellagra; but, judging from what writers say about it, it is probably caused by excessive

starch-eating; or it may be the combined effect of starch, sweet (molasses), and the sun's rays and hot weather. This disease, and hookworm, should be eradicated by correcting the personal habits of those afflicted with them. It is a mistake to look for a unitary cause for these diseases; for, as with all others, there are many causes, and just what causes them in one individual may not be the cause in another. impaired nutrition is the fundamental cause.

Darkened houses are proverbially unwholesome houses. All houses should be built in such a manner as to secure as much light as possible. When light is furnished, air is sure to be, and provision for both these elements makes it almost impossible to overheat.

Blue rays have been used to restore hair; Roentgen, or X-rays, and violet rays are used to treat cancer; and all the rays of the spectrum have been used as remedies for diseases. But these remedies soon fall into disuse because of lack of merit. A few enthusiasts--specialists on skin diseases, or cancer specialists--have lost their lives from administering the X-ray; others have lost fingers, hands, and arms. I have seen cancer patients fearfully burned by the use of the X-ray--and that, too, without corresponding benefit.

The ability of radium to disorganize tissue has caused it to be used and recommended. All these remedies, including the plaster cure made from escharotics, appeal to patients as well as to doctors. Why not? If these remedies can cause the disease to drop out, "root and all," what can possibly do more? Commercialism is just now exploiting radium; but, like all cures based on a false theory of disease, it must fail.

The professional mind seldom thinks farther than to the radical removal of the disease-which is seldom, if ever, anything more than removing effects. That the cause may hark back to a faulty nutrition, and that this fault may be caused by one or more of a thousand-and-one enervating causes, is not thought of; or, if it is, no consideration is given it. It is easier to think palliation and work palliatives.

It is doubtful if anyone will develop a cancer who lives in a properly lighted, aired, and heated home, and who takes reasonable care of his body and mind, and keeps intensely interested in life.

Shut out the light and air from the body with thick, closely woven, close-fitting, and overheating underwear; live in a house in keeping; then have a dietary to correspond, and this will create a habitat in which any disease is liable to spring up and thrive.

A bright light held before the eyes and gazed upon is liable to bring on a state known as artificial slumber or hypnosis. The name of "Braidism" is given to this phenomenon because a man by the name of Braidy discovered it.

The influence of light and shade on the nervous system must be very great, and it should be better understood. Let us hope that it will be.

I have seen young children thrown into convulsions by allowing a bright light to glare into their faces when they were nervous and feverish.

Care should be exercised with babies to prevent shocking them by allowing strong lights to flash into their eyes.

The moving picture shows, attended frequently and over a long period of time, will create nervous derangements. No doubt many are being injured in this way. Those with functional, as well as organic, diseases are having their symptoms aggravated by frequent attendance at these shows; but they have not suspected the cause. One or two hours at a picture show will use up as much nerve energy as a whole day at the usual vocation. The combined effect of eye- and ear-strain--the picture and the music--is very strenuous and nerve-exhausting.

Sound.--The nervous system of those who live in large towns and cities is put to great stress.

We are fast approaching a time when the noise nuisance will have to be legislated out of existence, the same as other nuisances that have been squelched.

The automobile need not be a nuisance, but it certainly is. The majority of people who drive their machines act as though they had a special commission to make as much noise, split as much air, and kick up as much dust as possible.

Since the automobile and motorcycle have come to stay, there has sprung up a type of people who really believe that their other name is pandemonium. Unless they are kicking up enough noise to wreck the "nerve" of a political lobbyist, they will not be able to "split the ears" of His Majesty, the Prince of Perdition, when they go to him; which they will, for they certainly will be out of place at a "rest" resort. The average chauffeur plays with the cut-off as the average motorman on the street car plays with his bell.

The street car is made up of the quintessence of noise, and the motorman has become so noise-crazed that he clangs his bell--not because he is approaching a crossing; not because he has a slow coach in front of him, but because he is playing an accompaniment to his thoughts. He thinks noise, hence he plays noise.

The car itself is a gamester of noise "par excellence.'? But health declares it a disgrace to civilization. Not the slightest attention has ever been given to constructing a silent-running car; it is put together so that every part becomes a rival of every other part in creating din. Then, when this roar-monger is manned by a real bellringer, hell is certainly turned loose when this peace- and quiet-destroyer is sent over a street every thirty to sixty seconds. There is positively no excuse for inflicting such punishment on humanity. Surprise is expressed at the number of people committing suicide and going insane every year. Unless commercialism is controlled in its selfishness, it will fill the world with mad-houses and penitentiaries.

Fill a street with modern cars, and a lot of automobiles with their cut-offs opened and conks conking, and we certainly have a state of uproar that must cause degeneration of the nervous system of all human beings subjected to it.

Why should we wonder at the increase of insanity and crime, when we add to the din the thousand-and-one other nerve-destroying habits of social and business life?

Every lover of music and art should protest without ceasing against the growing tendency to convert this beautiful world into a hideous nightmare of inharmony. When it is admitted that "silence is more musical than any song," why should the mongers of noise be allowed to rule?

Is there anyone so simple-minded as to need to be told that such a bedlam as exists in every large town and city is subversive of ethics, art, and religion? The beautiful, sonorous, and euphonious sounds are suppressed by the uproar, and the prospective mothers of the coming generation are forced into developing a distorted nervous system to impart to their children.

We must certainly expect to reap as we sow. Can any but the fool believe that we can sow inharmony and reap harmony--sow pandemonium and reap Utopias?

Disagreeable sounds, smells, sights, tastes, and feelings are so intimately united and blended with commercialism that there is little hope of overcoming them. With this it is the same as with disease-producing beliefs and so-called cures. The present style of curing and immunizing is so much a part of Rockefeller's millions, and other millions, that there is no hope of any considerable reform. The masses move along tied to the yoke of mammon; the poor, sick fools denounce the system that they declare usurps and exploits them; yet in every other way they uphold it with ballot and voice.

The noise system is a cheap-John scheme. It gets up cars as cheaply as possible--which means that they must be noisy. It charges as much as the law will allow. The patrons are shaken and jolted as only a springless and bumperless car or wagon can shake or jolt; and then their finer

senses are shocked, through the auditory nerves, by the noise that almost prevents thinking. All this wears out the patron; it injures him as a citizen; his health is impaired. The health, morality, estheticism, and artistic development of the people of any city may largely be measured by its cleanliness and absence of noise. A public utility that is grossly selfish, and tears the people down to lift itself, is certainly penny-wise and pound-foolish.

When people are nervous, they lack in judgment--they do not make the progress in trades, professions, arts, music, and business that they should. A city made up of noise-crazed people will not make progress in a substantial way. Why? Because noise-crazed people are nervous selfish, disloyal, and unable to see that to gratify themselves to the detriment of the city's best interests is to cut their own economic throats. This is exactly what every street-car company is doing when its economy lowers the moral, health, and sanity standard of its patrons.

Make a city clean and quiet-or as nearly noiseless as possible. Every utility should be run in the interests of its patrons, on the principle that people well served are happy, healthy, and prosperous, and possess drawing power. They attract other people to their city. Such a city grows; its property advances; and, according to the law of "like attracts like," a prosperous community attracts prosperity.

All physicians who know that sickness is brought on, wittingly or unwittingly, from practicing many bad habits, and from unwholesome environments, by wearing out the nervous system with a lot of unnecessary noise, or by any influence that uses up nerve energy, know that rest is one of the most important elements in any therapeutic plan-rest of body and mind. This means that the body must not labor; that the mind must not labor; and that the nerves of special sense-namely, sight, sound, taste, smell, and touch--must rest from labor.

Everything may be done for a broken-down individual except securing quiet--absence from noise; and if this requirement alone is neglected, restoration to health will not take place. Nervous people must secure rest from noise, because nothing is so uncompromisingly destructive to the nervous system as noise.

It is the duty of parents to control children. When several get together, they are inclined to push their funmaking to excess, and from small noises they go to larger and larger, until they become hysterical. If this is permitted day after day, the decidedly nervous temperament will lose more or less power over coordination, and this will lead to chorea, or St. Vitus' dance, or other nervous diseases.

Light, very restricted eating, and quiet in bed, with visits from children interdicted, is the proper treatment. Such patients must be kept in bed until every sign of irritability and muscle-twitching has subsided.

After nervous children recover, a limit must be set to the amount of play indulged in; and excitement of all kinds must be avoided. The diet of such children must be simple: toasted non-yeast bread, butter, and milk for two meals each day; and fruit, cottage cheese, and milk for one meal. Quiet and rest is the principal remedy.

Not many know that music has other qualities besides the power to "soothe the savage breast;" or perhaps I would better say that most people think that only good can come from music. Inharmony disturbs rhythm, and anything that interferes with rhythm strikes at the base of development and interferes with growth--nutrition.

Everything capable of producing an effect may be said to have at least four influences; namely: a good, natural, or wholesome influence; then an excessive, defective, and perverted influence. This is true of music. I know of people who are made very miserable by music--it might be said that they are badly influenced by it. Then there are strong, healthy people who are driven almost mad by poor or defective musical execution, but who thrive in an atmosphere of harmony.

All people are not attuned to the same key; or it may be possible that it is easier to adjust the nervous system to the different tones than to fall into harmony with varying time.

Sensitive children drive themselves into nervous prostration by the inharmony they produce when compelled to spend long hours in practice.

It may be that only inharmony (noise called music) is to blame for the nervousness I have seen in music teachers and their pupils; but I know that many suffer much from music, or the noise of practice, or butchered harmony. Of course, there are other influences which must be considered besides the noise of musical instruments. They are food, mental, and physical bad habits that help noise build nervousness and break nervous people down.

School children are overworked. School, music, and social duties wear some of those who are food-poisoned to nerve exhaustion.

When enervation is pronounced, as we often see in mothers of undisciplined children, such mothers must be taken away from home environments to be cured of their diseases. There is always something unusual--something out of the ordinary--the matter with mothers who cannot get well in the environment of home and children; for the mother-love converts din--what uninterested people would call bedlam--into sweet music. The ear-splitting shouts coming from one of her future great men she interprets as orders by the captain of the guards; another, whose voice dominates all others, is her Beecher or Spurgeon; still another is a captain of industry who will control all the iron industries of the country. So intensely is her mind fixed on the future of her children that their noises are material out of which she builds their future, and the success that she has in placing each one at the head of his specialty medicines every pain she has. Where this is not true, an accident at one of her confinements has caused septic poisoning, which has reduced the oxygen-carrying power of the blood fifty per cent, causing oxygen starvation; and her brain is so illnourished that her self-protecting imagination fails to convert din into sweet music, and she languishes and dies unless removed and carefully nursed back to the normal.

If our noises are grinding a grist that feathers our nests, the success antidotes to a degree their evil influences on the nervous system.

When a din becomes the vehicle in which to ride to success, it becomes for the time being a tonic, even if it builds insanity when reverses come.

Sound may be health-building and it may be mind-destroying; it all depends on our relationship to it. It comes under the old rule: What is one man's food is another man's poison.

Electricity is a mode of motion. It is said to be interchangeable with light, heat, cold, and sound. The power of a waterfall, and mechanical energy generally, may be converted into electricity, and it may be generated by transforming chemical energy also.

Life may be looked upon as a mode of motion; or, if you please, transformed light, heat, or electricity.

Matter and motion appear to be the cause and effect, and the effect and cause, of everything. It is a mistake to look upon matter and motion as two entities. Matter is. In one of its states, when at rest, it is static--in a condition of absence of motion; when active, it is in a dynamic state--in a state of motion. Motion is inconceivable as an entity; it must be the expression of something--and something is mentally conceived as matter. There are no such things as matter and motion, health and disease, strength and weakness, knowledge and ignorance, etc.

There is matter, and it may be in a static or dynamic state; there is health, and it may be in a good or bad state; there is force or strength, and it may be in a strong or weak state.

In the last analysis there is something, and we call that something matter. The various manifestations-the various shocks and reactions that we experience--are caused by the different

states of matter of which we ourselves are a part.

The primary or elementary states of matter we denominate light, heat, cold, sound, life, etc. Why light, life, or any other state of matter presents may be explained in many correct ways, but a kindergarten explanation may be such as I have sometimes used, namely: The elements of matter may be brought together in such a way that the summa summarum (sum-total) expression is that of light. A little change in the arrangements of atomic structure gives out heat, and another change gives out sound; and so the changes may be made, each giving out a sum-total expression, one of which we call life, and still another, more subtile than all the rest, we call mind. And all these states of matter we like to think of as entities'. but they are notthey are different states of matter.

Animal life cannot be suspended longer than a few minutes at a time, with any hope of resuming its manifestation. Hence it is possible that the elements of the body may be so compounded as to develop the different states we call light, heat, cold, sound, electricity; and, in doing so, air, food, and water are converted into life.

It is almost, if not quite, proved that the energy presiding over, or governing form, is electrical energy. Probably all formative energy is electrical, and possibly the question of sex is a question of a given number of electrons in the atoms comprising embryonic cells.

The ultimate atom, or unit of matter, according to present scientific developments, is conceded to be the electron, which is declared to be a literal atom of negative electricity.

We have become so used to thinking of the various states of matter as entities that it becomes almost impossible to express ourselves in any other form. If I lapse into referring to the different states as individual, I crave the reader's pardon and his indulgence in substituting in his mind the word "state" where I possibly may express myself as referring to "entity."

If in what follows I appear to individualize, entitize electricity, I do not mean it. Electricity, the same as every natural force, is a state of matter.

"Like electricities tend to repel one another," and, according to Lord Kelvin, the atom is held together by a core of positive electricity, which is known as an "ion." The problem of atomic architecture is to reconcile the common attraction of the ion for all the electrons with the mutual repulsion of the electrons themselves, so as to produce a stable structure.

By the aid of mathematical theory, checked by actual experience with magnetized needles--to represent electrons--floating freely in water, under the influence of a centrally placed electromagnet, Professor Thompson has been able to unravel the architecture of the atom.

The atoms of the different "elements" vary only in the number and arrangement of their electrons; every electron, wherever observed, being absolutely identical with every other.

Electrons are found to be arranged in concentric rings within the atom, and the presence of a certain number of them in each ring is necessary for holding any given number in place outside of them. The stability of the atom, therefore, depends on the number and arrangement of the electrons it contains.

Such a thing as an absolutely stable atom--a fixed, never-changing atom--is inconceivable.

Professor J. H. Thompson, of Cambridge, explains how atoms of one element, by losing their outer ring of electrons may be transformed into those of another. This also explains or suggests a law of natural selection among atomic species.

Of the many atoms that have attempted to gain a place for themselves during the countless past eons, there are some eighty that have survived.

This theory is consistent with evolution, and it is to be hoped that it will be proved out in all departments of learning.

We have seen, according to the latest accepted theories, that atoms are in reality atomic electric batteries--that each atom is an arrangement of electrons, or negative atoms of electricity with central core, or ion, of positive electricity.

To prevent perplexity, I will say that, from present knowledge, there are no literal atoms except electrons; all other so-called atoms are compound structures, made up of positive and negative electricity.

Electrical energy is hardly ever used as such, and only after it is transformed into other forms of energy; namely, mechanical, heat, chemical, and light.

Electricity as a remedy for the cure of disease is one of the fads of modern therapeutics. Outside of the benefit derived from suggestion, and the harm caused by so-called therapeutists in their endeavor to cure the sick, there is nothing in the remedy as understood and used today. The market is full of electric belts, garters, amulets, rings, hair-restorers, oxonizers, and all sorts of monstrosities in the shape of instruments and appliances, too numerous to mention. Outside of the suggestion of cure, or what the patient believes will take place after their use, they are not worth a fig a carload.

The profession uses the galvanic and faradic currents; also the X-ray, high-frequency, and static electricity. Very little good comes from any of these. A foreign body and broken bones may be diagnosed by the X-ray, and as a means for diagnosis this form of electricity has come to stay. For the generation of mechanical power, electricity is used. Vibratory instruments for giving mechanical massage are beneficial; but electricity is used only as a generator of the power. X-ray and other light-producing agents are used for the effect of the light--for the stimulation and tonic action. The X-ray can and does kill the tissues, and causes sloughing. Cancer has been, and is yet, treated with electric light. Results are unsatisfactory and doubtful. The radium treatment causes sloughing of tissue. All the new fangled remedies are not a whit better than the old-fashioned escharotic drugs that have been used in the manufacture of the well-known cancer plasters; some of which are "trained to eat out only the cancerous tissue. root and all"!

Electricity, as electricity, cannot be utilized by the human organism. How is it possible to use a state of matter? Life, light, heat, cold, sound, electricity, are states of matter. How can these states be used as food or remedy? Perhaps only as electrons, found in atomic and cellular lifein organized form. Is electricity utilizable? Possibly as electrons--units of matter--but not the force with which these units are torn from organized matter. The force is what is called electricity--not the units of matter carried with the force. The debris gathered in a cyclone is not the cyclone; the force or energy set in motion is the cyclone. The idea of imparting electrical energy to the human body lacking in energy is one of many common errors.

An enervated subject cannot be forced to receive energy. This is attempted by many physicians when they undertake to force food on those who are run down and enervated from lack of digestive power. Nature will not stand for forcing measures. There is no place for heroic treatment. Every vital process has safeguards thrown about it by nature, and those guards cannot be ignored or torn down with impunity.

In enervation, organic functioning is impaired. This means that the organism is deficient in power to take from the blood such matters as are necessary for repair or for the performance of its normal functioning. The organism, once reduced to this state, will remain so, unless the necessary rest can be procured. It is not mere building material that is needed; it is not stimulation that is needed; for enervation is the sequel of overstimulation. Rest is the remedy; and, as rest is secured, electrical energy will be supplied by food, air, water, light, and heat. This subtile energy cannot be forced on the organism in the gross manner offered by the bull-in-the-china-shop methods of modern medical therapeutics; an enervated state cannot be cured other

than by physiological rest--fasting--and physical rest; not exercise, work, stimulation, and starvation. Electric therapeutics amounts to but little more than chemical or mechanical irritation. Locally applied, it may do as much good as a mustard plaster-act as a counter-irritant.

Giving iron to those who are anemic or dysemic, and lime to those who need lime, is on the same order. The rule is that very few are dysemic because their food is deficient in the elements needed. The cause of deficiency is lost selective and appropriative power, and the more of the inorganic elements offered the system by way of drugs, as remedies or food, the more the dysemia develops, until the unfortunate victim is forced from functional to organic derangement, and on to premature death. This is not necessarily a rapid development. Such patients are seeking in vain for cures for from ten to twenty-five years. If they start at from twenty-five to thirty, and require twenty-five years to wear out, trying palliatives and false cures, they certainly die early enough. Besides, efficiency has been wasted in physical and mental impairment caused by disease and so-called cures.

If present scientific developments augur well, it will not be long before we shall know positively that electricity, or electrical energy, or more surely the electron, is the alpha and omega of all things; and, from a health standpoint, a knowledge of bow to conserve, utilize, and generate this energy will be the "summum bonum" of a successful therapeutics.

The most we know today of how to supply electric energy is to have the enervated--the impotent-rest. In a state of rest this energy appears capable of accumulating; and we know from daily observation that unrest, activity, and overstimulation cause its dissipation.

The farmer knows that rest restores energy and potency to land that has lost its fertility from use. But he does not know that ground granite or feldspar will restore its productiveness, and that in all probability the fertilizer "par excellence" contained in it is the static electricity that has entered into its formation and is liberated when the rock is made into bread.

I have proved out on electricity as a remedy the same as I proved out on the regular materia medica.

I once used the galvanic current in treating fibroid tumors, and believed that the electricity caused absorption. But I have learned, after years of experience, that the only really effective remedy is the correcting of bad habits which break down resistance, after which, physiological equilibrium is lost, and this allows cell growth to be perverted.

Lost resistance means lack of energy--lack of life force; and, according to the few hints thrown out regarding the electric architecture of the atoms, when enervation is pronounced, there is probably a dissipation of electricity--electrons--and a consequent change in the structure of the atoms that build the cells. As a result, we see tumors and growths of different kinds, and hardening of tissue--arteriosclerosis--stone formation, etc. If this is a true explanation of the cause, the logical remedy would be to furnish the system with electricity; but to turn. the battery and flood the body with a great current of electricity would be about as appropriate or logical as to tie a rock around the neck of a thirsty man and throw him into a river to relieve his need of water.

Nature never supplies wants in such a blustering way. The rock is built by feeding it with an impalpable supply. If this is true of rock-building, what must be the subtleness of tissue growth, and how slight the change required to convert normal tissue into abnormal-healthy flesh into cancerous!

Instead of flooding the surface of the body with a current of electricity--which the use of a battery means--the therapeutist must know how to cause the body to secure its electricity from the air, light, and food.

The average work done by physicians and surgeons in their application of remedies is what

one would expect of a house painter put to work to paint a portrait. There is a lack of delicacy. It is true that there are many skillful and delicate operations performed; there are also skilled matadors and butchers who perform skilled operations. We should not hold the idea that expert skill in operating is sufficient excuse for operating. I say, with no fear of successful contradiction, that the majority of operations performed have no excuse for being done except that they are done skillfully. In treating patients with electricity, they must be placed in a state favorable to receiving the inflow as offered by nature. All that is necessary, usually, is to learn in what way this energy is being dissipated; then stop the waste. Indeed, this is the simple formula for supplying the human body with all its needs.

3. Chemical Agents

Caustics

Caustics are chemical agents which produce disease through their power to destroy tissue.

As followers of my medical philosophy will use no drugs, they will not be interested in drugs, either of high or low degree.

The action of a caustic is that of causing necrosis or gangrene of the flesh that comes in contact with it. After the flesh is killed, the process of sloughing takes place. This process means that under the dead tissue the living is carrying on the work of separating the living tissue from the dead. The dead undergoes suppuration--disintegration--dissolves, and runs away as pus. Enough serum of the blood is carried to the borderland of the injury to neutralize and wash away the poison of putrefaction.

The normal chemical state of the fluids of the body is alkaline, while that of decaying tissues is acid. To prevent the acid--the septic--fluid of decaying tissue from being absorbed or taken into the body, where it would set up septicemia--blood poisoning--the living tissue that is in proximity to the sloughing tissue is infiltrated--saturated--to overflowing with the alkaline serum of the blood. This accounts for the great amount of fluid and pus seen in all suppurating processes. Pus is laudable when alkaline. Pure vaccine--if there is any--is dried laudable pus, and is inert.

If a wound is closed and the discharge has no outlet, the pus becomes ichoroid--septic--poisonous, sets up blood poisoning when forced absorption takes place, and death follows from blood poisoning. Septicemia is the professional term for pus poisoning.

It is said that the skin resists the action of caustics by throwing out a secretion which furnishes chemical elements that join the caustic elements to make an insoluble compound. Nature is busy meeting and destroying the influence of enemies of health and life. In this work help is needed, and the physician should be able to read the language of nature and assist her in her efforts to keep a rational and sane balance. On account of misunderstandings or lack of interpretation of systemic needs, the physician is often enlisted with the body's foes, and is tearing down rather than building up or defending the body.

Caustics are divided into **coagulating** and **liquefying.**

Coagulating caustics are those known as metallic salts, the various acids, etc. Nitrate of silver, nitric acid, nitrate of mercury, zinc chloride, and the actual cautery (white-hot) are a few that may be listed with these chemicals. These are so powerful that they kill the skin at the instant of contact.

Acids may be neutralized at once if plenty of water is handy; for water dissolves the acid and dilutes it into a harmless solution. The leading acids are: nitric, hydrochloric, sulphuric, and chromic.

Nitric acid produces a yellow eschar; sulphuric causes a black eschar.

Liquefying caustics are potash, soda, and ammonia.

The scars following the sloughing caused by caustics are often severe, causing contractions and disfigurements.

Toxin (Poison)

Any poisonous nitrogenous compound produced by animal or vegetable cells.

"Any poisonous substance--protein in nature--produced by animal or vegetable cells."--Gould's Medical Dictionary.

Toxins are those substances which, when taken into the body, or if developed within the body, are capable of so changing the fluids as to cause sickness or death.

There are two orders of toxins resulting from the fermentation of protein and protein compounds. One is physiological and the other pathological. Snake venom is a type of the first, and sepsin---putrefaction--is a type of the other.

Toxins that are developed physiologically, like the venom of the snake, are said to be for the purpose of defense. If we could know all about the subject, it is possible that the poison serves a physiological purpose in his snakeship's physical economy.

Man's interpretation of venom, odors, teeth, beaks, horns, hoofs, and claws has been from the standpoint of an eternal warfare for existence. Those attributes of animal life--physiological functioning--have been studied quite largely from the standpoint of weapons of offense and defense. If studied from an optimistic point of view, all those supposed defensive and offensive organs, and their functions, will be found to be indispensable aids to metabolism--digestion and assimilation--and to be physiological necessities.

When we keep steadily before the mind's eye that what we call bad is the reverse side of good, that unity is the key to universal order, and that the old and childish belief in two warring forces, namely, good and bad--God and Devil--is unworthy of present-day enlightenment, we are equipped mentally for analyzing chemical, physiological, and pathological processes rationally and certainly sanely.

There is no question but that autogenous toxins are first of all physiological necessities, and when forced to play the role of an enemy in physical economy, it is because it serves nature's purpose better. Hence optimism sees only good in all processes.

It may be asked: What of it, if the ending must be the same?

But the ending is not to be the same. A father chastises his son, not because he is an enemy of the boy, but because he is vitally interested in the son's welfare.

If God is good, then His chastening rod is not to defeat His purpose--to oppose cosmic necessity.

Pain is for good, for education, for development. No good can come from assuaging pain without removing cause; and certainly no good can come from negating--denying its existence, It is true that the opiate stops pain, but the patient dies afterward because the cause of the pain was not removed. It is true that removing the fibroid tumor cures (?) the patient of the tumor, but it does not remove the cause, and in from one to ten years afterward the patient dies of a pneumonia, kidney disease, or cancer. That the doctor is too limited in his reasoning to trace the connection between the cured (?) disease--the removed tumor--and the disease that proves fatal years afterward, does not militate at all against the truth that the two are one, neither does it change the working out of the unchangeable law of cause and effect.

To negate--to deny that there is pain--may banish nature's warning voice, but it does not alter the law of cause and effect; and if cause is not removed, the effect will certainly obey the laws of its nature; for law is God, and God is unchanging--not even the prayer of all mankind centered on one purpose will change one iota or tittle of law.

Pain and discomfort are reactions from undesirable influences. Remove the cause of the irritation, and the irritation and the discomfort of it disappear.

With an understanding of the inflexibleness of the laws of nature, in little as in great things, we should proceed with the subject of toxins with a mind cleared of some of the befogging beliefs of superstition and modern false reasoning.

The toxins that form within the organism are called endogenous poisons. They are called auto-intoxicants, and they set up autotoxemia when not eliminated properly.

These poisons alter the chemistry of the fluid medium--blood and other fluids--in which anatomical elements--tissues of the body--live and are nourished. It may be well to carry the idea that all the tissues of the body live in a sea of blood, as fish live in water, from which they gather nourishment.

At this point it may be well to say that health depends entirely upon the proper chemistry of the fluids of the body; and the chemistry depends upon the elements in the food, the mind, and the toxins developed or taken in. How is it possible otherwise for the various tissues of the body to select the elements needed for their upkeep? This being true, the importance of the part played by food in health and disease should be obvious to all giving any thought to the subject.

Toxins are divided into two groups; namely, **exogenous,** those formed in the alimentary canal from fermentation and decomposition following imperfect or faulty digestion. These toxins are attributed to germ secretions, but in all probability the ferment furnished by the germ is no more toxic than the ferments (ptyalin, pepsin, et al.) furnished by the digestive organs of the body.

The action of the germs is to set up fermentation (for the ever-present germ is a ferment) in all the foods taken into the alimentary canal beyond the digestive limit of the body's physiological ferments.

As a result of germ fermentation, toxins are formed, and their nature is in keeping with the chemic medium. If the fermentation is of vegetables or fruit, the toxins are **irritating,** stimulating, and enervating, but not so dangerous or destructive to organic life as **putrefaction,** which is a fermentation set up in nitrogenous matter--protein-bearing foods, but particularly the animal foods.

Endogenous toxins are autogenerated. They are the waste products of metabolism.

Metabolism means the power possessed by organized bodies of continually using up and renewing the tissues composing the body. In the process of building there must, of necessity, be a waste. This waste must be carried out of the body by the emunctory organs; but if, because of enervation, excretion does not take place, this waste product (toxin) is left in the body to poison it.

Exogenous toxins are those taken in with food and those formed outside of the body, and **endogenous,** those generated within the body.

When the body is enervated from any cause, or from many causes, excretion is always more or less inhibited, and as a result of accumulating the natural excretions (toxins) the fluids of the body are poisoned. The first symptom is a toxic stimulation--intoxication state; then comes a general soreness of the flesh, which is described as an aching from head to foot. A pronounced state causes one to feel very old, and unless relief comes in a few days, life loses all interest to the sufferer. An interested, hustling person will be transformed into a discouraged pessimist in a

few days.

Alimentary Poison.--Potash salts are necessary to the well-being of the body. It is said that dogs fed on meat freed from potash died in ten days--sooner than by starvation--showing that potash is necessary to prevent putrefaction.

Scurvy (acidosis), or ship disease, is due to a deficient supply of potash, furnished by fruit and vegetables, which, when oxidized in the process of digestion, renders the fluids of the body potentially alkaline.

To eat fresh or cured meat, eggs, fish, oatmeal, cookies, bread, rice, cake, puddings, coffee, tea, chocolate, etc., is to generate a slow acid poisoning.

Fruit and raw vegetables--salads--will correct any type of disease caused by acid poisoning.

Meat, potatoes, tomatoes, lettuce, cabbage, coffee, or tea, without fruit, will cause potash poisoning.

Albumin is a rank poison when injected into the blood; but when converted into peptones by the digestive secretions, it becomes one of the most important foods.

Where albumins (nitrogenous foods) are taken in excess, fermentation (putrefaction) takes place, and the absorption of this toxin causes enervation, high blood pressure, **arterial diseases,** heart diseases, catarrhal inflammations, and other ailments.

Beverages

Water, alcohol, coffee, tea, chocolate, and cocoa are common sources of toxin poisoning.

Water quite often contains minerals and organic matter in a state of putrefaction. Water with these elements in it is not so toxic as many professional men believe.

The elements--earth, air, water, and fire--are self-purifying; hence putrefaction taking place in water of sufficient protein toxic potency to render it dangerous to drink will be so offensive to the nerves of special sense that the one about to imbibe will turn away from it in disgust. Too much mineral in drinking water is not desirable, because it is left in the system to harden the tissues and prematurely age those who drink it.

Alcohol is toxic and inclined to bring on rheumatism of joints, gout, gastric and liver diseases, and in time neuritis and other nervous diseases. Why? Because all stimulants continued for any length of time bring on enervation. When the system is enervated, elimination is imperfect; then the toxins resulting from metabolism are retained in the system to poison. The deposits of these waste products in the muscles or the tissues of the body create such diseases as rheumatism.

The danger from fatal poisoning--from taking fatal doses of alcohol--is not so great as that resulting from the slow toxic poisoning--chronic poisoning--or alcoholism.

There is very little drunkenness today, compared with fifty to a hundred years ago, notwithstanding the fact that there is more alcohol consumed per capita. The reason for this is that alcohol is taken in the form of beer and wine, which are not so toxic as brandy and rum.

The continuous stimulation from the daily use of alcoholics causes enervation and imperfect elimination.

The use of alcoholics whips the appetite into taking an excess of animal proteid; and this is the reason why many users of alcohol have rheumatism and gout.

Absinthe contains nine different essences. All are toxic. There is very little of this poison

consumed now in this country. New Orleans has an absinthe house which ranks in age with her most ancient relics.

Coffee is a slow, insidious poison that encourages retention of excretions by its slow but sure enervation.

Coffee fools many into believing that it is an eliminant, because while they use it they have an action of their bowels daily. This is a false belief; for all the time coffee is used as a daily beverage there is a gradual enervation, with retention of the toxins or excretory products--waste from body--building. Coffee outranks alcohol in building endocarditis and sclerosis of blood vessels.

Ordinary reasoning should help anyone to understand that a drug that stimulates as coffee does, must in time cause much trouble by way of enervation, faulty elimination, and autotoxemia.

Tea stimulates, and in time enervates; following which comes retention of toxins in the system. Tea has a special toxic and sedative influence on the nervous system, and when used for a long time it causes neuralgia of an intractable nature.

Coffee and tea cause deposits in the grooves and openings in the bones through which nerves pass, causing in time neuritis or neuralgia that will not down until the habit of taking these table beverages is given up. These are the cases that surgeons undertake to cure by nerve-cutting or nerve-stretching.

Chocolate builds catarrh, and should not be used as a daily table beverage.

Cocoa is a stimulant and, like all stimulants, develops a habit. It brings on enervation and the usual consequences.

Lead.--Nearly all beverages--even water--contain lead. Water pipes, cisterns, reservoirs, etc., are built in such a way as to impart more or less lead to the water. All soft drinks charged with carbonic acid carry lead. Seltzer water and the lighter alcoholic beverages all carry more or less lead. Flour and bread often contain lead. Pewter, which is used to solder, contains lead. The pewter foil around chocolate, and the grinding machines used by butchers, impart more or less lead to the materials with which they come in contact. The diseases developed from lead toxin are what are known as lead colic, arteriosclerosis, kidney and other diseases.

Copper finds its way into the body in bread and wine. When copper vessels are used in preparing food and drink, copper can be found in wine, cider, and beer. It is said that condiments prepared with vinegar and pickles always contain copper.

In the quantities taken into the system from the sources named, copper is not thought to be greatly detrimental.

Arsenic is far more injurious than copper. It is to be found in wines. It is used as a preservative--to prevent fermentation in food. Since the pure food laws have been put into effect, this drug is not so extensively used in preserving food.

Salicylic acid is one of the most extensive poisons used as a preservative. Its use today is not so extensive as a few years ago.

Non-edible vegetables, such as **toadstools, sprouting potatoes,** and others, furnish an amount of poisoning every year,

Poisoning by animals occurs mainly in hot countries. In our country there are **snake-bite, bee-sting,** and poisoning by the eggs of various fishes.

Fish eggs provoke symptoms of cholera--vomiting and diarrhea--accompanied by skin irritation--erythema and urticaria.

Fish are said to be made toxic by living in water containing putrefactive matter.

Oysters are said to be poisonous when living close to the outlets of sewers.

The wholesomeness of healthy fish is questioned. Those who use much fish food are liable to develop skin and liver diseases. Probably, however, one is no more liable to develop disease from fish than from other food eaten beyond the power of the organism to utilize well.

All foods become toxic when indulged in beyond the real needs of the body.

The meat from **overworked animals,** those run down and killed, those that are slaughtered after **fatty degeneration** has well set in, is poisonous.

Stall-fed animals, that would die from disease in a short time if not butchered, are disease producing.

Blasted grains--wheat, rye, and corn--are poisonous to animals as well as to man. Pellagra comes from starch poisoning--so we are informed by those who have had experience in treating the disease.

Poisons in the Air.--People living close to smelters, slaughter houses, soap and glue factories, the outlets of sewers, etc., are injured more or less by poison gases.

Tobacco is a stimulant and sedative. Its stimulant effect is that of irritation. It is a rank heart irritant. During the first ten to twenty years of its use the heart is made to work overtime--often from twenty-five to forty per cent. Through years of use there becomes established more or less toleration. So great does this toleration appear to be that the use of the drug is looked upon by many as of no serious consequence.

The influence of the poison is to lower the individual's self-respect and dull his moral responsibility. It builds selfishness and prevents the evolution of higher efficiency.

At the beginning the effect of tobacco is that of a poison. it causes nausea, vomiting, and great depression of the nervous system. This being true, can anyone so far forget these facts as to say that tobacco is not a rank poison?

The reason why the system appears gradually to develop a toleration is because the irritating effects fail in time to cause the system to react against it as powerfully as at first; but this is no proof that it has lost its influence and is no longer an irritant--a poison. Indeed, the body continues to react, but it is in the form of fortifying against the influence of the poison. The heart and blood vessels are enlarged--these organs are thickened, hardened, and rendered less capable of performing their most delicate functions--namely, renewal of cell life and elimination. As a result, the walls of these organs become thick, hard, and lose their resiliency. This state, when established, is called hardening of arteries--arteriosclerosis, sclerosis, cancer, etc.

The chronic effects of tobacco on other organs of the body are that it causes enervation, and in many people emaciation.

"Tobacco heart" is recognized by the least observant when far advanced. The effect of tobacco on the eye is well known.

Many nervous "breakdowns" come from tobacco rather than from too much work.

Epilepsy, bronchitis, neuralgia, **rheumatism**, and many nervous disorders are brought on, directly or indirectly, by tobacco.

Nicotine is the active principle of tobacco. It is more deadly than arsenic, strychnin, or morphine. The odor will kill a bird.

Women and children are frequently invalided because husbands and fathers practice the filthy habit of smoking in the home.

When smoking is practiced in it daily, a home soon becomes saturated with smoke; after which it becomes a menace to the health of wife and children.

No man would willingly double his expense for tobacco if he knew this. Some might not worry about how uncomfortable wives are made by ill-smelling homes, but if they realized that a hundred dollars expended each year for sickness legitimately belonged to their tobacco bill, they probably would stop ruining their homes.

The use of one stimulant and narcotic calls for another. The smoker usually uses coffee, tea, or alcohol.

Diseased plants may produce digestive disturbances.

Plants infested with disease-producing germs are believed to be a source of much disease. Lettuce has been denounced by experts as a vegetable unfit to eat, because it is a germ-carrier. Personally I have not found this true of any vegetable, and, what is more, I know it is not true. Even if the vegetables that are eaten raw should carry germs, the germs stand no show against normal digestion. This I have been proving for years by prescribing the Tilden salad to every patient as a food to eat with every dinner.

Poison gases are generated in the bowels. The gas coming from putrescence should be washed out of the bowels by enemas, and eating should be suspended until lost digestive tone is restored.

Illuminating gas is very toxic. It contains carbonic oxide.

In cities where gas is manufactured there is more or less loss--waste--and the soil becomes saturated. The atmosphere of Paris is said to contain 1 part per 10,000 parts of carbonic oxide. Much more is believed to exist in houses into which, because of high temperature, the gas is drawn. This is added to by paintings and tapestry.

There is some little excuse for being poisoned by many of the items above pointed out; but what excuse can be given for the wholesale poisoning brought about by the use of tobacco?

Man deliberately poisons himself, but the layman can hardly be held responsible for doing so when we take into consideration that his medical adviser is offensively saturated by the weed.

So long as the world knows so little as to believe that a man who deliberately poisons his own body with tobacco is a safe medical adviser, and is justly a celebrated physician, just so long will rational healing be refused. Man will never come into a satisfying knowledge of anything until he wants to, and then he must put himself "en rapport" with the psychology that will bring it.

We cannot serve two masters. We must choose between the false and the true. And this decision is "up to" us every day and every hour in the day.

Tobacco is a poison that soon establishes a reign over the will of man. The mind is weakened in many respects. Memory for proper names is lost. Dyspepsia and heart disease ended the career of Mark Twain. His discomfort and heart disease were built by tobacco and coffee.

4. Animate Agents

History of Infection

Infection is divided into three stages, according to bacteriology; namely, animate agent, a fermentation, and intoxication. I would divide the history of toxemia--infection--into **Enervation and Autotoxemia.**

Enervation is brought on from one or many causes which use up nerve energy, both of a mental and of a physical character. Then, when enervation is established, functional efficiency is lost, and with this follows a "slump" in the production of physiological ferments, after which the omnipresent pathologic ferment--infectious agent--becomes "master of the show;" and if the good ship of health does not at once discard its jetsam and refuse to take on any flotsam, pathologic fermentation and decomposition will follow.

So long as the body is normal, and secreting a normal amount of physiological ferments, pathological ferments are made to dance attendance upon the body in the capacity of menial servants; and they will serve long and well in that capacity, if the master is sober and sane. But when licentiousness and sensuality force physical insolvency, then servants become masters; and whether this reversed order is ever righted depends entirely upon the amount of organic integrity left, and the skill used in suppressing the insurgents--bacteria--and reestablishing the home guard-enzymes.

This being a true statement of how disease is established, time and attention should be given to methods of keeping up the health standard, rather than spending all the time and attention in the study of bacteriology, when germs are at most only auxiliary agents in the development of health and disease.

Pasteur, after his researches in fermentation, took up the subject of disease. He assumed that disease was caused by fermentation; hence he searched for germs. The rank and file of the medical, as well as the non-drugging, profession filed in after their medical bellwether without question. The reason for so much unquestioning acceptance of the dicta of this great French germophobiac was that the profession was in chaos regarding cause, and it was ready to accept a savior of any kind without question. Today the germ theory fits well only those who take it without thought. Its popularity comes from numbers, not reason.

It will be well to keep in mind that Pasteur, Koch, and Metchnikoff were not practicing physicians; they were laboratory experts who--a priori--assumed that germs cause disease, and undertook to discover the specific germs that cause each specific disease, by experimenting on guinea pigs, chickens, and other animals; and, by making research in human and other excreta, they endeavored to discover the habits and customs of the flora and fauna of the intestinal canal.

In their explorations, experimentations, and deliberations, they found themselves sometimes on one side and sometimes on the other side of the question of whether or not germs were friendly to their host.

The material in the digestive tract, in bacterial form, is said to number one hundred and twenty-six billions for the daily human excreta. This certainly indicates that man has a powerful resistance, or none would reach the age of from sixty to a hundred years. By some observers it is said that guinea pigs have been successfully reared without germs, and that the polar bear and other animals of the arctic region have no bacteria; that even in the temperate regions there are animals whose alimentary tracts contain comparatively few bacteria. The parrot is one. Other observers have arrived at quite different conclusions.

Experiments have shown that, when chickens are fed on sterile food, they fail to develop, or are retarded in growth, and that they show normal growth only when fed food containing bacteria. It is said that Madame Metchnikoff arrived at the same conclusions in her experiments with tadpoles.

Pasteur's research work on the diseases of the silkworm was followed by a study of diseases of mammalia. He created the fundamental methods of bacteriology. It was in this field that Koch

achieved fame and was rewarded by his government, being awarded a title, a hundred thousand dollars, and a pension.

Koch discovered a cure for tuberculosis. In this field of discovery he has had many successful understudies, or imitators, of whom--neither last nor least--was Friedmann with his turtle serum.

That tuberculosis still thrives, except as it has been handicapped by the growing intelligence of the people and an improved sanitary science, is easy of observation to all but prejudiced eyes; yet, notwithstanding, this truth does not militate against the Koch, or bacteriological, theory of cause and cure. Once a fallacy is in the saddle, it rides, for a time, rough-shod over truth.

To utter a word of doubt or protest, that the theories of Pasteur, Koch, Metchnikoff, et al., are not the whole truth, consigns one, so stupidly ignorant, to total professional darkness--oblivion.

It should not be forgotten, in passing, that Koch abdicated his theory regarding bovine tuberculosis, but the profession out-Koched Koch and repudiated Koch's repudiation.

Reader, do not pass judgment on my protesting until you know all I have to say--until all the testimony is in! It is just barely possible that some of it may be evidence, and such haste on your part might not prove wise; for time--the court of last resort--may reverse your decision.

One of these laboratory experts has practiced medicine, thereby familiarizing himself with the peculiarities, habits, and customs, of both a mental and a physical character, of sick people. Theoretically they perhaps knew all about man, his mind and body; but to know--positively know--all knowledge must be lived. A doctor may have a lot of textbook and laboratory knowledge; but, unless he spends years in applying it, it is not his knowledge, and he only thinks he knows.

According to the laboratory expert's opinion, man is an automaton--a fixed entity--that has no power within himself to stay well or make himself sick. It is true that there is a perfunctory recognition that the body has within itself anti-bodies--a given amount of self-protection or immunization; but that activities, both mental and physical, have more than anything else to do with determining whether man shall be sick or well, is not recognized as the great field of causation; and, as to man's having within himself power to live in health--as to his having autoinimunizing power--being a living, breathing, activating knowledge--this is left out of the mental equation of all these eminent bacteriologists; hence the inexplicable failures that have accompanied every well-worked-out plan of cure on a bacteriological basis that has been advanced by them.

Perhaps I should not be personal; but, inasmuch as what I am about to say is of vital importance, I am justified in declaring that each one of the eminent gentlemen named above was a semi-invalid--and that, too, with his knowledge of germs. If germ infection was the cause of their ill-health, they certainly should have kept their bodies free enough from unfriendly organisms to have enjoyed health. A theory of cause and cure that will not give a reasonable amount of health to its possessor is not of great importance.

The conclusions arrived at by the bacteriological experts have been reached by approaching the subject of disease with the fixed hypothesis that there is but one cause of disease; namely, animate agents--that of germs; and then taking for granted that the cause--germs--is irresistible, unless headed off by immunizing the body by inoculating it with the virus of disease--germs. Then the logically obvious must follow; namely, if disease is headed off by immunization, health must be inevitable.

The absurdity of this one-sided search after the cause of disease should be apparent to any intelligent observing mind.

At this point a little reasoning should not be despised: There are a few people who enjoy

health and long life. Is it because they are not exposed to the omnipresent germ? They have not been made immune by virus or serum inoculation. This cannot be the reason. Then it must be because they have within themselves power to resist the influence of germs.

There are people who are well a part of the time, and a part of the time they are sick. Is it because they are exposed to germs a part of the time, and a part of the time they are not? This is not true. Then what causes the immunization a part of the time? They have no artificial immunization. If germs cause them to be sick a part of the time, why not all the time? Do germs cause disease a part of the time, and then a part of the time not? If so, are there subjects whom they never influence, and others whom they never immunize?

There are people who are, like Pasteur and Metchnikoff during their lifetime, in poor health all the time. Is it because they are infected and infested with germs more than other people? Surely this could not have been true of the laboratory experts! Who, knowing the cause of disease, would willingly suffer when a cure was at their hand?

If all that they taught about germs causing disease were true, surely a willingness to live as semi-invalids would be most inexplicable in the two great bacteriological experts.

In our own country, C. A. Herter, M.D.--once a very popular professor in Columbia University, and author of a book on bacterial infections of the digestive tract--died quite young. His perfected knowledge of germ influence in disease availed him nothing when he was called upon to save himself.

Of course, I do not believe that death can be done away with, but we should be able to have health for the most part while we do live, and certainly avoid premature death and waste of life.

Why do germs, in chronic invalids, fail to work out an immunization? Why is it that this class of invalids can be put in very good health when trained into health-producing habits--and this, too, when no attention whatever is paid to the germs that are supposed to produce the disease?

To illustrate my meaning: A few years ago a gentleman living in Tampico, Mexico, wrote me, saying that he understood I did not believe in drugs, and he wished to know if I would undertake his case. He had been suffering from malaria for five years, and every drug having a reputation as a cure for the disease had been tried and found wanting.

I gave him correspondence advice for one month. At the end of the month he said: "You have made good, and that, too, with a skeptical, doubting patient."

Two and a half years afterwards I heard from him, and he was still enjoying health, having had no return of the malaria.

The treatment I gave him was simply correcting all errors of eating and care of the body.

What caused the malarial fever in this case? The malaria germ? Or was it wrong life? Certainly both; but the question is: Which was the real cause? The malarial influence failed in five years to create an immunization; all "specific" drugs had failed. Treatment that allowed nature to return to the normal ended the malarial influence. If germs create immunization, why do we have chronic diseases? What causes chronic disease?

I have many cases of syphilis consulting me every year. According to medical authority, this disease is most positively "specific" in character, and should, according to the germ theory of disease, require a "specific" treatment; but in all cases I never resort to a more specific remedy than that related above in connection with malaria. Correct the habits, and feed properly--and all diseases will get well.

After years of experience in treating disease, I have found that health is the greatest and most reliable foe of disease.

The questions to decide are: Do germs per se cause disease? If germs cause disease, do they cause all diseases, or only a part of diseases? Which diseases are caused by germs, and which are not caused by germs? If there are people who are, and all their lives have been, in good health, without extrinsic or artificial immunization, what is the cause? If the cause is good health, then can the secret of good health be known; and if it can, may the secret be imparted to others who are not so fortunate? If good health immunized the organism to every normal disease-producing influence in man's environments, why cannot his normal immunization be increased to meet extraordinary disease-producing agents and influences? This can be done, and is being done at our "School for Teaching Health," to the satisfaction of many people from many parts of the world.

There are two groups of animate agents which are said to cause disease in man; namely, infectious and parasitic.

It has been thought that natural history could be taken as a basis for the study of animate agents as a cause of disease; and if infection is really produced by an infectious germ, then natural history must embrace all causes of disease. In other words, if infectious-microscopic germs and parasites are the cause of infection, then there is no excuse for dividing animate agents into parasites and infections; they can all come under the head of animate agents. Perhaps it would be well to divide parasites into exogenous and endogenous--those that are confined to the outside of the body and those that are on the inside--in the blood. A parasite that is on the body or in the bowels is still on the outside of the body.

If there are infectious animate agents, they should be divided into specific and non-specific; for, before we get through with the subject, we should see that there are germs which cause (using the word "cause" in a bacteriological sense) different diseases; and, on the other hand, different germs which cause the same disease; this, too, in diseases supposed to be clinically well defined.

As to specific germs, perhaps the gonococcus is one of the most pronounced types; yet it, too, fails to infect in those of pronounced resistance. This being true, what must constitute resistance?

As nerve energy appears to give power--as steam ,gives force to the engine, and as electrical energy gives power to move powerful machinery--so it is apparently necessary that nerve energy must be the force that enables man to resist environmental influences. But we see the physically strong giving way before influences that fail to prostrate others decidedly less strong. The question as to why this is, will not down.

The matter of feeding to keep up strength, so as to enable a patient to resist or throw off disease, is a professional fallacy that has cost, and is costing, more lives than perhaps all other fallacies combined, It is easily demonstrable that, without giving food and drugs, it is impossible to develop a "clinically well-defined" disease. Indeed, this epoch-making truth holds good in venereal diseases as in all others.

Any physician who, is not helplessly and hopelessly swallowed up by the whale of medical fallacy can in a very short time demonstrate, and prove to himself, the truth of all I say.

My theories and practice are not only simple, but they are logical; they are not only logical, but true. And the reason they are true is because they work. If they do not work, it is from a lack of knowledge in applying them. It is never necessary to fall back on that blanket excuse that has covered so much professional ignorance in the past; namely, "idiosyncrasy."

Malaria (malarial fever) is caused by a sporozoid; yet the disease may easily be cured by simply correcting the life of the patient--correcting the eating habits and care of the body generally. Then, when the disease is gone, if the patient continues to live right, he may stay in the malarial country, free from another attack. This being true, what really causes malarial fever?

Are those who continue to live in such countries, without becoming malarial, immune to the poison because of an idiosyncrasy; or are they carriers of the disease, having become immune to its influence? Can one person become immune and another not? The dilemma appears to be fully settled when it is understood that health--full health--is the only reliable opposition to disease; that everything which improves health builds immunity to all disease-building influences; that every influence injurious to health is an ally to disease,

While medical opinion is largely favorable to the idea that germs are disease-building, I should say that even those germs denominated infectious are not autonomous--individual--specific and self-acting, but by nature are convertible allies. When conditions are favorable to health, they add to the body's power of resistance; but when disease-producing influences--influences that lower the body's self-protecting energies--are in the ascendency, then they become allies to health's foes.

It appears reasonable that as germs are omnipresent, they, like the excretory products of the body, are allies for health, when limited to a health-standard percentage; but when that percentage is exceeded, these quondam friends become allies of disease-producing influences.

The treatment of disease, since germs have been recognized as the cause, parallels the treatment given when the profession was pruning itself on being conservative, yet wisely selective from the maze of theories advanced in the past hundred or more years. Perhaps it will be well to name a few theories that have been chaotically mixed in the medical mind previous to the germ theory:

Empiricism (experimental treatment), which is denounced as quacking, has always been handy for all grades of physicians to fall back on.

Organicism--organic disease.

Humoral pathology--all diseases come from derangement of the fluids of the body.

Symptomatology (treating symptoms)--a form of empiricism.

Phlebotomy (blood-letting)--one of the most popular theories previous to the germ theory.

Depleting system--blood-letting, calomel, and opium practice.

The various theories of inflammation.

Organotherapy--organ treatment; the treatment of diseases by the administration of animal organs, or extracts prepared from them. This treatment has existed from ancient times, the method as now practiced being of recent origin.

Hundreds of other theories might be cited, but what is the use? The popular treatment of disease, it matters not what has been the theory of cause, has always been the same; namely, ignoring the power of the body and mind to get well and stay well, when given a chance.

For the main part of all treatment, the medical man has believed it to be his duty to knock down and drag out. Indeed, he has appeared to believe that the more vandalism he practiced on the human body, the better for the victims of disease.

Just before my debut in the profession--in my father's day--the most popular remedy was blood-letting. When my day dawned, it was the physician's duty, according to the then dominant school, to purge, sweat, micturate, and salivate heroically.

Every treatment was heroically carried out. All the natural tendencies of the body to react and throw off disease were ignored, and a physician who would fold his arms and give nature a chance was a fiend, quack, a being to get rid of for the good of the people.

Even today the majority of physicians at the bedside will say of my suggestions--my heroic methods of let-alone treatment: "Such trifling, ineffectual methods may do in a case where there is nothing the matter, but in such cases as this (typhoid fever, pneumonia, appendicitis, or whatever the disease may be) it would be criminal to stand by and do nothing. What are physicians for? If their function is to do nothing, it is time to close medical schools." Indeed, I agree that, if the physician's function must be that of a disease-builder, and the function of the surgeon, two-thirds of the time, that of a vandal, it is time to close all medical schools.

Old methods are extensively carried out all over the world. Germs, serums, and vaccines are the slogans of medical men today; but many drugs are in constant use: quinine for malaria; mercury, iodine of potash, and "606"--the old salvarsan--and neo-salvarsan, and many times neo(new) salvarsan, the great twentieth-century remedy for syphilis which out-specifics all other specifics in "curing" syphilis; then opium and morphine are still working over-time for pain; and when the opiates are not used, the coaltar heart-paralyzers are used-to the death in many cases.

There is a great deal of perfunctory talk, on the part of medical men, about not believing in drugs, and of much believing in diet. But it is a trick of the trade; it is that old, professional, stock-in-trade buncombe that is often used to cover ignorance. If they could not prescribe drugs, and were required to make an effective diet prescription, they would be out of a job.

There is a lot of buncombe by way of professional talk in favor of diet and against drugs; but this is to meet the demand for physicians who understand diet--a demand that is fast running ahead of the supply. That is, the average doctor is compelled to prescribe a diet; and his prescription would be a joke, if it were not so stupid. There is a time and place for everything; but the burlesque acted by many physicians today, in pretending that they know how to diet the sick, is certainly too asinine even to create a smile.

That bacteriology is not satisfying the profession, there are evidences galore. And so long as common sense regarding the cause and cure of disease is to be ignored, all theories of cause and cure must be founded on shifting sand.

There are millions of money , and all the bluff that can be mustered by influence, behind the germ theory; consequently its death-struggles will be long and agonizing. But it must go. Of course, its fossilization stage will be long, and interesting to curio fiends and ancient respectability.

In what follows on the subject of germs, I shall endeavor to do justice to the germ theory. If I too frequently say that germs cause this, that, or the other disease, please understand that I am writing from the standpoint of an advocate.

What is the difference between parasitic and infectious agents, according to the accepted theory?

The parasite is supposed to be much easier on its host. It draws only what it needs for subsistence, and remains on the outside of the body; while the infectious agent invades the sanctity of the blood and fluids of the body, and spreads devastation and anarchy everywhere. It develops rapidly, and destroys organic functioning by exciting intense reactions.

When the parasite causes death, it is more accidental than otherwise. The intestinal worm causes death by finding its way into the lungs. The hydatid disease of the liver (a parasite belonging to the dog) is fatal. The parasites, when they kill, do so by causing tumors, which cause pressure or obstruction.

Both parasites and infection produce toxic substances; it is a question of more or less. The poison is that of intoxication. In parasites, intoxication is reduced to the smallest amount.

The definition of infectious disease is: Disease developed from toxins produced by parasites. The word "parasite" in this case is made to cover all animate agents.

Infection, defined, is a history of intoxication.

There are intoxicants which are not infectious agents. Alcohol, coffee, tea, tobacco, various drugs, and all legitimate foods, are stimulants; and stimulation is the first stage of intoxication. Thoughts stimulate the mind and body, and thoughts may be pushed to intoxication. To aid intoxicating habits to overcome resistance, we have all the domestic and social requirements--habits in daily life, in business and social life--the carrying-out of which uses up more nerve energy.

Intoxication means prostration. The body in a state of drunkenness--in a state of intoxication--is at first exalted until reaction comes; then it is prostrated--enervated. Understand, once for all, that there are many varieties and stages of drunkenness besides alcohol inebriety. The commonest drunkenness is food drunkenness--and it is not often recognized.

A body that is enervated is crippled in its functioning. Elimination is impaired, and this favors auto-intoxication; for the excretions are toxic, and when not carried out as fast as generated, they become a poison to the system.

Besides the intoxicants (stimulants) named, there is no question but that, when enervation is established, the process of digestion is imperfect; then pathologic fermentations take place; and this process generates toxins, which, when added to the daily or habitual supply, add to the enervating influence to such an extent that systemic protection--resistance--is lost. Then it is that bacterial invasion, with bacterial toxins, overwhelms the body, and the victim dies from an infectious type of disease.

Everything points to the fact that so long as the human body is normal, and not overtaxed by care and bad habits, parasites are either suppressed entirely or held down to inoffensive guests of the body. But when enervation is established, the body loses its immunizing power; then, and not before, do germs become the allies of bad habits in destroying health.

Pasteur demonstrated that germs were in the atmosphere, and that, falling into certain liquids, if they there found conditions favorable for their development, they caused fermentation. The great point that should never escape the mind's eye is: If germs find conditions favorable, they set up fermentation.

What are unfavorable conditions? Health! A normal type of health is capable of resisting even an abnormal type of fermentation, when health is not handicapped in some way. For example: In flesh wounds, if drainage is perfect, health defies septicemia. If uterine drainage is perfect, puerperal fever--septicemic fever--is defied. Large quantities of germs--putrescence--may be swallowed, and a normal digestion will defy them.

When putrescence is injected subcutaneously, beyond the immunizing power of the blood, the health is overcome, and the disease and death are enthroned.

When an injection of antitoxin, or even water, is made into the spine, it may kill from shock in a child that is enervated, and its system taxed at the time with an oversupply of food. The body is off guard, or preoccupied, so to speak, when taxed with a large meal, when mentally occupied, or when fear has possession. Under such conditions, a shock that ordinarily would be easily rallied from may prove fatal.

An irritable state and lack of poise are antidotal to resistance, and such subjects become easy victims of infection.

Any influence that consumes energy may become an ally of germs, if pushed to nerve exhaustion.

The human body becomes a victim of germs after resistance is broken down from any cause.

A Reasonable Explanation of Germ Action

Animate agents which have to do with the life and health of man may be divided into **Parasites** and **Microbes,** or **Bacteria.**

Parasites, in biology, are organisms that inhabit another organism and obtain nourishment from it. Microbes, or bacteria, are micro-organisms which should be thought of as yeast fungi, and as the inciters of fermentation, which are as necessary to man as his own unorganized ferments--his digestive secretions. These fungi, or germs, may be divided into as many genera and species as the microscope and the imagination of the bacteriologist may suggest. That the explorers of the microscopic world have some excuse for the infinite number of varieties already discovered, there is no question; for these infinitely small beings have the habit of taking on an individuality, or personality, in keeping with the chemic changes of the medium with which they are correlated. Instead of the bacteria setting up changes peculiar to themselves, they excite fermentation; and the resultant is the sum of the elements involved. These microbes become putrefactive germs when they carry their ferment to nitrogenous--protein--matter. The germ subject is wonderfully simplified when we know that the metamorphosis is in keeping with the chemistry, or the chemic changes taking place in the medium.

Ferments are divided into two classes--namely, unorganized, or enzymes, and organized, or bacteria, or microbes. The unorganized are produced by animal and vegetable life. Enzyme is a product of all living cells; without it there could be no tissue formation. Pepsin is a type of animal ferment, and the so-called vitamin is one of the refined products of metabolism.

When man's body is normal, the digestive secretions--the unorganized ferments--are quite sufficient protection against the metamorphosis of microbes into toxic germs in numbers great enough to do the body harm from the fermentation and decomposition which they may set up in the food intake.

When man's digestive and assimilative powers are reduced, and he fails to digest the food intake, the ever-present germs establish a pathological fermentation which hastens the disorganization and exit from the body of the superfluous food.

The monistic doctrine--the theory of the unity of all things--appears most rational, and should be satisfying to the most philosophic mind. When used medically, it clears the mind on the subject of cause and effect, wiping out many fallacies and superstitions

The negative and the positive, the good and the bad, health and disease, life and death, are two different states of one and the same thing. Of course, this is a theory that the child-mind cannot be expected to grasp instantly; for it requires a very great experience, and much reflection; it requires a priori--beforehand--knowledge, and a posteriori--from experience--knowledge.

In applying the monistic philosophy to digestion, a posteriori--according to experience--we know that digestion is carried on by ferments which are secreted by the body. In keeping with the great truth of the unity of all things, and the dual attributes of all things, a priori we reason that, if digestion is carried on by a ferment--a physiological ferment--indigestion must be the negative side of this phenomenon--it must be a pathological ferment. We must have indigestion if we have digestion; one is the reverse of the other, and one is as necessary as the other. If physiological digestion (fermentation) does not take place, then pathological fermentation (digestion) must; for action and reaction are going on all the time; nothing stands still.

Since Pasteur et al. discovered that there are microorganisms everywhere, which only await a favorable condition to set up fermentation, we reason, a priori, that this fermentation is the other half of physiological digestion or fermentation; and, in harmony with this monistic philosophy, this phenomenon--pathological fermentation--is necessary and physiologically conservative, rather than pathologically destructive.

Bacteriology assumes, a priori, that bacterial ferments cause disease; but all the cures based upon this assumption have failed, and all the testimony advanced in support of it has been more partisan than loyal to truth.

It is reasonable to assume that the ever-present bacteria, or germs of fermentation, are as necessary for physiological fermentation as they are necessary for pathlogical fermentation. Without the aid of these neutral germs of fermentation, it is doubtful whether the unorganized ferments--the digestive ferments of the body (ptyalin, pepsin, et al.)--would be capable of serving the great purpose of nutrition. I say "neutral," as they are found unchanged in nature. But they may be converted into allies or enemies--it all depends upon the chemic nature of the medium. It should always be borne in mind that yeast per se is non-toxic; toxicity is developed by the chemic changes which take place in disorganization. Food is disorganized when pathological digestion fits it for expulsion from the body.

These friends of man, against which Pasteur and Metchnikoff warred, and the influences of which in their own bodies they possibly were successful in controlling sufficiently to render them both semi-invalids, are in reality for man's good rather than his bane.

In this connection, perhaps it would be well to reflect, or to assume a priori, that when mind enters potentially into a compound in which the microbe, or ferment, and nitrogen, or protein, are associated, the character of the resultant must take the form of the mental concept. That is, the toxin that develops must correspond to the chemic change; but the form of the disease must be mentally directed. The disease may be a hydrophobia, a syphilis, or a tuberculosis. The location of the disease is perhaps chemically directed, but the type of symptoms may be directed by the mental concept.

To be more specific: A person is bitten by a supposedly mad dog. This fact starts a chain of morbid suggestions and expectations. Fear perverts digestion; pathological fermentation supplants physiological fermentation; the microbe, or neutral ferment, is made to take on a toxicity in keeping with the chemic agents involved; and all are given form by the mental suggestion, plus the added compound, protein-serum injection, known as the Pasteur serum. When the element of fear cannot be overcome, it is well to keep in mind the possibility that antitoxin serums may be reconverted into toxins and act contrary to expectation. Psychology must be considered.

The average medical treatment, or mistreatment, of supposed rabies is on the order of "a bull in a china shop."

The treatment is brutal, unscientific, and death-dealing in its application. The same is true of syphilis, and, to perhaps a less extent, of all other diseases.

What is the virus--admitting, for the sake of argument only, that there is a specific poison introduced into the human body by the dog's teeth? It must be a protein ferment, which is a pathological ferment. What is man's defense against such poisons? The neutralizing effect of hope, and the unorganized ferments. The normal blood can unhorse, so to speak, a great deal of poison, if the mind is free from fear. But fear kills.

The average physician is a fear-monger, if he is anything. He goes about like a roaring lion, seeking whom he may scare to death.

A normal man, devoid of fear, can develop antidote for poison. Those who are killed by snake bite have a paralyzing fear, which means surrender to the enemy. Keepers of snakes have no great trouble with bites until fear overtakes them.

Confidence in one's self-power is the secret of health and long life. This confidence, with the providence bestowed by a knowledge of the laws of health, is the most dependable immunizer known.

The influence of mind on fermentation is positive The mind may stimulate physiological fermentation, and it may stimulate pathological fermentation. In other words, the neutral germs are made by mind to ferment

physiologically or pathologically. The character of the toxin evolved must be in keeping with the chemical agents involved, but the Psychology of the disease is determined by the mental concept of what the disease must be.

When mind plays only an indifferent role, disease is commonplace.

It should be understood that anything in the alimentary canal (bowels) is still on the outside of the body. To nourish the body, food is taken into this canal, or digestive pouch, but, before it can be absorbed, it must be reduced to a fluid state by the various digestive secretions. When, from whatever cause, the food is not digested in a reasonable time, it must be disposed of--it must be thrown out--and the canal cleaned out. The cleaning is attended to by scavenger parasites.

The toxins resulting from the decomposition are unfit for absorption, and irritate the mucous membrane. The irritation causes the membrane to secrete mucous and serum. The mucous is tenacious and hangs on, coating over and protecting the mucous membrane. The office of the serum is to antidote and hasten the ferment germs and their toxins out of the bowels, and also to disinfect, or help the scavengers destroy, what remains of the transformed neutral germs and their ferment or toxin.

This is a necessary process, going on in the alimentary canal of man daily as long as he lives. If man breaks down his energy, and then persists in eating more than he can take care of by physiological digestion, the surplus must be disposed of by pathological digestion.

Physiological ferments are secreted by the body, and are necessary to prepare food for metabolism. The disposal of food takes place after it is absorbed, and this disposition is called metabolism.

Pathological ferments are generated by the neutral microbes when the latter are made to develop fermentation other than physiological. Their purpose is to dissolve the surplus food intake, and hurry it out of the body. This process is necessary for the life and health of man. When digestion is abused by a constant intake of food beyond digestive ability--beyond the power of physiological ferments--then the bacteria set up a pathological fermentation, which breaks down and disorganizes the surplus food, and forces it out of the alimentary canal by stimulating the expulsive power of the canal.

This work takes place on the outside of the body, in spite of the fact that it is in the bowels. A like work, only much more refined, is going on in the lungs in all cases of tuberculosis.

When digestion and absorption are carried on in the alimentary canal, beyond the needs of repair and building, the surplus must be disposed of. The duty of the lungs is to furnish the oxygen necessary to bum up this surplus. But this function is often overtaxed, and, to get rid of surplus nutritive material, the lungs are requisitioned by the central powers to do vicarious excretory work. In addition to performing their function of exchanging carbon dioxide for oxygen gas, they become excretory organs; and, as the bronchial tubes and air- cells of the lungs, like the bowels, are simply excavations into the body, and their closed cavities are on the outside of the body, germs have free access to them. When the lungs are forced to take up the task of excretion, to aid in freeing the body from its accumulation, a cough develops, which is necessary to rid the lungs of the accumulated matter. When there is no systemic infection, the cough and expectoration may be what is known as bronchitis; or perhaps bronchorrhea, asthma, etc.

When toxins, the result of putrefaction in the bowels, enter by way of the absorbents in the bowels, the lymphatic system arrests the toxin and renders it innocuous; but when the infection, or toxin absorption, is too great for the lymphatics to dispose of, nature undertakes to expel it by

way of the lungs. The neutral germs that join the process are metamorphosed into tubercle bacilli. They undertake to dispose of the accumulation by disorganizing it--causing a disorganization of the hyperplasia, or the protoplasmic deposits; in other words, a disorganization of the tubercles which have been forced to develop from the irritation of the toxins absorbed from the bowels. This disease is called pulmonary tuberculosis. The simple germs of fermentation become the germs of putrefaction. Putrefaction hastens the exit of accumulation by breaking down and liquefying it. The putrefactive germs, because of the chemical medium, metamorphose into T. B.'s.

Bacteriology, like theology, makes the bad more powerful than the good.

The old theology made the devil and sin greater than God and good; and the medical profession has always put disease far ahead of health. The devil, disease, is much more powerful than health; and I admit, when disease has modern, or ancient, medical science as an ally, the combination is more potent than health.

Bacteriology is a splendidly wrought fallacy. How long it will hold the center of the arena of human endeavor, as far as the cause, effect, and cure of disease are concerned, is hard to say. There are millions of dollars invested in exploiting bacteriology; and millions of dollars may keep a fallacy alive for ages. Besides, the fallacious system offers such splendid rewards during the lifetime of its devotees; and, neither last nor least, it gives immortality to those who .are worthy.

To have a germ named after its discoverer is far greater than to have a continent bear the name of its discoverer.

Bacteriological science is so grandly scientific that one who has mastered all its details is entitled to a niche in the Hall of Fame, despite the fact that he can never be a physician--can never know anything of value about the cure of disease-until he has forgotten all he has been taught.

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CHAPTER III

The Study Of Medicine

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The study of medicine is divided into four subjects, namely

I. Pathology: that part of medical science which studies disease.

A. Etiology: the investigation of morbific causes.

B. Pathogeny: an explanation of the mode of action of causes-how cause produces the development of disease.

C. Pathological Physiology: morbid reactions under disease-producing causes.

D. Pathological Anatomy: which reveals the structural change resulting from disease.

E. Symptomatology: which accounts for disturbances.

F. Nosology: which describes and classifies disease.

II. Diagnosis: which determines the place where a given disease belongs in Nosology.

III. Prognosis: which fortells the outcome of disease.

IV. Therapeutics: which endeavors to relieve, modify, and cure disease.

I. PATHOLOGY

According to medical science, pathology is the science of disease--that branch of medical science which treats of the modifications of function and structure of organs caused by disease. Disease defined is: inharmonious action of one or more of the various organs, owing to functional or structural change.

There is special pathology, which means analyzing disease. This is divided into internal or medical, and external or surgical, pathology. Then there is comparative pathology, which considers a study of diseases in man, animals, and vegetables; experimental pathology, and general pathology.

General pathology defines terms and fixes meanings; determines the laws of morbid phenomena, determines causes, defines symptoms, names diseases.

Pathology is a description of the body, and the organs which compose it, when they are laboring under the effects of abnormal, unusual, and perverting influences.

Physiology is the study of the body and its organs in that state known as health, and under influences that give health and strength.

Pathology, then, is that state of the body known as bad health, while physiology is that state of the body known as good health.

Disease is inharmony, and health is harmony. Both are different states of one and the same thing.

When we study pathology in connection with the influences that produce it, we learn in time to recognize real cause in its effect.

To study effectually the phenomenon pathology--disease--we must combine with it physiology--health--and etiology--cause.

To study pathology--to note change in function and structure--without a correct understanding of the cause of the change, leads nowhere. To study physiology-to study the secretions and excretions from men en masse, like a composite picture--will show an average--show about what an average individual should secrete and excrete under a given environment and a measured dietary. This is good as far as it goes, but no approximation can do more than give general knowledge of physiology and pathology. This generalization will give a like knowledge of dietetics, hygiene, and all branches of medical science.

Morbific effects will be found following certain morbific causes; but on closer investigation it will be found that there are exceptions to every cause--that there is no cause that always produces the same effect; hence pathology, physiology, their causes and effects, must be studied, not only in a general way, but in a special way, and the reason for exceptions must be as thoroughly understood as the rules.

Health and disease are related in that they are two phases of one state, and neither can be known without contrasting it with the other.

Living organisms are unstable. Their state must vary with the changes that take place in the environing influences.

The phenomena recognized as different acts of life are not dependent on some mysterious force outside of the body--some vital energy animating the body--but are simply actions and reactions produced by external agents.

For example, when external variations are slight, adjustments are readily made in those of a full measure of health, but not so readily adjusted in those with resistance broken down. Where the temperature falls forty to sixty degrees in a day or night, the most robust will suffer more or less from the adjustment, and the delicate may be killed.

Pathology given exclusive attention is a fruitless study. Health in all its phases must be studied, and cause and effect must be found in everything that affects the body.

The general study of pathology today too frequently starts with an established state of the blood or the organs of the body. The primary causes are ignored or not thought of. For example: Typhoid fever is thought of as cause, which leaves, when over, modifications which persist; being too slight to be recognized, they nevertheless continue their evolution. Ten to fifteen years later a heart, lung, liver, or kidney disease develops, which is ascribed to the changes wrought by the initial fever. A correct way to view these phenomena is to recognize the typhoid as an accidental but possible link in a morbific chain started in perverted nutrition, back perhaps in childhood, or back farther in a nutritional diathesis, that makes the development of a morbid chain of perverted nutrition, with possible links of typhoid, pneumonia, catarrhal inflammations, et al.

Crises.--Life is made up of crises. The individual establishes a standard of health peculiarly his own, which must vary from all other standards as greatly as his personality varies from others. The individual standard may be such as to favor the development of indigestion, catarrh, gout, rheumatic and glandular inflammations, tubercular developments, congestions, sluggish secretions and excretions, or inhibitions of various functions, both mental and physical, wherever the environmental or habit strain is greater than usual. The health standard may be

such--the standard of resistance may be opposed so strenuously by habits and unusual physical agencies--that the body gives down under the strain. This is a crisis. Appetite fails, discomfort or pain forces rest, and, as a result of physiological rest (fasting) and physical rest (rest from daily work and habits), a readjustment takes place, and an unusual standard is attained for a short time--the patient is "cured." This is what the profession and the people call a cure; and it is for the time being--until the customary habits and usual style of living have had time to establish the regular ante-crisis standard. This standard is maintained until an unusual enervation is brought on from accident or dissipation; then another crisis. These crises are the ordinary sicknesses of all communities--all catalogued diseases. Cold and hay-fever are simply forms of crises belonging to a chronic state of toxin poisoning characterized by catarrhal inflammations of mucous membranes. When the cold is gone, or the hay-fever fully relieved, it does not mean that the patient is cured. Indeed, he is as much diseased as before he suffered the attack (?)--the crisis--and he never will be cured until the habits of life that keep up toxin poisoning are corrected. If the intoxicating habits are continued, nature will undertake to cure by hardening the tissues--sclerosis. Arterio-sclerosis is one of nature's cures. Such a cure will not take place before old age, if not forced to.

A standard of health may be such as to be forced into frequent small crises, such as colds, frequent headaches, neuralgias, toothache, acute fevers, throat affections diarrheas, constipation, etc. Each of these attacks may be looked upon as a crisis. To recover from a crisis is not a cure; the tendency is back to the individual standard; hence all crises are self-limited, unless nature by maltreatment is prevented from reacting.

All so-called healing systems ride to glory on the backs of self-limited crises, and the self-deluded doctors, and their credulous clients, believe, when the crises are past. that a cure has been wrought, whereas the real truth is that the treatment may have delayed reaction. This is largely true where anything has been done except rest. A cure consists in changing the manner of living to such a rational standard that full resistance and a balanced metabolism are established.

One hundred per cent efficiency is seldom seen. No one with an established sensual habit is one hundred per cent efficient.

Tobacco, coffee, tea, cocoa, alcohol, drug habits of all kinds lower the standard of resistance and personal efficiency; and if the habitue starts life with less than one hundred per cent efficiency, his habit or habits will bring him into more pronounced inefficiency and more frequent crises.

Any habit of mind or body that uses energy faster than it is generated must establish a resistance and an efficiency below the normal standard. Then, if the normal standard is below the ideal one hundred per cent, it must be obvious to all thinking minds that those who belong to this class must have a very precarious hold on health, and must be of the class forced into a crisis at every unusual change of environmental influences. Babies will have the diseases peculiar to nursing and teething; older children will develop the so-called contagious diseases; while grownup people will have crises peculiar to, and in keeping with, their diatheses.

All of the above concerning crises is demonstrable. Indeed, so self-evident is it that it has taken a lot of selfish conceit and dogmatism to prevent these simple truths from becoming commonplace.

I suppose it is not quite human to expect those of a standardized school of healing to give utterance to discovered truth which, if accepted by the people, would rob them of the glory of being curers of disease. Indeed, nature, and nature only, cures; and, as for crises, they come and go, whether or not there is a doctor or healer within a thousand miles. For the good of most patients, it would be well if the schools of slightly varying phases of fallacious therapeutics were driven into the sea of oblivion.

If typhoid or any disease is managed correctly, the patient will recover, and if the habits of life are corrected and the patient continues to live right, there can be no sequel from the typhoid; but if the style of living followed before the fever be continued after it, other diseases will be developed; and if an organic change has been caused by the interpolated disease, then certainly the organs so affected is most liable to give down from years of toxic infection.

Disease, functional or organic, must be looked upon as interpolated affections. The real disease is in faulty nutrition, and is of daily development.

Intestinal intoxication, from bacterial fermentation due to overeating, improper eating, and eating potentially acid foods, and foods devoid of enzyme, is a constant source of toxin poisoning. This condition is added to by retained excretions, which will always take place when the organism is enervated. The amount of food intake may not be too great under correct conditions, but the subject's power to digest and assimilate is impaired by overwork, worry, venereal excess, alcoholics, tobacco, coffee, tea, and other stimulants.

Without impaired nutrition, which is initiated by toxins introduced from without, or developed in the body, diseases, acute or chronic, cannot develop.

Suppose we take heart disease. It may have developed with rheumatism, typhoid fever, or other diseases. The effects on the heart are identical. The new disorder--the heart disease--is not caused by the rheumatism, the fever, or any other disease, but evolves from the same cause that evolved the rheumatism or other diseases--namely, the toxemia.

To treat any disease correctly, its cause must be understood. To say that the heart was diseased by rheumatism is an etiological error. The heart was poisoned by the toxins that created the rheumatism, and the drugs and other treatment for rheumatism joined the, toxins to put the heart out of commission.

The leading authorities say that visceral diseases take their origin from some antecedent cause, but that the initial disease is not always easy to find. They declare that the disease may be dormant, or develop silently, for twenty or thirty years before manifesting. This is true and it is not true. A tuberculous diathesis favors the development of tuberculosis, and the gouty diathesis favors the development of gouty diseases; but the primary cause is the same--namely, chronic toxin poisoning. This state of the blood and other fluids of the body must exist before any of the organs can go into a state of degeneration.

If the subject is scrofulous, scorbutic, or has developed a state of acidosis, and the glandular system has once been septically infected from a syphilis, gonorrheal bubo, carbuncle, vaccination, or wound infection, the gland lesions will get well under proper treatment; but if the subject becomes careless in his habits, and builds back the chronic autotoxemia, it would be the natural thing for the glands to become diseased. When the glands are once infected, they are made sensitive and will respond to toxic influences more readily.

A. ETIOLOGY

Post-mortems are held for the purpose of discovering the cause of death, and the cause is found. It may be an organic change of the heart, liver, lungs, or some other organ. Suppose an abscess is found in the liver, spleen, pleura, or elsewhere; suppose apoplexy is found; without doubt a reasonable cause for death has been discovered. But what light has been shed on the real cause of disease?

None whatever. Post-mortern revelations are as silent on the subject of ancestry as they are on the cause or causes of disease.

To find an abscess of the liver or spleen may account for death, but the very important knowledge of what caused the abscess, or what caused the cause of the abscess, is not found. On knowledge of morbid processes that would help the living to shun a like fate, all post-mortems

are as silent as death--except in deaths from injury, and in those cases only the cause of death is found; the dead tell no tales regarding the cause or causes bringing about the accident.

How is anyone who has not studied the history of morbid processes to know that a slight injury to the neck of the womb twenty years ago is one cause of cancer today? Or that the habit of drinking hot coffee twenty years ago caused chronic inflammation of the stomach that ends today in cancer of the stomach?

After having gained the knowledge that injuries, such as related above, are the cause of a fatal disease twenty years or more afterward, it is rather confusing to be confronted with the truth that only a few of those who have suffered a like cause have also suffered a like effect. Hence there must be collateral causes which are not considered, and without which the true causes and effects leading to the final fatal effect remain speculative. The profession moves in a diagnostic circle of misapprehension, always coming back to the starting point with no more true knowledge of cause than at the start.

So very obscure are the real causes of disease that it is not strange that nearly all professional men willingly disregard anything pertaining to disease except the symptoms which palpably present.

1. Enviromnent in Its Relationship to Health and Disease

The two words "health" and "disease" are used daily, but few know anything, except in a general way, of what either means.

The general conception is that health is a fixed, ideal state or entity, and that disease is a fixed state or entity whose particular purpose it is to war on health.

In aboriginal man's conception, disease was an evil spirit. In the early days epilepsy was caused by the devil. According to the Bible, an epileptic was a person possessed of the devil, or of devils.

A doctor in Cincinnati has discovered that epilepsy is caused by a particular germ, which the doctor has named "bacillus epilepticus."* (* Since this was put in type the doctor has recanted.) This devil germ takes up his abode in the colon, and from this throne torments his victim.

The Bible doctors cast out the devil Epilepticus in the name of the Lord. The Cincinnati doctor advocates casting the throne or habitat of this devil bacillus out by a surgical operation, on the theory that by destroying his abode Mr. Devil will depart forever.

It takes about as much faith to accept the germ theory as the devil theory. Indeed, both are conceptions built out of hypotheses that have their foundation in the false theory that the universe is governed by two Deities--namely, God and Devil. The whole germ theory is a refined and modernized demonology.

Cell-Life

As soon as a cell is born it begins to die. Man's body is made up of cells, and his continuance in life depends entirely upon cell renewal and cell integrity.

The cell is in an ideal state only at the instant of completion; then it begins to wear out. Man's body during his fetal life is in as near a state of equilibrium as is possible; for the temperature of the mother's body is maintained at about ninety-nine degrees F., and his life is carried on by proxy, so to speak. When born, he is subjected sooner or later to all the influences of his environment.

Health is an abstract idea. It cannot be well defined, for it necessarily must vary from birth to the grave.

Living organisms never more than approach a state of equilibrium. Indeed, no man would accept life if he could be guaranteed equilibrium; for that would be a neutral state devoid of experience, consequently with no knowledge. He could not enjoy; he could not love; he could not hate; he could not eat; he could not lose his temper; he could not be happy; he could not have friends or enemies; all of which are necessary to his development.

All man's pleasures and displeasures--happiness and unhappiness--come from the varying of his environment. Through attention, thought, and reflection on these influences is he educated. Man too often goes through life giving no attention whatever to the influences, from a health standpoint, of these various shocks to his nervous system. Indeed, very few recognize the sense of pleasure as a shock, and that evil can come from it. Just a few of the people are beginning to realize that taking food into the system is a shock, notwithstanding the fact that it is a pleasure to take it into the system, and a necessity from a building and repairing point of view. When this subject receives the serious thought and consideration of laymen, as well as professional men, there will be more inquiry for knowledge of just how far stimulation can be carried without harm, and when people get sick they will know that they have been imprudent and gone beyond the point where health can be maintained in eating and caring for the body.

When man is born in the backwoods, and his mental and physical experiences are confined to a very limited environment, the number of pleasurable and disagreeable shocks which he experiences must be almost nil compared with what he would experience in the heart of population.

Everything else being equal, he should live longer in his secluded home; but such is not the experience of mankind. The limited experience--the limited shocks--in this restricted home fail to interest him, and he grows old young, and tires of life, and dies. We cannot live longer than we want to. Books and music help to fill the life and will prolong it.

The metropolitan man is shocked by so much of love and hate, and his experiences are so educational, that life has too much of interest for him to leave it. This does not apply to the sensualist--the man who lives for pleasure; for he becomes ennuied and dies from lack of interest. The man who lives for gain will live long if he continues to be interested in gain; but if he fails, and hope is gone, his health fails and death comes soon. Unfortunately, those who have the faculty for making money--becoming wealthy--are exceedingly unwise in placing it where it will do them the greatest good, or the greatest good to the greatest number.

The body is made stronger by the shock of exercise and work. Too much exercise pushes development beyond the normal. Most athletes are overdeveloped, and as a consequence die early.

Men, after they pass middle age, should have a certain amount of exercise; but those who live a sedentary life will not live as long if their exercise is pushed to a hardening of the muscles as they will if they exercise just enough to keep the muscles well shaped--keep the tissues from falling down. Old men never have muscles that stand up and are individual, such as the athlete prides himself upon. A man who is in a trade or business that requires continuous hard work will keep his muscles well up into old age, if he is regular about his work. If he works up to sixty years of age, keeping his muscles hard from his labor, and then retires, he will not live many years--not nearly so many as he would live if he should continue his work, perhaps not doing quite so much; yet, on account of his being accustomed to work, he will live very much longer if he keeps at his labor than he will if he stops and retires.

Most men of sedentary lives are underdeveloped; their organic life runs down, and many die early.

Over-mental development always means early death. This is especially true where the knowledge is not of a character to make one wise about his proper relation to his environment.

When a great physician dies too early because of lime deposit in his arteries, what is the reason? He has not had the proper conception of his relationship to his environment.

The riddle of health in its varying stages must be known before man can brace himself against the over- and under-effects of environmental shock.

We have seen that development means shock. The shock of too much nourishment, and of too much exercise, produces disease. Neither of these causes is disease-producing within itself. Food is necessary. The body cannot live long without the stimulation (shock) which it gets from food, and certainly it must have the building material that food furnishes. When food and exercise are given within the needs of the body, everything else being equal, the body may be said to be in a state of health.

When food and exercise are supplied beyond the needs of the system, or below the needs of the system, disease is said to prevail.

There is but one deduction from these facts, and that is that health and disease come from the same cause.

Perfect health does not exist. The state varies from one that is known as robust health to fatal disease. Yet both extremes are states of health.

How can there be an entity, disease, coming out of food, exercise, pleasure, work, or anything that affects man in his environment? The answer is: There cannot be. As stated before, life is made worth while because of the various influences affecting man.

Once it was thought that the force which animated living matter was an autogenerated vital energy, but now it is thought to be reactions produced by various agents.

About as good a definition for health as can be given, according to the foregoing, is: an equilibrium established between external stimulation and internal reaction.

The temperature of the body in health is about 37' C., or 98-1/2° F. If the temperature of the room or weather is about 60, and is kept at that point, the body becomes adjusted. If the temperature rises or falls slowly, reaction on the external medium will be gradual. Where the change is sudden, either plus or minus, it upsets the heat equilibrium and may cause much disorder, resulting in disease. What is the disease? Enervation and retention of excretion. This produces toxic poisoning.

Becoming adjusted to any sudden changes causes so much agitation that life may be endangered.

The cause of disease, or the cause of a departure from health, or health perverted, is not some mysterious entity; it comes from shocks imparted by environmental agents, which cause reactions; and the reactions are for the purpose of modifying the shocks and making them compatible with life's requirements.

2. Physical Agents

Air.--Air is not classed as a food; yet it is the most important food. We can live without the ordinary foods from thirty to forty days, and we can live without water for a few days, but we cannot live without air for more than a few minutes.

Air is the gaseous substance that envelops the earth and forms its atmosphere. It consists almost entirely of the gases oxygen and nitrogen, which are merely mixed and not chemically combined.

An ordinary-sized man is supposed to take through the lungs about two thousand cubic feet of

air each twenty-four hours. It is from the air that we secure our greatest supply of oxygen.

Air at sea-level has a pressure of about fourteen and three-fourths pounds to the square inch. It decreases about one-twentieth of a pound per square inch for every ninety feet of altitude. High altitudes cause a quickening of the pulse and breathing. Most people have an idea that there is much danger in going to a high altitude quickly. There is very little discomfort, and almost no danger, to persons in good health.

It is said that, whatever the altitude, the composition of the air is always the same; namely, 21 parts of oxygen, 78.06 of nitrogen, 0.94 of argon, and a trace of carbonic acid.

The only change in the composition of the air in high altitudes is an increase in ozone. Ozone is an allotropic (allotropism: the existence of an element in two or more distinct forms--distinct physical properties).and more active form of oxygen. The variations of the chemical composition of the air do not account for the evil effects experienced in high altitudes; hence the effects must be caused by temperature, pressure, and the action of the sun's rays, which strike more perpendicularly in high than in low altitudes. At an altitude of 4,500 to 5,000 feet the temperature will mark a difference of ten to twelve degrees Fahrenheit in the sun and in the shade. If the bulb of the thermometer be covered with black cotton, the difference will often reach sixty degrees Fahrenheit. This should warn. those in delicate health to prepare themselves with a proper amount of clothing when going into high altitudes. It should not be forgotten, however, that the cold of high altitudes is more tolerable than that of low altitudes, because the air is drier.

The sun, however, does not melt snow unless accompanied with warm air. Black or dark clothes retain the sun's heat and enable the traveler to keep warm in a temperature that would be very uncomfortable at sea level.

The absence of wind and humidity in high altitudes gives comfort, whereas in low altitudes, with a much higher temperature, those who are sick and of low resistance will suffer from the cold.

Altitude.--Snow does not melt in high altitudes, even when the sun's rays are quite warm, until the air becomes warm. Snow, or white clothing reflects the sun's rays; hence dark clothing should be worn in winter, and white or light-colored clothing in summer.

As an experiment: Place a dry leaf on a bank of snow where the sun is shining; in a little while it will be seen that the snow under the leaf is melting.

Absence of wind and humidity causes high altitudes to be comfortable places to live.

Mountain air is so dry that putrefaction does not occur to the same extent as at sea level. In high altitudes meat will dry and cure without salt. Desiccation is effected before decomposition can set in. At St. Bernard, in the Swiss Alps, the corpses of men and animals never decay. The dead are placed in morgues, where they are preserved indefinitely--a form of immortality.

The air is so rarefied in high altitudes that patients are made quite nervous because of the absence of noise. Sound does not carry, because the air is not dense enough to transmit it.

It is said that the absence of noise causes a feeling of sadness.

The effect of altitudes ranging from six to twelve thousand feet, on one seeking health, will be at first, while becoming acclimated, that of a feeling of warmth on the skin. The lips will redden, and the eyes will flush. For a while one will be troubled with insomnia; a slight palpitation; or, if the heart is weak, the palpitation may be severe. There will be a feeling of dyspnea (shortness of breath); dizziness; and sometimes headache. The urine is dark, and constipation is the rule; and, from the first, the appetite is increased.

In a short time the skin becomes a tan color. The lips, nose, and hair become so dry that salves and vaseline are used to secure relief from the dryness. Strength increases, and long walks, and even mountain-climbing, do not fatigue until overeating brings on the tired feeling peculiar to food poisoning.

There is mountain sickness, which is said to be unavoidable in altitudes of from twelve to fifteen thousand feet, but not equally in all countries--probably the result of overeating and fatigue. The exhilaration caused by the mountain atmosphere induces the traveler or sightseer to exercise to excess; this uses up so much nerve energy that imperfect digestion results, following which comes intestinal toxin infection; and that is what mountain fever is.

Mountain-climbers are not equally subject to mountain sickness. This, of course, is true of every section of the country. It is said that the lack of oxygen, the increased cold, and the fatigue have much to do with bringing on mountain sickness. Obviously harm must follow an increased appetite and a decrease in oxygen supply. A decrease of oxygen favors decomposition; this is one reason for auto-intoxication.

The symptoms of mountain sickness are a feeling of growing malaise; pains in the legs, especially the knees; the mouth fills with saliva; sickness of the stomach, followed by vomiting of food; and, in severe attacks, bilious and even blood vomiting. In the advanced stages of the disease, pain in the bowels and diarrhea set in.

According to Paul Bert: "The quantity of oxygen in the blood diminishes as the atmospheric pressure diminishes. If the rarefaction corresponds to pressure existing at 6,000 feet of altitude, the oxygen diminishes thirteen per cent; at 9,000 feet, twenty-one per cent; at 25,000 feet, fifty per cent." He thinks oxygen starvation causes death in these high altitudes, and experiments that he has carried out have proved that he is right.

By "becoming acclimated" is meant that the blood acquires an increased capacity for absorbing oxygen; which means an increase in the red corpuscles and an increase in the iron contents. This being true, patients suffering from anemia, and especially chlorosis, will find benefit in living in high altitudes. They will also suffer much in traveling in high altitudes.

This is according to the best medical authority. I will say in this connection, however, that such diseases are brought on from imprudent eating. My experience is that anemic and chlorotic patients eat foods that are devoid of oxygen, until they lose their power for carrying oxygen. Why should not this be true? Nature removes an organ no longer used. If oxygen is not taken into the system in large enough quantities to supply work for the red corpuscles, there will be a gradual diminution of these corpuscles to correspond with requirements. High altitudes force breathing; hence the demand for more blood corpuscles, and the supply.

To those who are anemic or chlorotic I will say: If resort to a high and dry altitude cannot be taken, do not be discouraged; stay at home and get well. Stop sugar-, candy-, and cake-eating; use sugar in foods very sparingly. Eat uncooked fruit, also salads made from fresh, crisp vegetables, or a slaw, every day; and teach yourself deep breathing.

An increased capacity for absorbing oxygen may be developed in low as well as high altitudes by getting rid of toxins in the blood. This can be done by correcting the eating: by lessening the amount of the so-called staples--meat, bread or cereals, pudding, pie, cake, etc.--and eating more fresh fruit and vegetable salads; and exercise should not be forgotten.

Pulmonary tuberculosis is a disease supposed to be best treated when sent to high and dry altitudes. This supposed benefit is not without its drawbacks. All lung cases with a high pulse-rate should seek as dry a climate as possible, but avoid altitudes more than a mile above sea level.

Almost irreparable harm is done to blood-making and nutrition before the tubercular bacillus

is discoverable in the lungs. Prevention of this disease must start in childhood, with those of the tubercular diathesis. After adenitis (lymphatic infection) has been developed in a tuberculous diathesis, it will require unusually good judgment on the part of the patient, and unusual medical skill on the part of the medical adviser, to bring the patient back to the normal. To stay normal with a diathesis and a record of one breakdown will require great good judgment--certainly more than a residence in a high altitude, etc.

I have learned from observation that those who are well advanced with pulmonary tuberculosis, and who have a high pulse-rate, die off very rapidly when brought to Denver.

If we are to believe in the eternal logic of the universe, we must believe that sound judgment is an accompaniment of a sound body. This being true, all tubercular subjects should be directed by the wisest minds; for their own is as prone to go wrong as the sparks are to fly upward.

Curing this disease means correcting the mind and body-it means right thinking and acting.

If it is a fact that more lung capacity is needed in high altitudes, is it wise to force diseased lungs to expand? Oxygen starvation is one of the symptoms of tuberculosis, due to imperfect lung action. The lungs of these subjects are not used to their full capacity, and, as the disease advances, breathing grows more shallow, because the lungs grow more sensitive to the air. Cold air irritates and causes coughing, and, to avoid coughing, the patient learns to breathe in a more shallow manner all the time; and, of course, the less oxygen taken in, the less food is digested, and the farther away from health the victim drifts.

Sleeping-porches and other devices for furnishing fresh air and a greater oxygen consumption have been a dominating fad since a few years ago, when it was the custom to have patients sit out-of-doors in the coldest weather--wrapped, of course, enough to keep warm.

Obviously both plans are rather more detrimental than good. The object is fine, for it is necessary to have as pure air as possible; but the good is, according to my way of thinking, more than offset by the irritating effect of the cold on the lungs. Reader, stop and think: These patients are in heated houses all day, and some of them in superheated houses. At night they breathe an atmosphere many degrees colder than it is throughout the day. The house temperature through the day is seventy degrees Fahrenheit, or more; while on the porch it ranges, in Denver, from thirty-two degrees above to ten degrees below zero. The range is from thirty-eight to eighty degrees. Can anyone with common sense believe that a weak, diseased lung will thrive subjected every twenty-four hours to such extremes of temperature?

If the above is true, the modem treatment of this disease could not possibly be much worse.

If houses are as clean as they should be; if bedding is as clean as bedding should always be, patients will do much better in a closed house--closed up for the entire night--and fire enough to keep the night temperature within ten or twenty degrees of the day temperature.

All of us (doctors and laymen) must go through the fresh air insanity. Converts to new thoughts, or old thoughts, are always nearsighted, enthusiastic, and even fanatical in their loyalty in following literally and not wisely such fads. The fresh air craze has surely killed its quota. Filthy houses have done their share. Now sensible people should split the difference and keep both foul and cold air out of their lungs. To encourage those who read this, I will say: The composition of the atmosphere is always the same,* and, like all organs, it is maintained at the same composition, and must remain so until destroyed; and along with its destruction must go all animal life. (*This does not mean that the air of proper composition cannot be made the vehicle of filth. Houses, bedding, clothing, and the body must be clean.)

It is all nonsense to talk about burning up or breathing out of the atmosphere all the oxygen. If houses are clean, no harm will come to the sick by closing doors and windows to prevent them from chilling their lungs and blood by breathing an atmosphere much colder than their bodies.

Harm from breathing cold air does not end with simply causing irritation; the patient's nerve energy is used up in resisting the cold. It takes nerve energy to resist cold; it takes nerve energy to digest food. This being true, should not sick people be kept in a warm atmosphere, and fed on food that will nourish the body at the least expenditure of energy in digestion?

The nervous system of a plithisical patient should not be severely taxed in resisting cold. It must be remembered that digestion cannot be carried on with a bodily temperature varying much from 99' F.

It is a mistake for sick people to live in an atmosphere so cold that wool or other heavy, impervious underwear is thought to be necessary to keep the body warm. Air is a tonic and stimulant to the skin, and, neither last nor least, it is a disinfectant. To keep the surface of the body sweet and clean, air must get to it, and it cannot when the body is swathed in tight-fitting woolen or other underwear. Open-woven cloth is better; no underwear at all is best.

It matters not how clean a housewife may be-if she does not air her closets and clothing, she cannot boast of her cleanliness. Men who ruin their homes with tobacco smoke, rendering them unfit for women and children to live in, certainly pay a lot for their pleasure. I have known of invalid wives who could get well if their homes could be freed from stale tobacco smoke. Invalid wives are expensive.

A part of humanity live in ill-smelling houses and clothing. Many men think they are excused for ill-smelling bodies because their work is dirty. This is not necessary. Grease, smoke, dust, and iron rust or filings will make the clothes, hands, and face dirty; but I deny that it is necessary for any man to emit an odor that is offensive.

Women who take advantage of dirty work as an excuse for making themselves a nuisance from malodor should be boycotted. It is no disgrace to do work that makes one's body and clothes dirty; but there never can be any excuse for filth, and the odor that accompanies it. People who are filthy are a menace to society and should be taken care of by the health authorities, in the same manner that all decomposition is cared for.

Air and dust, sometimes called dirt, are aseptic and antiseptic. Dust is fought against by housewives, and cities hold it down with the sprinkling cars. In this way one of nature's health-imparting agencies is made inefficient.

Winds and storms are necessary; they are nature's sanitary measures. Wind is necessary for lowlands and low altitudes. Canyons are frequently swept by windsthe reason given being that they act as chimneys for conveying hot air out of the plains: the hot air rises and the cold air goes to the bottom, creating currents. These winds are sanitary; they carry out of the canyons malodors, and antisepticize the accumulated decomposition.

Vegetation grows more luxuriantly, everything being equal, in a windy country than it does in a windless country. Trees grow more rapidly in Kansas because of its winds. Chicago is noted for large, fine-looking girls, and wind. The relationship is obvious.

Walls of wood and stone around private residences in cities are menacing to the health of the neighborhood.

Houses for stock and chickens should be nothing more than windbreaks--never airtight pens or houses. All that animals need are windbreaks; they do not need warm houses, notwithstanding the fact that such protection is often given as a matter of economy--the warmer the animal is kept, the less food is needed. But this is economy at the expense of health. Warm houses and tuberculosis are close friends, and are found among the human animals as well as the brute creation.

The more air we breathe, the better our digestions will be. Warm, close houses are not so menacing to health as people generally believe. The real health-destroyer in our houses is dirt

that is taking on septic change: dirty clothes, kept in closets that cannot be ventilated and are not cleaned; decaying food, and never thoroughly cleaned pantries and ice-chests; old beds that are dressed with nice, white pillows and spreads--veritable whited sepulchers; and then the habit of keeping an ill-smelling cesspool under the diaphragm, from eating beyond the digestive capacity.

Keep the home, in every comer and recess, sweet and clean; keep dirty clothing from accumulating; keep the body and mind clean; then, when cold weather comes, it will not be necessary to keep doors and windows open or to sleep out-of-doors. Keep clean and comfortable, and avoid shocking the lungs and nervous system by breathing air seventy to eighty degrees colder at night than at midday. When necessary to breathe cold air, do so in action--when walking, exercising, or at work. Do not sit out-of-doors wrapped up, or sleep out-of-doors.

In all things it is worth while to take a commonsense view; and in the care of the body, moderation--avoiding fanaticism, which is another name for ignorance--is the safer practice, and much more conducive to long life and success.

Heat.--Heat is not food; yet it is one of food's most important allies.

A temperature of the body of approximately ninety-eight degrees Fahrenheit is necessary to insure digestion and assimilation. A continuous temperature of one degree less than normal will lead to physical destruction sooner than a continuous temperature of one degree above normal.

Just what causes the increased temperature in fevers is an unsolved problem; and it is doubtful whether it ever will be solved. Every case of fever will have to be settled individually; for, as in all things connected with health and disease, there are no unitary causes. Every effect depends upon multiple causes.

The nervous system presides over organic functioning. When nerve energy is below normal, the functions of secretion and excretion are impaired. As secretions are necessary to digestion and assimilation, these functions are impaired, and, excretions being imperfect, the waste products are retained and act as inhibitors of functioning.

Following this state will be cold hands and feet. People are said to have poor circulation, which, indeed, is true; but poor circulation must have an explanation, for those two words are meaningless in themselves. Poor circulation means enervation; means that nerve energy is low; means that the nerves distributed to the blood vessels fail to impart tonicity to their muscular and fibrous coats, stimulating normal contraction.

Heart and blood-vessels in health act rhythmically--contract and relax--under the influence of nerve energy; and this causes what we know as circulation of the blood.

Nerve energy is necessary to keep up the blood circulation and the normal temperature of the body indicated by warm feet and hands.

Anything that uses up nerve energy brings on enervation and, as hinted before, impairment of the functions of secretion and excretion. The lungs fail to exchange carbonic-acid gas for oxygen gas. When there is imperfect exchange of gases in the lungs, digestion is impaired; for perfect digestion requires that oxygen be brought in by the lungs.

Nerve energy and heat are generated when the oxygen in the blood of the arteries acts upon the carbon in the veins; and when, from any cause, the supply of oxygen is low, heat is not generated, and cold hands and feet follow. The remedy must be to remove the first cause of enervation. What is it? Excessive eating, drinking, enjoying, working, or what not. The feeding must be in keeping with digestive limitations, not in keeping with the bodily needs. There is little science and less sense in advising an enervated patient to eat "lots of good, nourishing food." The chasm that exists between my dietetic system and every other system that I have

heard of is too great to be bridged with any possible compromise. I feed my patients in keeping with their digestive capacity, while all others endeavor to force feeding in keeping with apparent systemic needs, without respect or consideration for the patient's ability to digest and assimilate.

The foods that furnish heat are the carbohydrates. Sugar is the most rapid heat-producer, fat next, and starch next.

An oversupply of heat-producing foods, indulged in continually, will end in great enervation and whatever disease the individual has a predisposition to develop.

When sugar is eaten beyond the system's needs, it will not be acted upon. If all were used up and heat generated, life would be put out from hyperpyrexia, or overheating. The amount taken above the body's needs will go out of the body by way of the kidneys or bowels; not, however, without more or less injury to these organs of excretion. It is a mistake to believe that we may indulge ourselves beyond the system's needs, with any food or drink, with impunity. Indeed, the surplus is a tax on energy to get rid of it, and this tax divides the work of nutrition. Ideal nutrition cannot be had when its work is interfered with by the work of eliminating a lot of unnecessary material.

It should be bome in mind that the law of correlation of forces must govern in the matter of food and nutrition, the same as in dealing with natural law anywhere in the realm of knowledge and science.

Heat is being consumed when the body is in pain; when overclothed or overworked; and when mentally worried, depressed, or overjoyed.

Fever is not an indication of the generation of surplus heat. Indeed, quite the contrary is true; for the body is not generating so much as when normal. The reason for the excessive temperature is that nerve energy is impaired; elimination by the skin, lungs, and kidneys is suspended, and, as a result, the excretions are retained. One of the functions of the skin and lungs is to radiate heat. If, through food or other poisoning, the nerve energy supplied to these organs is cut off, heat is retained in the body. If the cause is infection from an injury, or pent-up decomposition in the bowels, the source of infection must be got rid of as soon as possible; then the temperature will run down. Physicians in general practice often see an increase of temperature from two or three to five and six degrees Fahrenheit following indigestion caused by overeating, and if the indiscretion is not repeated, the fever may subside in twelve to twenty-four hours.

After childbirth or abortion, if from any cause the uterine discharge becomes pent up, pain and fever will quickly follow. If understood, however, and the womb washed out, and drainage established, pain and increased temperature will be controlled at once, never to return, unless the cause is allowed to return.

Pain inhibits the physiological manufacture of heat, and if it did not stop radiation, the patient would probably die from refrigeration--from loss of all bodily heat. Hence fever may be looked upon as one of the most remarkably uniquely conservative acts in all the world of pathological conservatism.

Health and long life cannot be looked for by those who are careless and indifferent about keeping their extremities warm. Cold, clammy hands and feet indicate malnutrition, and must be cured by correcting the bad daily habits that build this symptom.

Until the extremities keep warm from restored circulation, following the correcting of the disease-producing habits, artificial heat must be used to keep the feet warm. Covering on the feet and legs to the knees should be double the weight of that over the body and shoulders; or a jug of hot water may be kept in the foot of the bed to use when necessary. Do not sleep with the

feet against the heater. Through the day, if sitting much, an electric pad should be used. Keep the feet warm, and prevent further decline in health.

Do not overclothe in an effort to keep warm. Lightweight, open-woven underwear, with heavy top clothing when going out, is the proper way to meet the cold. When riding in cold weather, the feet must be kept warm. Overeating and chilling spell pneumonia.

Heat of summer can be easily borne--in fact, enjoyed--if the eating is correct. Cut the heat-producing foods down to the minimum; meat, with all fat trimmed away, not oftener than once a day or three times a week; fruit and salads, with milk and cheese; bread once a day for those who are not overweight. Wear only the lightestweight, open-woven underwear.

People who persist in overeating make themselves very uncomfortable, and they are the people who meet with prostrations and sunstrokes.

Workmen who are subjected to great heat should leave starch, fats, and sugar, or any form of sweets, alone. Drink freely of pure water--positively no alcoholics; for lunch, ice cream and fruit. The ice cream is sweet and fat and evolves heat. its effects should be watched, and if the heat is harder to endure on days that the ice cream is used, it would be wise to stop it.

Ices may be used too often, and to the detriment of health. The injurious effects of all classes of foods are so little known by laymen, and even by physicians, that few are willing to believe that their favorite "bonnes bouches" cause the discomfort they experience. I see people daily suffering so greatly that they are driven to seek relief and cure; yet they are unwilling to part with the habit that causes their unhappiness. Indeed, it is almost impossible to convince them that ill can come from so simple a pleasure.

Iced drinks should be taken in great moderation. The cold drink habit is like all other habits--it grows on what it feeds. The more ice used, the stronger the demand. A drink of ice water taken an hour after a hearty meal often generates an insatiable thirst, which, if satisfied, will positively cause indigestion, and not infrequently start a derangement that may end in typhoid fever or some other acute malady; or a chronic irritation may be started that will end in ulcer or cancer of the stomach.

Extremely cold drinks and extremely hot drinks are equally injurious. The very sick should always be watched, and artificial heat used continually to keep the extremities warm.

Thousands and thousands have died who would have lived if that one little chore of keeping their feet warm had been attended to properly.

If it could be generally known and remembered that the function of heat-making is suspended during sickness, and that the very old, the very young, and those who are greatly run down are liable to freeze up--collapse--in the hottest weather, deaths from this cause might be prevented by seeing to it that they are kept comfortably warm.

Many cholera-infantum cases die every summer--July and August--because those who care for them believe the babies feel the heat as other people do, and no attention is given to keeping them warm. Death in such cases comes from chilling or freezing to death.

Dry heat is more endurable than moist heat. A humid atmosphere is very enervating.

Every summer nearly all cities of this country suffer deaths from heat strokes.

Sunstroke usually occurs among those who are dissipated. Sensuality perhaps covers the whole class. I do not believe any suffer from this disease who are not enervated from sensuality.

Those who work in overheated places and are food- or alcohol-poisoned are in line for heat prostrations.

Various disorders may persist after a recovery from heat stroke; namely, neuralgia, headache, and sometimes strange ideas or notions. These troubles, however, result as much from wrong daily life as from the previous sickness . Indeed, such cases may be cured of these relics of former sickness if the patients will follow a proper style of living.

Cold.--Cold climates are said to be more healthful than warm climates. I am not prepared to accept that statement without qualifications. Under correct sanitary control, I believe that warm countries are more conducive to long life than are cold countries; but under neglected and bad dietetic, hygienic, and sanitary conditions, cold countries are better. And, of all countries, those of high altitudes are best. Decomposition is the menace to health in warm countries; the people die of sepsis--blood poisoning--and hepatic derangements; whereas in cold countries health and life are menaced by overstimulation and its consequent enervation.

It is true that heat is enervating, but the bad habit of eating heat-producing foods in hot countries causes hot climates to be more unhealthful than is natural. Investigation will show that there are more people who grow old in warm countries. Cold is hard on old, and on very young, people.

Explorers of the polar regions state that they stood a temperature of from forty to fifty degrees Fahrenheit below zero, without suffering, when there was no wind. It is said that life may be maintained at from seventy to ninety-five degrees Fahrenheit below zero. Authors of this statement, however, counsel against exaggerating the importance of this fact. On an average, about seven hundred persons perish every year in Russia from cold.

All ages do not stand cold equally well. Adults resist the cold best. The old and young chill easily.

The enervated, or those with weakened nutrition, must keep warm.

Discouragement, overwork, starvation, or any influences that depress the mind as well as the body, render the individual unfit to stand exposure to cold. Any enervating habit removes resistance to cold. Drinking of alcoholics overcomes man's resistance. Brandy-drinking, as practiced in Russia, often causes serious suffering, and a few fall dead on being exposed to extreme cold after indulging.

There still persists a popular obstinacy or ignorant belief that alcoholics, or so-called stimulants, are an advantage to those who are exposed to cold, or subjected to fatiguing labor. The truth is exactly the opposite of this belief; for alcohol, in any form, enervates by removing the normal tonicity. Man in a full state of health has tone--a normal irritability or excitability--that enables him to act and react on his environment. A man in full vigor can control or react of strike back, but the impotent man has no control and cannot react or strike back. The rage of King Lear marks the acme of senile impotency. Indeed, anger means impotency; the greater the lack of self-control, the more impotency is marked.

Alcohol is not a stimulant nor a tonic; it is a drug that deadens sensation. Hence its first, last, and only effect is to paralyze. The reason why drinkers like it is because it deadens sensation. The more enervated the alcoholic habitue, the less responsible he is for his acts.

To send a drunkard or a drug fiend to the electric chair is certainly the acme of social stupidity. We have quit legally killing those whom we know to be insane; yet we are slow to recognize the drunk or the dope fiends as artificially and temporarily insane.

Fever often produces mental hallucinations, but these states of aberration are not so often due to fever as to drugs. Alcohol and opium have sent many patients through windows to their death. Suicides and homicides are oftener the acts of brains crazed with drugs than the result of viciousness. And society is so ignorantly stupid as to license drug and gin shops, and clothe physicians with authority to build lunatics for our courts to run into the penitentiaries, hang, or

electrocute.

Habits are easily formed. It is an easy matter to go from alcohol to morphine. These drugs do not act the same, yet both of them deaden sensation and are habit-forming, and both produce physical and mental impotency. It matters not in what quantities taken, they weaken resistance and render those who use them less and less efficient for their work.

There is nothing except food that gives man strength. And too much food--eating beyond the digestive capacity--will cause weakness. When food is taken beyond digestive capacity, and a habitual intestinal fermentation is established, the individual loses his power to keep warm. Victims of this state may put on the heaviest clothing--indeed, they usually wear heavy woolen underwear, often two suits, and the heaviest top clothing--yet the more clothing they put on, the more they may. Still there is no comfort for them; for the more clothing put on the body, beyond just enough to protect from wind and weather, the more such people suffer from cold. Heavy clothes break down resistance, and if the habit of wrong eating and heavy clothing is continued, the refrigeration of death will relieve the unfortunate victims of this health-destroying habit.

When a man is in full health, nothing can add to his strength. Emotional excitement may cause him to use all the power he has for the moment, but the result is enervation that will require more than the usual amount of rest to restore. The same is true of protection with clothing. The body in health has power to protect itself from the varying temperatures. It can adjust itself to all degrees of heat and cold, and needs no protection except from inclemency. And when these facts are ignored and artificial protection is indulged in, self-protection is lost, which results in disease.

Food and clothing beyond necessity, close houses, artificial heat, stimulants (?), and tonics (?), make a conglomeration of influences that spell d-i-s-e-a-s-e and early death.

The body should be protected from wind and weather, but not from contact with the air. The body must live in the air. Open-woven cotton or linen underwear, or a sleeveless and legless light-weight garment that stands for cleanliness rather than bodily protection, is all that is necessary; then the top clothing may be adjusted to be in keeping with the weather conditions.

This is quite the opposite of what is recommended by modem medical science. But it should be known that modem medical science is a wonderfully wroughtout system of palliation which in every particular "borrows from Peter to pay Paul;" breaks down health to relieve suffering; builds a fatal disease by relieving or palliating an innocent one.

In the matter of prescribing for those who are breaking themselves down--becoming so enervated that the chill of death is sending its messengers of warning--the really up-to-date doctor will prescribe heavy woolen underwear and more "good, nourishing food;" and, as auxiliaries, stimulants and tonics to quicken the circulation and give strength! Such trifling with health and life is a disgrace to our civilization. Patients applying for advice--for relief from such symptoms--should be educated into health habits; not turned off with short-lived palliatives that will become allied with the patient's bad habits to hasten his destruction.

Those who find themselves distressed by a weather temperature that does not appear to inconvenience those about them should get busy correcting bad eating, clothing, and housing habits.

Do these people need heat-producing foods? Most of them have broken themselves down by overindulgence in these very same foods. Will they be benefited by eating more of them? This is exactly what modem medical science declares; and the result is more breaking-down, more disease, and at last premature death.

Rest--physiological and physical--whole or partial withdrawal of food, and quiet in bed, with artificial heat, and food only when comfortable, will soon right such patients.

As soon as habitual decomposition in the bowels is overcome, these patients begin to warm up; feet and hands gradually grow warm; the mind and body grow more active; the outlook becomes brighter. Often this change not only restores physical and mental health, but it puts the victim on a solid financial basis. People poisoned with alcohol or drugs, or who are toxin-infected, stumble over opportunities every day; they see others succeeding by, perhaps, picking up the opportunities over which they themselves have stumbled.

Those who are cultivating cold feet must not be surprised to find themselves lagging behind in the affairs of life; and they will certainly grow more diseases from day to day.

Death is a coldness that knows no warming; and the unfortunate person who has cultivated cold hands and feet is started toward that final state.

The greater the intensity of cold, the more pronounced its effects on the parts exposed. At three or four degrees below zero, redness is excited; treble the amount will cause swelling; and six times that amount of cold will result in gangrene.

The first effect of cold is a feeling of fatigue and a desire to sleep. But if sleep be indulged in, there will be no awaking.

Light.--Light is necessary for health. Germ life is destroyed by it. Plants do not thrive any better than animals in the absence of light.

Light is a stimulant, and of course can do injury to those who overindulge in it. Those who chase fad cures, and who are not happy until everyone is in the ground too deep for resurrection, will, while taking the sun-bath cure, blister their bodies and torture themselves in every way, that the sun's rays may be used. When this so-called cure ceases to be disagreeable, they will decide that the remedy has lost its effect, and away they go searching for a new cure that will be disagreeable enough to be curative. A cure with them is valued according to the extent of its disagreeableness. The cure idea with such people has not evolved away from exorcism--disease and cure still being a system of demonism. With the profession the demon has dwindled to a microscopic germ.

Clothes keep the light away from the body, and, because of this, man suffers more or less from light starvation. When such subjects are persuaded by a monomaniac healer to expose their delicate bodies to the direct rays of the sun, they will be very uncomfortable.

When people become accustomed to living in Colorado, and have cultivated the sunshine habit, they are not satisfied to make their homes in a country where the sunlight is shut out by clouds and rain. Light builds optimism, while cloudiness or shade causes more or less pessimism.

Light increases the amount of carbonic acid thrown off. It is said that when the body is brought into the light with the eyes shaded, carbonic acid rises twelve per cent; then, if the eyes are bared and the body covered, the carbonic acid rises to fourteen per cent; when eyes and body are exposed simultaneously, this acid rises to thirty-six per cent, exceeding the combined separate exposures by ten per cent. This increase indicates more combustion; and, in fact, there is a slight elevation of temperature. In children it ranges from one-tenth to one-half degree Centigrade.

The sun's rays, either direct or reflected, will cause a skin irritation--erythema--accompanied by an elevation of the epidermis, with serous liquid; that is, the skin blisters and causes great discomfort. When the sun's rays are reflected from water, the action on the skin in one day is very pronounced.

Pellagra is supposed by a few to be caused by the sun's rays; by others, to be caused by consuming spoiled maize--corn. It has not been my privilege to see more than one or two cases of pellagra; but, judging from what writers say about it, it is probably caused by excessive

starch-eating; or it may be the combined effect of starch, sweet (molasses), and the sun's rays and hot weather. This disease, and hookworm, should be eradicated by correcting the personal habits of those afflicted with them. It is a mistake to look for a unitary cause for these diseases; for, as with all others, there are many causes, and just what causes them in one individual may not be the cause in another. impaired nutrition is the fundamental cause.

Darkened houses are proverbially unwholesome houses. All houses should be built in such a manner as to secure as much light as possible. When light is furnished, air is sure to be, and provision for both these elements makes it almost impossible to overheat.

Blue rays have been used to restore hair; Roentgen, or X-rays, and violet rays are used to treat cancer; and all the rays of the spectrum have been used as remedies for diseases. But these remedies soon fall into disuse because of lack of merit. A few enthusiasts--specialists on skin diseases, or cancer specialists--have lost their lives from administering the X-ray; others have lost fingers, hands, and arms. I have seen cancer patients fearfully burned by the use of the X-ray--and that, too, without corresponding benefit.

The ability of radium to disorganize tissue has caused it to be used and recommended. All these remedies, including the plaster cure made from escharotics, appeal to patients as well as to doctors. Why not? If these remedies can cause the disease to drop out, "root and all," what can possibly do more? Commercialism is just now exploiting radium; but, like all cures based on a false theory of disease, it must fail.

The professional mind seldom thinks farther than to the radical removal of the disease-which is seldom, if ever, anything more than removing effects. That the cause may hark back to a faulty nutrition, and that this fault may be caused by one or more of a thousand-and-one enervating causes, is not thought of; or, if it is, no consideration is given it. It is easier to think palliation and work palliatives.

It is doubtful if anyone will develop a cancer who lives in a properly lighted, aired, and heated home, and who takes reasonable care of his body and mind, and keeps intensely interested in life.

Shut out the light and air from the body with thick, closely woven, close-fitting, and overheating underwear; live in a house in keeping; then have a dietary to correspond, and this will create a habitat in which any disease is liable to spring up and thrive.

A bright light held before the eyes and gazed upon is liable to bring on a state known as artificial slumber or hypnosis. The name of "Braidism" is given to this phenomenon because a man by the name of Braidy discovered it.

The influence of light and shade on the nervous system must be very great, and it should be better understood. Let us hope that it will be.

I have seen young children thrown into convulsions by allowing a bright light to glare into their faces when they were nervous and feverish.

Care should be exercised with babies to prevent shocking them by allowing strong lights to flash into their eyes.

The moving picture shows, attended frequently and over a long period of time, will create nervous derangements. No doubt many are being injured in this way. Those with functional, as well as organic, diseases are having their symptoms aggravated by frequent attendance at these shows; but they have not suspected the cause. One or two hours at a picture show will use up as much nerve energy as a whole day at the usual vocation. The combined effect of eye- and ear-strain--the picture and the music--is very strenuous and nerve-exhausting.

Sound.--The nervous system of those who live in large towns and cities is put to great stress.

We are fast approaching a time when the noise nuisance will have to be legislated out of existence, the same as other nuisances that have been squelched.

The automobile need not be a nuisance, but it certainly is. The majority of people who drive their machines act as though they had a special commission to make as much noise, split as much air, and kick up as much dust as possible.

Since the automobile and motorcycle have come to stay, there has sprung up a type of people who really believe that their other name is pandemonium. Unless they are kicking up enough noise to wreck the "nerve" of a political lobbyist, they will not be able to "split the ears" of His Majesty, the Prince of Perdition, when they go to him; which they will, for they certainly will be out of place at a "rest" resort. The average chauffeur plays with the cut-off as the average motorman on the street car plays with his bell.

The street car is made up of the quintessence of noise, and the motorman has become so noise-crazed that he clangs his bell--not because he is approaching a crossing; not because he has a slow coach in front of him, but because he is playing an accompaniment to his thoughts. He thinks noise, hence he plays noise.

The car itself is a gamester of noise "par excellence.'? But health declares it a disgrace to civilization. Not the slightest attention has ever been given to constructing a silent-running car; it is put together so that every part becomes a rival of every other part in creating din. Then, when this roar-monger is manned by a real bellringer, hell is certainly turned loose when this peace- and quiet-destroyer is sent over a street every thirty to sixty seconds. There is positively no excuse for inflicting such punishment on humanity. Surprise is expressed at the number of people committing suicide and going insane every year. Unless commercialism is controlled in its selfishness, it will fill the world with mad-houses and penitentiaries.

Fill a street with modern cars, and a lot of automobiles with their cut-offs opened and conks conking, and we certainly have a state of uproar that must cause degeneration of the nervous system of all human beings subjected to it.

Why should we wonder at the increase of insanity and crime, when we add to the din the thousand-and-one other nerve-destroying habits of social and business life?

Every lover of music and art should protest without ceasing against the growing tendency to convert this beautiful world into a hideous nightmare of inharmony. When it is admitted that "silence is more musical than any song," why should the mongers of noise be allowed to rule?

Is there anyone so simple-minded as to need to be told that such a bedlam as exists in every large town and city is subversive of ethics, art, and religion? The beautiful, sonorous, and euphonious sounds are suppressed by the uproar, and the prospective mothers of the coming generation are forced into developing a distorted nervous system to impart to their children.

We must certainly expect to reap as we sow. Can any but the fool believe that we can sow inharmony and reap harmony--sow pandemonium and reap Utopias?

Disagreeable sounds, smells, sights, tastes, and feelings are so intimately united and blended with commercialism that there is little hope of overcoming them. With this it is the same as with disease-producing beliefs and so-called cures. The present style of curing and immunizing is so much a part of Rockefeller's millions, and other millions, that there is no hope of any considerable reform. The masses move along tied to the yoke of mammon; the poor, sick fools denounce the system that they declare usurps and exploits them; yet in every other way they uphold it with ballot and voice.

The noise system is a cheap-John scheme. It gets up cars as cheaply as possible--which means that they must be noisy. It charges as much as the law will allow. The patrons are shaken and jolted as only a springless and bumperless car or wagon can shake or jolt; and then their finer

senses are shocked, through the auditory nerves, by the noise that almost prevents thinking. All this wears out the patron; it injures him as a citizen; his health is impaired. The health, morality, estheticism, and artistic development of the people of any city may largely be measured by its cleanliness and absence of noise. A public utility that is grossly selfish, and tears the people down to lift itself, is certainly penny-wise and pound-foolish.

When people are nervous, they lack in judgment--they do not make the progress in trades, professions, arts, music, and business that they should. A city made up of noise-crazed people will not make progress in a substantial way. Why? Because noise-crazed people are nervous selfish, disloyal, and unable to see that to gratify themselves to the detriment of the city's best interests is to cut their own economic throats. This is exactly what every street-car company is doing when its economy lowers the moral, health, and sanity standard of its patrons.

Make a city clean and quiet-or as nearly noiseless as possible. Every utility should be run in the interests of its patrons, on the principle that people well served are happy, healthy, and prosperous, and possess drawing power. They attract other people to their city. Such a city grows; its property advances; and, according to the law of "like attracts like," a prosperous community attracts prosperity.

All physicians who know that sickness is brought on, wittingly or unwittingly, from practicing many bad habits, and from unwholesome environments, by wearing out the nervous system with a lot of unnecessary noise, or by any influence that uses up nerve energy, know that rest is one of the most important elements in any therapeutic plan-rest of body and mind. This means that the body must not labor; that the mind must not labor; and that the nerves of special sense-namely, sight, sound, taste, smell, and touch--must rest from labor.

Everything may be done for a broken-down individual except securing quiet--absence from noise; and if this requirement alone is neglected, restoration to health will not take place. Nervous people must secure rest from noise, because nothing is so uncompromisingly destructive to the nervous system as noise.

It is the duty of parents to control children. When several get together, they are inclined to push their funmaking to excess, and from small noises they go to larger and larger, until they become hysterical. If this is permitted day after day, the decidedly nervous temperament will lose more or less power over coordination, and this will lead to chorea, or St. Vitus' dance, or other nervous diseases.

Light, very restricted eating, and quiet in bed, with visits from children interdicted, is the proper treatment. Such patients must be kept in bed until every sign of irritability and muscle-twitching has subsided.

After nervous children recover, a limit must be set to the amount of play indulged in; and excitement of all kinds must be avoided. The diet of such children must be simple: toasted non-yeast bread, butter, and milk for two meals each day; and fruit, cottage cheese, and milk for one meal. Quiet and rest is the principal remedy.

Not many know that music has other qualities besides the power to "soothe the savage breast;" or perhaps I would better say that most people think that only good can come from music. Inharmony disturbs rhythm, and anything that interferes with rhythm strikes at the base of development and interferes with growth--nutrition.

Everything capable of producing an effect may be said to have at least four influences; namely: a good, natural, or wholesome influence; then an excessive, defective, and perverted influence. This is true of music. I know of people who are made very miserable by music--it might be said that they are badly influenced by it. Then there are strong, healthy people who are driven almost mad by poor or defective musical execution, but who thrive in an atmosphere of harmony.

All people are not attuned to the same key; or it may be possible that it is easier to adjust the nervous system to the different tones than to fall into harmony with varying time.

Sensitive children drive themselves into nervous prostration by the inharmony they produce when compelled to spend long hours in practice.

It may be that only inharmony (noise called music) is to blame for the nervousness I have seen in music teachers and their pupils; but I know that many suffer much from music, or the noise of practice, or butchered harmony. Of course, there are other influences which must be considered besides the noise of musical instruments. They are food, mental, and physical bad habits that help noise build nervousness and break nervous people down.

School children are overworked. School, music, and social duties wear some of those who are food-poisoned to nerve exhaustion.

When enervation is pronounced, as we often see in mothers of undisciplined children, such mothers must be taken away from home environments to be cured of their diseases. There is always something unusual--something out of the ordinary--the matter with mothers who cannot get well in the environment of home and children; for the mother-love converts din--what uninterested people would call bedlam--into sweet music. The ear-splitting shouts coming from one of her future great men she interprets as orders by the captain of the guards; another, whose voice dominates all others, is her Beecher or Spurgeon; still another is a captain of industry who will control all the iron industries of the country. So intensely is her mind fixed on the future of her children that their noises are material out of which she builds their future, and the success that she has in placing each one at the head of his specialty medicines every pain she has. Where this is not true, an accident at one of her confinements has caused septic poisoning, which has reduced the oxygen-carrying power of the blood fifty per cent, causing oxygen starvation; and her brain is so illnourished that her self-protecting imagination fails to convert din into sweet music, and she languishes and dies unless removed and carefully nursed back to the normal.

If our noises are grinding a grist that feathers our nests, the success antidotes to a degree their evil influences on the nervous system.

When a din becomes the vehicle in which to ride to success, it becomes for the time being a tonic, even if it builds insanity when reverses come.

Sound may be health-building and it may be mind-destroying; it all depends on our relationship to it. It comes under the old rule: What is one man's food is another man's poison.

Electricity is a mode of motion. It is said to be interchangeable with light, heat, cold, and sound. The power of a waterfall, and mechanical energy generally, may be converted into electricity, and it may be generated by transforming chemical energy also.

Life may be looked upon as a mode of motion; or, if you please, transformed light, heat, or electricity.

Matter and motion appear to be the cause and effect, and the effect and cause, of everything. It is a mistake to look upon matter and motion as two entities. Matter is. In one of its states, when at rest, it is static--in a condition of absence of motion; when active, it is in a dynamic state--in a state of motion. Motion is inconceivable as an entity; it must be the expression of something--and something is mentally conceived as matter. There are no such things as matter and motion, health and disease, strength and weakness, knowledge and ignorance, etc.

There is matter, and it may be in a static or dynamic state; there is health, and it may be in a good or bad state; there is force or strength, and it may be in a strong or weak state.

In the last analysis there is something, and we call that something matter. The various manifestations-the various shocks and reactions that we experience--are caused by the different

states of matter of which we ourselves are a part.

The primary or elementary states of matter we denominate light, heat, cold, sound, life, etc. Why light, life, or any other state of matter presents may be explained in many correct ways, but a kindergarten explanation may be such as I have sometimes used, namely: The elements of matter may be brought together in such a way that the summa summarum (sum-total) expression is that of light. A little change in the arrangements of atomic structure gives out heat, and another change gives out sound; and so the changes may be made, each giving out a sum-total expression, one of which we call life, and still another, more subtile than all the rest, we call mind. And all these states of matter we like to think of as entities'. but they are notthey are different states of matter.

Animal life cannot be suspended longer than a few minutes at a time, with any hope of resuming its manifestation. Hence it is possible that the elements of the body may be so compounded as to develop the different states we call light, heat, cold, sound, electricity; and, in doing so, air, food, and water are converted into life.

It is almost, if not quite, proved that the energy presiding over, or governing form, is electrical energy. Probably all formative energy is electrical, and possibly the question of sex is a question of a given number of electrons in the atoms comprising embryonic cells.

The ultimate atom, or unit of matter, according to present scientific developments, is conceded to be the electron, which is declared to be a literal atom of negative electricity.

We have become so used to thinking of the various states of matter as entities that it becomes almost impossible to express ourselves in any other form. If I lapse into referring to the different states as individual, I crave the reader's pardon and his indulgence in substituting in his mind the word "state" where I possibly may express myself as referring to "entity."

If in what follows I appear to individualize, entitize electricity, I do not mean it. Electricity, the same as every natural force, is a state of matter.

"Like electricities tend to repel one another," and, according to Lord Kelvin, the atom is held together by a core of positive electricity, which is known as an "ion." The problem of atomic architecture is to reconcile the common attraction of the ion for all the electrons with the mutual repulsion of the electrons themselves, so as to produce a stable structure.

By the aid of mathematical theory, checked by actual experience with magnetized needles--to represent electrons--floating freely in water, under the influence of a centrally placed electromagnet, Professor Thompson has been able to unravel the architecture of the atom.

The atoms of the different "elements" vary only in the number and arrangement of their electrons; every electron, wherever observed, being absolutely identical with every other.

Electrons are found to be arranged in concentric rings within the atom, and the presence of a certain number of them in each ring is necessary for holding any given number in place outside of them. The stability of the atom, therefore, depends on the number and arrangement of the electrons it contains.

Such a thing as an absolutely stable atom--a fixed, never-changing atom--is inconceivable.

Professor J. H. Thompson, of Cambridge, explains how atoms of one element, by losing their outer ring of electrons may be transformed into those of another. This also explains or suggests a law of natural selection among atomic species.

Of the many atoms that have attempted to gain a place for themselves during the countless past eons, there are some eighty that have survived.

This theory is consistent with evolution, and it is to be hoped that it will be proved out in all departments of learning.

We have seen, according to the latest accepted theories, that atoms are in reality atomic electric batteries--that each atom is an arrangement of electrons, or negative atoms of electricity with central core, or ion, of positive electricity.

To prevent perplexity, I will say that, from present knowledge, there are no literal atoms except electrons; all other so-called atoms are compound structures, made up of positive and negative electricity.

Electrical energy is hardly ever used as such, and only after it is transformed into other forms of energy; namely, mechanical, heat, chemical, and light.

Electricity as a remedy for the cure of disease is one of the fads of modern therapeutics. Outside of the benefit derived from suggestion, and the harm caused by so-called therapeutists in their endeavor to cure the sick, there is nothing in the remedy as understood and used today. The market is full of electric belts, garters, amulets, rings, hair-restorers, oxonizers, and all sorts of monstrosities in the shape of instruments and appliances, too numerous to mention. Outside of the suggestion of cure, or what the patient believes will take place after their use, they are not worth a fig a carload.

The profession uses the galvanic and faradic currents; also the X-ray, high-frequency, and static electricity. Very little good comes from any of these. A foreign body and broken bones may be diagnosed by the X-ray, and as a means for diagnosis this form of electricity has come to stay. For the generation of mechanical power, electricity is used. Vibratory instruments for giving mechanical massage are beneficial; but electricity is used only as a generator of the power. X-ray and other light-producing agents are used for the effect of the light--for the stimulation and tonic action. The X-ray can and does kill the tissues, and causes sloughing. Cancer has been, and is yet, treated with electric light. Results are unsatisfactory and doubtful. The radium treatment causes sloughing of tissue. All the new fangled remedies are not a whit better than the old-fashioned escharotic drugs that have been used in the manufacture of the well-known cancer plasters; some of which are "trained to eat out only the cancerous tissue. root and all"!

Electricity, as electricity, cannot be utilized by the human organism. How is it possible to use a state of matter? Life, light, heat, cold, sound, electricity, are states of matter. How can these states be used as food or remedy? Perhaps only as electrons, found in atomic and cellular lifein organized form. Is electricity utilizable? Possibly as electrons--units of matter--but not the force with which these units are torn from organized matter. The force is what is called electricity--not the units of matter carried with the force. The debris gathered in a cyclone is not the cyclone; the force or energy set in motion is the cyclone. The idea of imparting electrical energy to the human body lacking in energy is one of many common errors.

An enervated subject cannot be forced to receive energy. This is attempted by many physicians when they undertake to force food on those who are run down and enervated from lack of digestive power. Nature will not stand for forcing measures. There is no place for heroic treatment. Every vital process has safeguards thrown about it by nature, and those guards cannot be ignored or torn down with impunity.

In enervation, organic functioning is impaired. This means that the organism is deficient in power to take from the blood such matters as are necessary for repair or for the performance of its normal functioning. The organism, once reduced to this state, will remain so, unless the necessary rest can be procured. It is not mere building material that is needed; it is not stimulation that is needed; for enervation is the sequel of overstimulation. Rest is the remedy; and, as rest is secured, electrical energy will be supplied by food, air, water, light, and heat. This subtile energy cannot be forced on the organism in the gross manner offered by the bull-in-the-china-shop methods of modern medical therapeutics; an enervated state cannot be cured other

than by physiological rest--fasting--and physical rest; not exercise, work, stimulation, and starvation. Electric therapeutics amounts to but little more than chemical or mechanical irritation. Locally applied, it may do as much good as a mustard plaster-act as a counter-irritant.

Giving iron to those who are anemic or dysemic, and lime to those who need lime, is on the same order. The rule is that very few are dysemic because their food is deficient in the elements needed. The cause of deficiency is lost selective and appropriative power, and the more of the inorganic elements offered the system by way of drugs, as remedies or food, the more the dysemia develops, until the unfortunate victim is forced from functional to organic derangement, and on to premature death. This is not necessarily a rapid development. Such patients are seeking in vain for cures for from ten to twenty-five years. If they start at from twenty-five to thirty, and require twenty-five years to wear out, trying palliatives and false cures, they certainly die early enough. Besides, efficiency has been wasted in physical and mental impairment caused by disease and so-called cures.

If present scientific developments augur well, it will not be long before we shall know positively that electricity, or electrical energy, or more surely the electron, is the alpha and omega of all things; and, from a health standpoint, a knowledge of bow to conserve, utilize, and generate this energy will be the "summum bonum" of a successful therapeutics.

The most we know today of how to supply electric energy is to have the enervated--the impotent-rest. In a state of rest this energy appears capable of accumulating; and we know from daily observation that unrest, activity, and overstimulation cause its dissipation.

The farmer knows that rest restores energy and potency to land that has lost its fertility from use. But he does not know that ground granite or feldspar will restore its productiveness, and that in all probability the fertilizer "par excellence" contained in it is the static electricity that has entered into its formation and is liberated when the rock is made into bread.

I have proved out on electricity as a remedy the same as I proved out on the regular materia medica.

I once used the galvanic current in treating fibroid tumors, and believed that the electricity caused absorption. But I have learned, after years of experience, that the only really effective remedy is the correcting of bad habits which break down resistance, after which, physiological equilibrium is lost, and this allows cell growth to be perverted.

Lost resistance means lack of energy--lack of life force; and, according to the few hints thrown out regarding the electric architecture of the atoms, when enervation is pronounced, there is probably a dissipation of electricity--electrons--and a consequent change in the structure of the atoms that build the cells. As a result, we see tumors and growths of different kinds, and hardening of tissue--arteriosclerosis--stone formation, etc. If this is a true explanation of the cause, the logical remedy would be to furnish the system with electricity; but to turn. the battery and flood the body with a great current of electricity would be about as appropriate or logical as to tie a rock around the neck of a thirsty man and throw him into a river to relieve his need of water.

Nature never supplies wants in such a blustering way. The rock is built by feeding it with an impalpable supply. If this is true of rock-building, what must be the subtleness of tissue growth, and how slight the change required to convert normal tissue into abnormal-healthy flesh into cancerous!

Instead of flooding the surface of the body with a current of electricity--which the use of a battery means--the therapeutist must know how to cause the body to secure its electricity from the air, light, and food.

The average work done by physicians and surgeons in their application of remedies is what

one would expect of a house painter put to work to paint a portrait. There is a lack of delicacy. It is true that there are many skillful and delicate operations performed; there are also skilled matadors and butchers who perform skilled operations. We should not hold the idea that expert skill in operating is sufficient excuse for operating. I say, with no fear of successful contradiction, that the majority of operations performed have no excuse for being done except that they are done skillfully. In treating patients with electricity, they must be placed in a state favorable to receiving the inflow as offered by nature. All that is necessary, usually, is to learn in what way this energy is being dissipated; then stop the waste. Indeed, this is the simple formula for supplying the human body with all its needs.

3. Chemical Agents

Caustics

Caustics are chemical agents which produce disease through their power to destroy tissue.

As followers of my medical philosophy will use no drugs, they will not be interested in drugs, either of high or low degree.

The action of a caustic is that of causing necrosis or gangrene of the flesh that comes in contact with it. After the flesh is killed, the process of sloughing takes place. This process means that under the dead tissue the living is carrying on the work of separating the living tissue from the dead. The dead undergoes suppuration--disintegration--dissolves, and runs away as pus. Enough serum of the blood is carried to the borderland of the injury to neutralize and wash away the poison of putrefaction.

The normal chemical state of the fluids of the body is alkaline, while that of decaying tissues is acid. To prevent the acid--the septic--fluid of decaying tissue from being absorbed or taken into the body, where it would set up septicemia--blood poisoning--the living tissue that is in proximity to the sloughing tissue is infiltrated--saturated--to overflowing with the alkaline serum of the blood. This accounts for the great amount of fluid and pus seen in all suppurating processes. Pus is laudable when alkaline. Pure vaccine--if there is any--is dried laudable pus, and is inert.

If a wound is closed and the discharge has no outlet, the pus becomes ichoroid--septic--poisonous, sets up blood poisoning when forced absorption takes place, and death follows from blood poisoning. Septicemia is the professional term for pus poisoning.

It is said that the skin resists the action of caustics by throwing out a secretion which furnishes chemical elements that join the caustic elements to make an insoluble compound. Nature is busy meeting and destroying the influence of enemies of health and life. In this work help is needed, and the physician should be able to read the language of nature and assist her in her efforts to keep a rational and sane balance. On account of misunderstandings or lack of interpretation of systemic needs, the physician is often enlisted with the body's foes, and is tearing down rather than building up or defending the body.

Caustics are divided into **coagulating** and **liquefying.**

Coagulating caustics are those known as metallic salts, the various acids, etc. Nitrate of silver, nitric acid, nitrate of mercury, zinc chloride, and the actual cautery (white-hot) are a few that may be listed with these chemicals. These are so powerful that they kill the skin at the instant of contact.

Acids may be neutralized at once if plenty of water is handy; for water dissolves the acid and dilutes it into a harmless solution. The leading acids are: nitric, hydrochloric, sulphuric, and chromic.

Nitric acid produces a yellow eschar; sulphuric causes a black eschar.

Liquefying caustics are potash, soda, and ammonia.

The scars following the sloughing caused by caustics are often severe, causing contractions and disfigurements.

Toxin (Poison)

Any poisonous nitrogenous compound produced by animal or vegetable cells.

"Any poisonous substance--protein in nature--produced by animal or vegetable cells."--Gould's Medical Dictionary.

Toxins are those substances which, when taken into the body, or if developed within the body, are capable of so changing the fluids as to cause sickness or death.

There are two orders of toxins resulting from the fermentation of protein and protein compounds. One is physiological and the other pathological. Snake venom is a type of the first, and sepsin---putrefaction--is a type of the other.

Toxins that are developed physiologically, like the venom of the snake, are said to be for the purpose of defense. If we could know all about the subject, it is possible that the poison serves a physiological purpose in his snakeship's physical economy.

Man's interpretation of venom, odors, teeth, beaks, horns, hoofs, and claws has been from the standpoint of an eternal warfare for existence. Those attributes of animal life--physiological functioning--have been studied quite largely from the standpoint of weapons of offense and defense. If studied from an optimistic point of view, all those supposed defensive and offensive organs, and their functions, will be found to be indispensable aids to metabolism--digestion and assimilation--and to be physiological necessities.

When we keep steadily before the mind's eye that what we call bad is the reverse side of good, that unity is the key to universal order, and that the old and childish belief in two warring forces, namely, good and bad--God and Devil--is unworthy of present-day enlightenment, we are equipped mentally for analyzing chemical, physiological, and pathological processes rationally and certainly sanely.

There is no question but that autogenous toxins are first of all physiological necessities, and when forced to play the role of an enemy in physical economy, it is because it serves nature's purpose better. Hence optimism sees only good in all processes.

It may be asked: What of it, if the ending must be the same?

But the ending is not to be the same. A father chastises his son, not because he is an enemy of the boy, but because he is vitally interested in the son's welfare.

If God is good, then His chastening rod is not to defeat His purpose--to oppose cosmic necessity.

Pain is for good, for education, for development. No good can come from assuaging pain without removing cause; and certainly no good can come from negating--denying its existence, It is true that the opiate stops pain, but the patient dies afterward because the cause of the pain was not removed. It is true that removing the fibroid tumor cures (?) the patient of the tumor, but it does not remove the cause, and in from one to ten years afterward the patient dies of a pneumonia, kidney disease, or cancer. That the doctor is too limited in his reasoning to trace the connection between the cured (?) disease--the removed tumor--and the disease that proves fatal years afterward, does not militate at all against the truth that the two are one, neither does it change the working out of the unchangeable law of cause and effect.

To negate--to deny that there is pain--may banish nature's warning voice, but it does not alter the law of cause and effect; and if cause is not removed, the effect will certainly obey the laws of its nature; for law is God, and God is unchanging--not even the prayer of all mankind centered on one purpose will change one iota or tittle of law.

Pain and discomfort are reactions from undesirable influences. Remove the cause of the irritation, and the irritation and the discomfort of it disappear.

With an understanding of the inflexibleness of the laws of nature, in little as in great things, we should proceed with the subject of toxins with a mind cleared of some of the befogging beliefs of superstition and modern false reasoning.

The toxins that form within the organism are called endogenous poisons. They are called auto-intoxicants, and they set up autotoxemia when not eliminated properly.

These poisons alter the chemistry of the fluid medium--blood and other fluids--in which anatomical elements--tissues of the body--live and are nourished. It may be well to carry the idea that all the tissues of the body live in a sea of blood, as fish live in water, from which they gather nourishment.

At this point it may be well to say that health depends entirely upon the proper chemistry of the fluids of the body; and the chemistry depends upon the elements in the food, the mind, and the toxins developed or taken in. How is it possible otherwise for the various tissues of the body to select the elements needed for their upkeep? This being true, the importance of the part played by food in health and disease should be obvious to all giving any thought to the subject.

Toxins are divided into two groups; namely, **exogenous,** those formed in the alimentary canal from fermentation and decomposition following imperfect or faulty digestion. These toxins are attributed to germ secretions, but in all probability the ferment furnished by the germ is no more toxic than the ferments (ptyalin, pepsin, et al.) furnished by the digestive organs of the body.

The action of the germs is to set up fermentation (for the ever-present germ is a ferment) in all the foods taken into the alimentary canal beyond the digestive limit of the body's physiological ferments.

As a result of germ fermentation, toxins are formed, and their nature is in keeping with the chemic medium. If the fermentation is of vegetables or fruit, the toxins are **irritating,** stimulating, and enervating, but not so dangerous or destructive to organic life as **putrefaction,** which is a fermentation set up in nitrogenous matter--protein-bearing foods, but particularly the animal foods.

Endogenous toxins are autogenerated. They are the waste products of metabolism.

Metabolism means the power possessed by organized bodies of continually using up and renewing the tissues composing the body. In the process of building there must, of necessity, be a waste. This waste must be carried out of the body by the emunctory organs; but if, because of enervation, excretion does not take place, this waste product (toxin) is left in the body to poison it.

Exogenous toxins are those taken in with food and those formed outside of the body, and **endogenous,** those generated within the body.

When the body is enervated from any cause, or from many causes, excretion is always more or less inhibited, and as a result of accumulating the natural excretions (toxins) the fluids of the body are poisoned. The first symptom is a toxic stimulation--intoxication state; then comes a general soreness of the flesh, which is described as an aching from head to foot. A pronounced state causes one to feel very old, and unless relief comes in a few days, life loses all interest to the sufferer. An interested, hustling person will be transformed into a discouraged pessimist in a

few days.

Alimentary Poison.--Potash salts are necessary to the well-being of the body. It is said that dogs fed on meat freed from potash died in ten days--sooner than by starvation--showing that potash is necessary to prevent putrefaction.

Scurvy (acidosis), or ship disease, is due to a deficient supply of potash, furnished by fruit and vegetables, which, when oxidized in the process of digestion, renders the fluids of the body potentially alkaline.

To eat fresh or cured meat, eggs, fish, oatmeal, cookies, bread, rice, cake, puddings, coffee, tea, chocolate, etc., is to generate a slow acid poisoning.

Fruit and raw vegetables--salads--will correct any type of disease caused by acid poisoning.

Meat, potatoes, tomatoes, lettuce, cabbage, coffee, or tea, without fruit, will cause potash poisoning.

Albumin is a rank poison when injected into the blood; but when converted into peptones by the digestive secretions, it becomes one of the most important foods.

Where albumins (nitrogenous foods) are taken in excess, fermentation (putrefaction) takes place, and the absorption of this toxin causes enervation, high blood pressure, **arterial diseases,** heart diseases, catarrhal inflammations, and other ailments.

Beverages

Water, alcohol, coffee, tea, chocolate, and cocoa are common sources of toxin poisoning.

Water quite often contains minerals and organic matter in a state of putrefaction. Water with these elements in it is not so toxic as many professional men believe.

The elements--earth, air, water, and fire--are self-purifying; hence putrefaction taking place in water of sufficient protein toxic potency to render it dangerous to drink will be so offensive to the nerves of special sense that the one about to imbibe will turn away from it in disgust. Too much mineral in drinking water is not desirable, because it is left in the system to harden the tissues and prematurely age those who drink it.

Alcohol is toxic and inclined to bring on rheumatism of joints, gout, gastric and liver diseases, and in time neuritis and other nervous diseases. Why? Because all stimulants continued for any length of time bring on enervation. When the system is enervated, elimination is imperfect; then the toxins resulting from metabolism are retained in the system to poison. The deposits of these waste products in the muscles or the tissues of the body create such diseases as rheumatism.

The danger from fatal poisoning--from taking fatal doses of alcohol--is not so great as that resulting from the slow toxic poisoning--chronic poisoning--or alcoholism.

There is very little drunkenness today, compared with fifty to a hundred years ago, notwithstanding the fact that there is more alcohol consumed per capita. The reason for this is that alcohol is taken in the form of beer and wine, which are not so toxic as brandy and rum.

The continuous stimulation from the daily use of alcoholics causes enervation and imperfect elimination.

The use of alcoholics whips the appetite into taking an excess of animal proteid; and this is the reason why many users of alcohol have rheumatism and gout.

Absinthe contains nine different essences. All are toxic. There is very little of this poison

consumed now in this country. New Orleans has an absinthe house which ranks in age with her most ancient relics.

Coffee is a slow, insidious poison that encourages retention of excretions by its slow but sure enervation.

Coffee fools many into believing that it is an eliminant, because while they use it they have an action of their bowels daily. This is a false belief; for all the time coffee is used as a daily beverage there is a gradual enervation, with retention of the toxins or excretory products--waste from body--building. Coffee outranks alcohol in building endocarditis and sclerosis of blood vessels.

Ordinary reasoning should help anyone to understand that a drug that stimulates as coffee does, must in time cause much trouble by way of enervation, faulty elimination, and autotoxemia.

Tea stimulates, and in time enervates; following which comes retention of toxins in the system. Tea has a special toxic and sedative influence on the nervous system, and when used for a long time it causes neuralgia of an intractable nature.

Coffee and tea cause deposits in the grooves and openings in the bones through which nerves pass, causing in time neuritis or neuralgia that will not down until the habit of taking these table beverages is given up. These are the cases that surgeons undertake to cure by nerve-cutting or nerve-stretching.

Chocolate builds catarrh, and should not be used as a daily table beverage.

Cocoa is a stimulant and, like all stimulants, develops a habit. It brings on enervation and the usual consequences.

Lead.--Nearly all beverages--even water--contain lead. Water pipes, cisterns, reservoirs, etc., are built in such a way as to impart more or less lead to the water. All soft drinks charged with carbonic acid carry lead. Seltzer water and the lighter alcoholic beverages all carry more or less lead. Flour and bread often contain lead. Pewter, which is used to solder, contains lead. The pewter foil around chocolate, and the grinding machines used by butchers, impart more or less lead to the materials with which they come in contact. The diseases developed from lead toxin are what are known as lead colic, arteriosclerosis, kidney and other diseases.

Copper finds its way into the body in bread and wine. When copper vessels are used in preparing food and drink, copper can be found in wine, cider, and beer. It is said that condiments prepared with vinegar and pickles always contain copper.

In the quantities taken into the system from the sources named, copper is not thought to be greatly detrimental.

Arsenic is far more injurious than copper. It is to be found in wines. It is used as a preservative--to prevent fermentation in food. Since the pure food laws have been put into effect, this drug is not so extensively used in preserving food.

Salicylic acid is one of the most extensive poisons used as a preservative. Its use today is not so extensive as a few years ago.

Non-edible vegetables, such as **toadstools, sprouting potatoes,** and others, furnish an amount of poisoning every year,

Poisoning by animals occurs mainly in hot countries. In our country there are **snake-bite, bee-sting,** and poisoning by the eggs of various fishes.

Fish eggs provoke symptoms of cholera--vomiting and diarrhea--accompanied by skin irritation--erythema and urticaria.

Fish are said to be made toxic by living in water containing putrefactive matter.

Oysters are said to be poisonous when living close to the outlets of sewers.

The wholesomeness of healthy fish is questioned. Those who use much fish food are liable to develop skin and liver diseases. Probably, however, one is no more liable to develop disease from fish than from other food eaten beyond the power of the organism to utilize well.

All foods become toxic when indulged in beyond the real needs of the body.

The meat from **overworked animals,** those run down and killed, those that are slaughtered after **fatty degeneration** has well set in, is poisonous.

Stall-fed animals, that would die from disease in a short time if not butchered, are disease producing.

Blasted grains--wheat, rye, and corn--are poisonous to animals as well as to man. Pellagra comes from starch poisoning--so we are informed by those who have had experience in treating the disease.

Poisons in the Air.--People living close to smelters, slaughter houses, soap and glue factories, the outlets of sewers, etc., are injured more or less by poison gases.

Tobacco is a stimulant and sedative. Its stimulant effect is that of irritation. It is a rank heart irritant. During the first ten to twenty years of its use the heart is made to work overtime--often from twenty-five to forty per cent. Through years of use there becomes established more or less toleration. So great does this toleration appear to be that the use of the drug is looked upon by many as of no serious consequence.

The influence of the poison is to lower the individual's self-respect and dull his moral responsibility. It builds selfishness and prevents the evolution of higher efficiency.

At the beginning the effect of tobacco is that of a poison. it causes nausea, vomiting, and great depression of the nervous system. This being true, can anyone so far forget these facts as to say that tobacco is not a rank poison?

The reason why the system appears gradually to develop a toleration is because the irritating effects fail in time to cause the system to react against it as powerfully as at first; but this is no proof that it has lost its influence and is no longer an irritant--a poison. Indeed, the body continues to react, but it is in the form of fortifying against the influence of the poison. The heart and blood vessels are enlarged--these organs are thickened, hardened, and rendered less capable of performing their most delicate functions--namely, renewal of cell life and elimination. As a result, the walls of these organs become thick, hard, and lose their resiliency. This state, when established, is called hardening of arteries--arteriosclerosis, sclerosis, cancer, etc.

The chronic effects of tobacco on other organs of the body are that it causes enervation, and in many people emaciation.

"Tobacco heart" is recognized by the least observant when far advanced. The effect of tobacco on the eye is well known.

Many nervous "breakdowns" come from tobacco rather than from too much work.

Epilepsy, bronchitis, neuralgia, **rheumatism**, and many nervous disorders are brought on, directly or indirectly, by tobacco.

Nicotine is the active principle of tobacco. It is more deadly than arsenic, strychnin, or morphine. The odor will kill a bird.

Women and children are frequently invalided because husbands and fathers practice the filthy habit of smoking in the home.

When smoking is practiced in it daily, a home soon becomes saturated with smoke; after which it becomes a menace to the health of wife and children.

No man would willingly double his expense for tobacco if he knew this. Some might not worry about how uncomfortable wives are made by ill-smelling homes, but if they realized that a hundred dollars expended each year for sickness legitimately belonged to their tobacco bill, they probably would stop ruining their homes.

The use of one stimulant and narcotic calls for another. The smoker usually uses coffee, tea, or alcohol.

Diseased plants may produce digestive disturbances.

Plants infested with disease-producing germs are believed to be a source of much disease. Lettuce has been denounced by experts as a vegetable unfit to eat, because it is a germ-carrier. Personally I have not found this true of any vegetable, and, what is more, I know it is not true. Even if the vegetables that are eaten raw should carry germs, the germs stand no show against normal digestion. This I have been proving for years by prescribing the Tilden salad to every patient as a food to eat with every dinner.

Poison gases are generated in the bowels. The gas coming from putrescence should be washed out of the bowels by enemas, and eating should be suspended until lost digestive tone is restored.

Illuminating gas is very toxic. It contains carbonic oxide.

In cities where gas is manufactured there is more or less loss--waste--and the soil becomes saturated. The atmosphere of Paris is said to contain 1 part per 10,000 parts of carbonic oxide. Much more is believed to exist in houses into which, because of high temperature, the gas is drawn. This is added to by paintings and tapestry.

There is some little excuse for being poisoned by many of the items above pointed out; but what excuse can be given for the wholesale poisoning brought about by the use of tobacco?

Man deliberately poisons himself, but the layman can hardly be held responsible for doing so when we take into consideration that his medical adviser is offensively saturated by the weed.

So long as the world knows so little as to believe that a man who deliberately poisons his own body with tobacco is a safe medical adviser, and is justly a celebrated physician, just so long will rational healing be refused. Man will never come into a satisfying knowledge of anything until he wants to, and then he must put himself "en rapport" with the psychology that will bring it.

We cannot serve two masters. We must choose between the false and the true. And this decision is "up to" us every day and every hour in the day.

Tobacco is a poison that soon establishes a reign over the will of man. The mind is weakened in many respects. Memory for proper names is lost. Dyspepsia and heart disease ended the career of Mark Twain. His discomfort and heart disease were built by tobacco and coffee.

4. Animate Agents

History of Infection

Infection is divided into three stages, according to bacteriology; namely, animate agent, a fermentation, and intoxication. I would divide the history of toxemia--infection--into **Enervation and Autotoxemia.**

Enervation is brought on from one or many causes which use up nerve energy, both of a mental and of a physical character. Then, when enervation is established, functional efficiency is lost, and with this follows a "slump" in the production of physiological ferments, after which the omnipresent pathologic ferment--infectious agent--becomes "master of the show;" and if the good ship of health does not at once discard its jetsam and refuse to take on any flotsam, pathologic fermentation and decomposition will follow.

So long as the body is normal, and secreting a normal amount of physiological ferments, pathological ferments are made to dance attendance upon the body in the capacity of menial servants; and they will serve long and well in that capacity, if the master is sober and sane. But when licentiousness and sensuality force physical insolvency, then servants become masters; and whether this reversed order is ever righted depends entirely upon the amount of organic integrity left, and the skill used in suppressing the insurgents--bacteria--and reestablishing the home guard-enzymes.

This being a true statement of how disease is established, time and attention should be given to methods of keeping up the health standard, rather than spending all the time and attention in the study of bacteriology, when germs are at most only auxiliary agents in the development of health and disease.

Pasteur, after his researches in fermentation, took up the subject of disease. He assumed that disease was caused by fermentation; hence he searched for germs. The rank and file of the medical, as well as the non-drugging, profession filed in after their medical bellwether without question. The reason for so much unquestioning acceptance of the dicta of this great French germophobiac was that the profession was in chaos regarding cause, and it was ready to accept a savior of any kind without question. Today the germ theory fits well only those who take it without thought. Its popularity comes from numbers, not reason.

It will be well to keep in mind that Pasteur, Koch, and Metchnikoff were not practicing physicians; they were laboratory experts who--a priori--assumed that germs cause disease, and undertook to discover the specific germs that cause each specific disease, by experimenting on guinea pigs, chickens, and other animals; and, by making research in human and other excreta, they endeavored to discover the habits and customs of the flora and fauna of the intestinal canal.

In their explorations, experimentations, and deliberations, they found themselves sometimes on one side and sometimes on the other side of the question of whether or not germs were friendly to their host.

The material in the digestive tract, in bacterial form, is said to number one hundred and twenty-six billions for the daily human excreta. This certainly indicates that man has a powerful resistance, or none would reach the age of from sixty to a hundred years. By some observers it is said that guinea pigs have been successfully reared without germs, and that the polar bear and other animals of the arctic region have no bacteria; that even in the temperate regions there are animals whose alimentary tracts contain comparatively few bacteria. The parrot is one. Other observers have arrived at quite different conclusions.

Experiments have shown that, when chickens are fed on sterile food, they fail to develop, or are retarded in growth, and that they show normal growth only when fed food containing bacteria. It is said that Madame Metchnikoff arrived at the same conclusions in her experiments with tadpoles.

Pasteur's research work on the diseases of the silkworm was followed by a study of diseases of mammalia. He created the fundamental methods of bacteriology. It was in this field that Koch

achieved fame and was rewarded by his government, being awarded a title, a hundred thousand dollars, and a pension.

Koch discovered a cure for tuberculosis. In this field of discovery he has had many successful understudies, or imitators, of whom--neither last nor least--was Friedmann with his turtle serum.

That tuberculosis still thrives, except as it has been handicapped by the growing intelligence of the people and an improved sanitary science, is easy of observation to all but prejudiced eyes; yet, notwithstanding, this truth does not militate against the Koch, or bacteriological, theory of cause and cure. Once a fallacy is in the saddle, it rides, for a time, rough-shod over truth.

To utter a word of doubt or protest, that the theories of Pasteur, Koch, Metchnikoff, et al., are not the whole truth, consigns one, so stupidly ignorant, to total professional darkness--oblivion.

It should not be forgotten, in passing, that Koch abdicated his theory regarding bovine tuberculosis, but the profession out-Koched Koch and repudiated Koch's repudiation.

Reader, do not pass judgment on my protesting until you know all I have to say--until all the testimony is in! It is just barely possible that some of it may be evidence, and such haste on your part might not prove wise; for time--the court of last resort--may reverse your decision.

One of these laboratory experts has practiced medicine, thereby familiarizing himself with the peculiarities, habits, and customs, of both a mental and a physical character, of sick people. Theoretically they perhaps knew all about man, his mind and body; but to know--positively know--all knowledge must be lived. A doctor may have a lot of textbook and laboratory knowledge; but, unless he spends years in applying it, it is not his knowledge, and he only thinks he knows.

According to the laboratory expert's opinion, man is an automaton--a fixed entity--that has no power within himself to stay well or make himself sick. It is true that there is a perfunctory recognition that the body has within itself anti-bodies--a given amount of self-protection or immunization; but that activities, both mental and physical, have more than anything else to do with determining whether man shall be sick or well, is not recognized as the great field of causation; and, as to man's having within himself power to live in health--as to his having autoinimunizing power--being a living, breathing, activating knowledge--this is left out of the mental equation of all these eminent bacteriologists; hence the inexplicable failures that have accompanied every well-worked-out plan of cure on a bacteriological basis that has been advanced by them.

Perhaps I should not be personal; but, inasmuch as what I am about to say is of vital importance, I am justified in declaring that each one of the eminent gentlemen named above was a semi-invalid--and that, too, with his knowledge of germs. If germ infection was the cause of their ill-health, they certainly should have kept their bodies free enough from unfriendly organisms to have enjoyed health. A theory of cause and cure that will not give a reasonable amount of health to its possessor is not of great importance.

The conclusions arrived at by the bacteriological experts have been reached by approaching the subject of disease with the fixed hypothesis that there is but one cause of disease; namely, animate agents--that of germs; and then taking for granted that the cause--germs--is irresistible, unless headed off by immunizing the body by inoculating it with the virus of disease--germs. Then the logically obvious must follow; namely, if disease is headed off by immunization, health must be inevitable.

The absurdity of this one-sided search after the cause of disease should be apparent to any intelligent observing mind.

At this point a little reasoning should not be despised: There are a few people who enjoy

health and long life. Is it because they are not exposed to the omnipresent germ? They have not been made immune by virus or serum inoculation. This cannot be the reason. Then it must be because they have within themselves power to resist the influence of germs.

There are people who are well a part of the time, and a part of the time they are sick. Is it because they are exposed to germs a part of the time, and a part of the time they are not? This is not true. Then what causes the immunization a part of the time? They have no artificial immunization. If germs cause them to be sick a part of the time, why not all the time? Do germs cause disease a part of the time, and then a part of the time not? If so, are there subjects whom they never influence, and others whom they never immunize?

There are people who are, like Pasteur and Metchnikoff during their lifetime, in poor health all the time. Is it because they are infected and infested with germs more than other people? Surely this could not have been true of the laboratory experts! Who, knowing the cause of disease, would willingly suffer when a cure was at their hand?

If all that they taught about germs causing disease were true, surely a willingness to live as semi-invalids would be most inexplicable in the two great bacteriological experts.

In our own country, C. A. Herter, M.D.--once a very popular professor in Columbia University, and author of a book on bacterial infections of the digestive tract--died quite young. His perfected knowledge of germ influence in disease availed him nothing when he was called upon to save himself.

Of course, I do not believe that death can be done away with, but we should be able to have health for the most part while we do live, and certainly avoid premature death and waste of life.

Why do germs, in chronic invalids, fail to work out an immunization? Why is it that this class of invalids can be put in very good health when trained into health-producing habits--and this, too, when no attention whatever is paid to the germs that are supposed to produce the disease?

To illustrate my meaning: A few years ago a gentleman living in Tampico, Mexico, wrote me, saying that he understood I did not believe in drugs, and he wished to know if I would undertake his case. He had been suffering from malaria for five years, and every drug having a reputation as a cure for the disease had been tried and found wanting.

I gave him correspondence advice for one month. At the end of the month he said: "You have made good, and that, too, with a skeptical, doubting patient."

Two and a half years afterwards I heard from him, and he was still enjoying health, having had no return of the malaria.

The treatment I gave him was simply correcting all errors of eating and care of the body.

What caused the malarial fever in this case? The malaria germ? Or was it wrong life? Certainly both; but the question is: Which was the real cause? The malarial influence failed in five years to create an immunization; all "specific" drugs had failed. Treatment that allowed nature to return to the normal ended the malarial influence. If germs create immunization, why do we have chronic diseases? What causes chronic disease?

I have many cases of syphilis consulting me every year. According to medical authority, this disease is most positively "specific" in character, and should, according to the germ theory of disease, require a "specific" treatment; but in all cases I never resort to a more specific remedy than that related above in connection with malaria. Correct the habits, and feed properly--and all diseases will get well.

After years of experience in treating disease, I have found that health is the greatest and most reliable foe of disease.

The questions to decide are: Do germs per se cause disease? If germs cause disease, do they cause all diseases, or only a part of diseases? Which diseases are caused by germs, and which are not caused by germs? If there are people who are, and all their lives have been, in good health, without extrinsic or artificial immunization, what is the cause? If the cause is good health, then can the secret of good health be known; and if it can, may the secret be imparted to others who are not so fortunate? If good health immunized the organism to every normal disease-producing influence in man's environments, why cannot his normal immunization be increased to meet extraordinary disease-producing agents and influences? This can be done, and is being done at our "School for Teaching Health," to the satisfaction of many people from many parts of the world.

There are two groups of animate agents which are said to cause disease in man; namely, infectious and parasitic.

It has been thought that natural history could be taken as a basis for the study of animate agents as a cause of disease; and if infection is really produced by an infectious germ, then natural history must embrace all causes of disease. In other words, if infectious-microscopic germs and parasites are the cause of infection, then there is no excuse for dividing animate agents into parasites and infections; they can all come under the head of animate agents. Perhaps it would be well to divide parasites into exogenous and endogenous--those that are confined to the outside of the body and those that are on the inside--in the blood. A parasite that is on the body or in the bowels is still on the outside of the body.

If there are infectious animate agents, they should be divided into specific and non-specific; for, before we get through with the subject, we should see that there are germs which cause (using the word "cause" in a bacteriological sense) different diseases; and, on the other hand, different germs which cause the same disease; this, too, in diseases supposed to be clinically well defined.

As to specific germs, perhaps the gonococcus is one of the most pronounced types; yet it, too, fails to infect in those of pronounced resistance. This being true, what must constitute resistance?

As nerve energy appears to give power--as steam ,gives force to the engine, and as electrical energy gives power to move powerful machinery--so it is apparently necessary that nerve energy must be the force that enables man to resist environmental influences. But we see the physically strong giving way before influences that fail to prostrate others decidedly less strong. The question as to why this is, will not down.

The matter of feeding to keep up strength, so as to enable a patient to resist or throw off disease, is a professional fallacy that has cost, and is costing, more lives than perhaps all other fallacies combined, It is easily demonstrable that, without giving food and drugs, it is impossible to develop a "clinically well-defined" disease. Indeed, this epoch-making truth holds good in venereal diseases as in all others.

Any physician who, is not helplessly and hopelessly swallowed up by the whale of medical fallacy can in a very short time demonstrate, and prove to himself, the truth of all I say.

My theories and practice are not only simple, but they are logical; they are not only logical, but true. And the reason they are true is because they work. If they do not work, it is from a lack of knowledge in applying them. It is never necessary to fall back on that blanket excuse that has covered so much professional ignorance in the past; namely, "idiosyncrasy."

Malaria (malarial fever) is caused by a sporozoid; yet the disease may easily be cured by simply correcting the life of the patient--correcting the eating habits and care of the body generally. Then, when the disease is gone, if the patient continues to live right, he may stay in the malarial country, free from another attack. This being true, what really causes malarial fever?

Are those who continue to live in such countries, without becoming malarial, immune to the poison because of an idiosyncrasy; or are they carriers of the disease, having become immune to its influence? Can one person become immune and another not? The dilemma appears to be fully settled when it is understood that health--full health--is the only reliable opposition to disease; that everything which improves health builds immunity to all disease-building influences; that every influence injurious to health is an ally to disease,

While medical opinion is largely favorable to the idea that germs are disease-building, I should say that even those germs denominated infectious are not autonomous--individual--specific and self-acting, but by nature are convertible allies. When conditions are favorable to health, they add to the body's power of resistance; but when disease-producing influences--influences that lower the body's self-protecting energies--are in the ascendency, then they become allies to health's foes.

It appears reasonable that as germs are omnipresent, they, like the excretory products of the body, are allies for health, when limited to a health-standard percentage; but when that percentage is exceeded, these quondam friends become allies of disease-producing influences.

The treatment of disease, since germs have been recognized as the cause, parallels the treatment given when the profession was pruning itself on being conservative, yet wisely selective from the maze of theories advanced in the past hundred or more years. Perhaps it will be well to name a few theories that have been chaotically mixed in the medical mind previous to the germ theory:

Empiricism (experimental treatment), which is denounced as quacking, has always been handy for all grades of physicians to fall back on.

Organicism--organic disease.

Humoral pathology--all diseases come from derangement of the fluids of the body.

Symptomatology (treating symptoms)--a form of empiricism.

Phlebotomy (blood-letting)--one of the most popular theories previous to the germ theory.

Depleting system--blood-letting, calomel, and opium practice.

The various theories of inflammation.

Organotherapy--organ treatment; the treatment of diseases by the administration of animal organs, or extracts prepared from them. This treatment has existed from ancient times, the method as now practiced being of recent origin.

Hundreds of other theories might be cited, but what is the use? The popular treatment of disease, it matters not what has been the theory of cause, has always been the same; namely, ignoring the power of the body and mind to get well and stay well, when given a chance.

For the main part of all treatment, the medical man has believed it to be his duty to knock down and drag out. Indeed, he has appeared to believe that the more vandalism he practiced on the human body, the better for the victims of disease.

Just before my debut in the profession--in my father's day--the most popular remedy was blood-letting. When my day dawned, it was the physician's duty, according to the then dominant school, to purge, sweat, micturate, and salivate heroically.

Every treatment was heroically carried out. All the natural tendencies of the body to react and throw off disease were ignored, and a physician who would fold his arms and give nature a chance was a fiend, quack, a being to get rid of for the good of the people.

Even today the majority of physicians at the bedside will say of my suggestions--my heroic methods of let-alone treatment: "Such trifling, ineffectual methods may do in a case where there is nothing the matter, but in such cases as this (typhoid fever, pneumonia, appendicitis, or whatever the disease may be) it would be criminal to stand by and do nothing. What are physicians for? If their function is to do nothing, it is time to close medical schools." Indeed, I agree that, if the physician's function must be that of a disease-builder, and the function of the surgeon, two-thirds of the time, that of a vandal, it is time to close all medical schools.

Old methods are extensively carried out all over the world. Germs, serums, and vaccines are the slogans of medical men today; but many drugs are in constant use: quinine for malaria; mercury, iodine of potash, and "606"--the old salvarsan--and neo-salvarsan, and many times neo(new) salvarsan, the great twentieth-century remedy for syphilis which out-specifics all other specifics in "curing" syphilis; then opium and morphine are still working over-time for pain; and when the opiates are not used, the coaltar heart-paralyzers are used-to the death in many cases.

There is a great deal of perfunctory talk, on the part of medical men, about not believing in drugs, and of much believing in diet. But it is a trick of the trade; it is that old, professional, stock-in-trade buncombe that is often used to cover ignorance. If they could not prescribe drugs, and were required to make an effective diet prescription, they would be out of a job.

There is a lot of buncombe by way of professional talk in favor of diet and against drugs; but this is to meet the demand for physicians who understand diet--a demand that is fast running ahead of the supply. That is, the average doctor is compelled to prescribe a diet; and his prescription would be a joke, if it were not so stupid. There is a time and place for everything; but the burlesque acted by many physicians today, in pretending that they know how to diet the sick, is certainly too asinine even to create a smile.

That bacteriology is not satisfying the profession, there are evidences galore. And so long as common sense regarding the cause and cure of disease is to be ignored, all theories of cause and cure must be founded on shifting sand.

There are millions of money , and all the bluff that can be mustered by influence, behind the germ theory; consequently its death-struggles will be long and agonizing. But it must go. Of course, its fossilization stage will be long, and interesting to curio fiends and ancient respectability.

In what follows on the subject of germs, I shall endeavor to do justice to the germ theory. If I too frequently say that germs cause this, that, or the other disease, please understand that I am writing from the standpoint of an advocate.

What is the difference between parasitic and infectious agents, according to the accepted theory?

The parasite is supposed to be much easier on its host. It draws only what it needs for subsistence, and remains on the outside of the body; while the infectious agent invades the sanctity of the blood and fluids of the body, and spreads devastation and anarchy everywhere. It develops rapidly, and destroys organic functioning by exciting intense reactions.

When the parasite causes death, it is more accidental than otherwise. The intestinal worm causes death by finding its way into the lungs. The hydatid disease of the liver (a parasite belonging to the dog) is fatal. The parasites, when they kill, do so by causing tumors, which cause pressure or obstruction.

Both parasites and infection produce toxic substances; it is a question of more or less. The poison is that of intoxication. In parasites, intoxication is reduced to the smallest amount.

The definition of infectious disease is: Disease developed from toxins produced by parasites. The word "parasite" in this case is made to cover all animate agents.

Infection, defined, is a history of intoxication.

There are intoxicants which are not infectious agents. Alcohol, coffee, tea, tobacco, various drugs, and all legitimate foods, are stimulants; and stimulation is the first stage of intoxication. Thoughts stimulate the mind and body, and thoughts may be pushed to intoxication. To aid intoxicating habits to overcome resistance, we have all the domestic and social requirements--habits in daily life, in business and social life--the carrying-out of which uses up more nerve energy.

Intoxication means prostration. The body in a state of drunkenness--in a state of intoxication--is at first exalted until reaction comes; then it is prostrated--enervated. Understand, once for all, that there are many varieties and stages of drunkenness besides alcohol inebriety. The commonest drunkenness is food drunkenness--and it is not often recognized.

A body that is enervated is crippled in its functioning. Elimination is impaired, and this favors auto-intoxication; for the excretions are toxic, and when not carried out as fast as generated, they become a poison to the system.

Besides the intoxicants (stimulants) named, there is no question but that, when enervation is established, the process of digestion is imperfect; then pathologic fermentations take place; and this process generates toxins, which, when added to the daily or habitual supply, add to the enervating influence to such an extent that systemic protection--resistance--is lost. Then it is that bacterial invasion, with bacterial toxins, overwhelms the body, and the victim dies from an infectious type of disease.

Everything points to the fact that so long as the human body is normal, and not overtaxed by care and bad habits, parasites are either suppressed entirely or held down to inoffensive guests of the body. But when enervation is established, the body loses its immunizing power; then, and not before, do germs become the allies of bad habits in destroying health.

Pasteur demonstrated that germs were in the atmosphere, and that, falling into certain liquids, if they there found conditions favorable for their development, they caused fermentation. The great point that should never escape the mind's eye is: If germs find conditions favorable, they set up fermentation.

What are unfavorable conditions? Health! A normal type of health is capable of resisting even an abnormal type of fermentation, when health is not handicapped in some way. For example: In flesh wounds, if drainage is perfect, health defies septicemia. If uterine drainage is perfect, puerperal fever--septicemic fever--is defied. Large quantities of germs--putrescence--may be swallowed, and a normal digestion will defy them.

When putrescence is injected subcutaneously, beyond the immunizing power of the blood, the health is overcome, and the disease and death are enthroned.

When an injection of antitoxin, or even water, is made into the spine, it may kill from shock in a child that is enervated, and its system taxed at the time with an oversupply of food. The body is off guard, or preoccupied, so to speak, when taxed with a large meal, when mentally occupied, or when fear has possession. Under such conditions, a shock that ordinarily would be easily rallied from may prove fatal.

An irritable state and lack of poise are antidotal to resistance, and such subjects become easy victims of infection.

Any influence that consumes energy may become an ally of germs, if pushed to nerve exhaustion.

The human body becomes a victim of germs after resistance is broken down from any cause.

A Reasonable Explanation of Germ Action

Animate agents which have to do with the life and health of man may be divided into **Parasites** and **Microbes,** or **Bacteria.**

Parasites, in biology, are organisms that inhabit another organism and obtain nourishment from it. Microbes, or bacteria, are micro-organisms which should be thought of as yeast fungi, and as the inciters of fermentation, which are as necessary to man as his own unorganized ferments--his digestive secretions. These fungi, or germs, may be divided into as many genera and species as the microscope and the imagination of the bacteriologist may suggest. That the explorers of the microscopic world have some excuse for the infinite number of varieties already discovered, there is no question; for these infinitely small beings have the habit of taking on an individuality, or personality, in keeping with the chemic changes of the medium with which they are correlated. Instead of the bacteria setting up changes peculiar to themselves, they excite fermentation; and the resultant is the sum of the elements involved. These microbes become putrefactive germs when they carry their ferment to nitrogenous--protein--matter. The germ subject is wonderfully simplified when we know that the metamorphosis is in keeping with the chemistry, or the chemic changes taking place in the medium.

Ferments are divided into two classes--namely, unorganized, or enzymes, and organized, or bacteria, or microbes. The unorganized are produced by animal and vegetable life. Enzyme is a product of all living cells; without it there could be no tissue formation. Pepsin is a type of animal ferment, and the so-called vitamin is one of the refined products of metabolism.

When man's body is normal, the digestive secretions--the unorganized ferments--are quite sufficient protection against the metamorphosis of microbes into toxic germs in numbers great enough to do the body harm from the fermentation and decomposition which they may set up in the food intake.

When man's digestive and assimilative powers are reduced, and he fails to digest the food intake, the ever-present germs establish a pathological fermentation which hastens the disorganization and exit from the body of the superfluous food.

The monistic doctrine--the theory of the unity of all things--appears most rational, and should be satisfying to the most philosophic mind. When used medically, it clears the mind on the subject of cause and effect, wiping out many fallacies and superstitions

The negative and the positive, the good and the bad, health and disease, life and death, are two different states of one and the same thing. Of course, this is a theory that the child-mind cannot be expected to grasp instantly; for it requires a very great experience, and much reflection; it requires a priori--beforehand--knowledge, and a posteriori--from experience--knowledge.

In applying the monistic philosophy to digestion, a posteriori--according to experience--we know that digestion is carried on by ferments which are secreted by the body. In keeping with the great truth of the unity of all things, and the dual attributes of all things, a priori we reason that, if digestion is carried on by a ferment--a physiological ferment--indigestion must be the negative side of this phenomenon--it must be a pathological ferment. We must have indigestion if we have digestion; one is the reverse of the other, and one is as necessary as the other. If physiological digestion (fermentation) does not take place, then pathological fermentation (digestion) must; for action and reaction are going on all the time; nothing stands still.

Since Pasteur et al. discovered that there are microorganisms everywhere, which only await a favorable condition to set up fermentation, we reason, a priori, that this fermentation is the other half of physiological digestion or fermentation; and, in harmony with this monistic philosophy, this phenomenon--pathological fermentation--is necessary and physiologically conservative, rather than pathologically destructive.

Bacteriology assumes, a priori, that bacterial ferments cause disease; but all the cures based upon this assumption have failed, and all the testimony advanced in support of it has been more partisan than loyal to truth.

It is reasonable to assume that the ever-present bacteria, or germs of fermentation, are as necessary for physiological fermentation as they are necessary for pathlogical fermentation. Without the aid of these neutral germs of fermentation, it is doubtful whether the unorganized ferments--the digestive ferments of the body (ptyalin, pepsin, et al.)--would be capable of serving the great purpose of nutrition. I say "neutral," as they are found unchanged in nature. But they may be converted into allies or enemies--it all depends upon the chemic nature of the medium. It should always be borne in mind that yeast per se is non-toxic; toxicity is developed by the chemic changes which take place in disorganization. Food is disorganized when pathological digestion fits it for expulsion from the body.

These friends of man, against which Pasteur and Metchnikoff warred, and the influences of which in their own bodies they possibly were successful in controlling sufficiently to render them both semi-invalids, are in reality for man's good rather than his bane.

In this connection, perhaps it would be well to reflect, or to assume a priori, that when mind enters potentially into a compound in which the microbe, or ferment, and nitrogen, or protein, are associated, the character of the resultant must take the form of the mental concept. That is, the toxin that develops must correspond to the chemic change; but the form of the disease must be mentally directed. The disease may be a hydrophobia, a syphilis, or a tuberculosis. The location of the disease is perhaps chemically directed, but the type of symptoms may be directed by the mental concept.

To be more specific: A person is bitten by a supposedly mad dog. This fact starts a chain of morbid suggestions and expectations. Fear perverts digestion; pathological fermentation supplants physiological fermentation; the microbe, or neutral ferment, is made to take on a toxicity in keeping with the chemic agents involved; and all are given form by the mental suggestion, plus the added compound, protein-serum injection, known as the Pasteur serum. When the element of fear cannot be overcome, it is well to keep in mind the possibility that antitoxin serums may be reconverted into toxins and act contrary to expectation. Psychology must be considered.

The average medical treatment, or mistreatment, of supposed rabies is on the order of "a bull in a china shop."

The treatment is brutal, unscientific, and death-dealing in its application. The same is true of syphilis, and, to perhaps a less extent, of all other diseases.

What is the virus--admitting, for the sake of argument only, that there is a specific poison introduced into the human body by the dog's teeth? It must be a protein ferment, which is a pathological ferment. What is man's defense against such poisons? The neutralizing effect of hope, and the unorganized ferments. The normal blood can unhorse, so to speak, a great deal of poison, if the mind is free from fear. But fear kills.

The average physician is a fear-monger, if he is anything. He goes about like a roaring lion, seeking whom he may scare to death.

A normal man, devoid of fear, can develop antidote for poison. Those who are killed by snake bite have a paralyzing fear, which means surrender to the enemy. Keepers of snakes have no great trouble with bites until fear overtakes them.

Confidence in one's self-power is the secret of health and long life. This confidence, with the providence bestowed by a knowledge of the laws of health, is the most dependable immunizer known.

The influence of mind on fermentation is positive The mind may stimulate physiological fermentation, and it may stimulate pathological fermentation. In other words, the neutral germs are made by mind to ferment

physiologically or pathologically. The character of the toxin evolved must be in keeping with the chemical agents involved, but the Psychology of the disease is determined by the mental concept of what the disease must be.

When mind plays only an indifferent role, disease is commonplace.

It should be understood that anything in the alimentary canal (bowels) is still on the outside of the body. To nourish the body, food is taken into this canal, or digestive pouch, but, before it can be absorbed, it must be reduced to a fluid state by the various digestive secretions. When, from whatever cause, the food is not digested in a reasonable time, it must be disposed of--it must be thrown out--and the canal cleaned out. The cleaning is attended to by scavenger parasites.

The toxins resulting from the decomposition are unfit for absorption, and irritate the mucous membrane. The irritation causes the membrane to secrete mucous and serum. The mucous is tenacious and hangs on, coating over and protecting the mucous membrane. The office of the serum is to antidote and hasten the ferment germs and their toxins out of the bowels, and also to disinfect, or help the scavengers destroy, what remains of the transformed neutral germs and their ferment or toxin.

This is a necessary process, going on in the alimentary canal of man daily as long as he lives. If man breaks down his energy, and then persists in eating more than he can take care of by physiological digestion, the surplus must be disposed of by pathological digestion.

Physiological ferments are secreted by the body, and are necessary to prepare food for metabolism. The disposal of food takes place after it is absorbed, and this disposition is called metabolism.

Pathological ferments are generated by the neutral microbes when the latter are made to develop fermentation other than physiological. Their purpose is to dissolve the surplus food intake, and hurry it out of the body. This process is necessary for the life and health of man. When digestion is abused by a constant intake of food beyond digestive ability--beyond the power of physiological ferments--then the bacteria set up a pathological fermentation, which breaks down and disorganizes the surplus food, and forces it out of the alimentary canal by stimulating the expulsive power of the canal.

This work takes place on the outside of the body, in spite of the fact that it is in the bowels. A like work, only much more refined, is going on in the lungs in all cases of tuberculosis.

When digestion and absorption are carried on in the alimentary canal, beyond the needs of repair and building, the surplus must be disposed of. The duty of the lungs is to furnish the oxygen necessary to bum up this surplus. But this function is often overtaxed, and, to get rid of surplus nutritive material, the lungs are requisitioned by the central powers to do vicarious excretory work. In addition to performing their function of exchanging carbon dioxide for oxygen gas, they become excretory organs; and, as the bronchial tubes and air- cells of the lungs, like the bowels, are simply excavations into the body, and their closed cavities are on the outside of the body, germs have free access to them. When the lungs are forced to take up the task of excretion, to aid in freeing the body from its accumulation, a cough develops, which is necessary to rid the lungs of the accumulated matter. When there is no systemic infection, the cough and expectoration may be what is known as bronchitis; or perhaps bronchorrhea, asthma, etc.

When toxins, the result of putrefaction in the bowels, enter by way of the absorbents in the bowels, the lymphatic system arrests the toxin and renders it innocuous; but when the infection, or toxin absorption, is too great for the lymphatics to dispose of, nature undertakes to expel it by

way of the lungs. The neutral germs that join the process are metamorphosed into tubercle bacilli. They undertake to dispose of the accumulation by disorganizing it--causing a disorganization of the hyperplasia, or the protoplasmic deposits; in other words, a disorganization of the tubercles which have been forced to develop from the irritation of the toxins absorbed from the bowels. This disease is called pulmonary tuberculosis. The simple germs of fermentation become the germs of putrefaction. Putrefaction hastens the exit of accumulation by breaking down and liquefying it. The putrefactive germs, because of the chemical medium, metamorphose into T. B.'s.

Bacteriology, like theology, makes the bad more powerful than the good.

The old theology made the devil and sin greater than God and good; and the medical profession has always put disease far ahead of health. The devil, disease, is much more powerful than health; and I admit, when disease has modern, or ancient, medical science as an ally, the combination is more potent than health.

Bacteriology is a splendidly wrought fallacy. How long it will hold the center of the arena of human endeavor, as far as the cause, effect, and cure of disease are concerned, is hard to say. There are millions of dollars invested in exploiting bacteriology; and millions of dollars may keep a fallacy alive for ages. Besides, the fallacious system offers such splendid rewards during the lifetime of its devotees; and, neither last nor least, it gives immortality to those who .are worthy.

To have a germ named after its discoverer is far greater than to have a continent bear the name of its discoverer.

Bacteriological science is so grandly scientific that one who has mastered all its details is entitled to a niche in the Hall of Fame, despite the fact that he can never be a physician--can never know anything of value about the cure of disease-until he has forgotten all he has been taught.

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CHAPTER III

The Study Of Medicine

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The study of medicine is divided into four subjects, namely

I. Pathology: that part of medical science which studies disease.

A. Etiology: the investigation of morbific causes.

B. Pathogeny: an explanation of the mode of action of causes-how cause produces the development of disease.

C. Pathological Physiology: morbid reactions under disease-producing causes.

D. Pathological Anatomy: which reveals the structural change resulting from disease.

E. Symptomatology: which accounts for disturbances.

F. Nosology: which describes and classifies disease.

II. Diagnosis: which determines the place where a given disease belongs in Nosology.

III. Prognosis: which fortells the outcome of disease.

IV. Therapeutics: which endeavors to relieve, modify, and cure disease.

I. PATHOLOGY

According to medical science, pathology is the science of disease--that branch of medical science which treats of the modifications of function and structure of organs caused by disease. Disease defined is: inharmonious action of one or more of the various organs, owing to functional or structural change.

There is special pathology, which means analyzing disease. This is divided into internal or medical, and external or surgical, pathology. Then there is comparative pathology, which considers a study of diseases in man, animals, and vegetables; experimental pathology, and general pathology.

General pathology defines terms and fixes meanings; determines the laws of morbid phenomena, determines causes, defines symptoms, names diseases.

Pathology is a description of the body, and the organs which compose it, when they are laboring under the effects of abnormal, unusual, and perverting influences.

Physiology is the study of the body and its organs in that state known as health, and under influences that give health and strength.

Pathology, then, is that state of the body known as bad health, while physiology is that state of the body known as good health.

Disease is inharmony, and health is harmony. Both are different states of one and the same thing.

When we study pathology in connection with the influences that produce it, we learn in time to recognize real cause in its effect.

To study effectually the phenomenon pathology--disease--we must combine with it physiology--health--and etiology--cause.

To study pathology--to note change in function and structure--without a correct understanding of the cause of the change, leads nowhere. To study physiology-to study the secretions and excretions from men en masse, like a composite picture--will show an average--show about what an average individual should secrete and excrete under a given environment and a measured dietary. This is good as far as it goes, but no approximation can do more than give general knowledge of physiology and pathology. This generalization will give a like knowledge of dietetics, hygiene, and all branches of medical science.

Morbific effects will be found following certain morbific causes; but on closer investigation it will be found that there are exceptions to every cause--that there is no cause that always produces the same effect; hence pathology, physiology, their causes and effects, must be studied, not only in a general way, but in a special way, and the reason for exceptions must be as thoroughly understood as the rules.

Health and disease are related in that they are two phases of one state, and neither can be known without contrasting it with the other.

Living organisms are unstable. Their state must vary with the changes that take place in the environing influences.

The phenomena recognized as different acts of life are not dependent on some mysterious force outside of the body--some vital energy animating the body--but are simply actions and reactions produced by external agents.

For example, when external variations are slight, adjustments are readily made in those of a full measure of health, but not so readily adjusted in those with resistance broken down. Where the temperature falls forty to sixty degrees in a day or night, the most robust will suffer more or less from the adjustment, and the delicate may be killed.

Pathology given exclusive attention is a fruitless study. Health in all its phases must be studied, and cause and effect must be found in everything that affects the body.

The general study of pathology today too frequently starts with an established state of the blood or the organs of the body. The primary causes are ignored or not thought of. For example: Typhoid fever is thought of as cause, which leaves, when over, modifications which persist; being too slight to be recognized, they nevertheless continue their evolution. Ten to fifteen years later a heart, lung, liver, or kidney disease develops, which is ascribed to the changes wrought by the initial fever. A correct way to view these phenomena is to recognize the typhoid as an accidental but possible link in a morbific chain started in perverted nutrition, back perhaps in childhood, or back farther in a nutritional diathesis, that makes the development of a morbid chain of perverted nutrition, with possible links of typhoid, pneumonia, catarrhal inflammations, et al.

Crises.--Life is made up of crises. The individual establishes a standard of health peculiarly his own, which must vary from all other standards as greatly as his personality varies from others. The individual standard may be such as to favor the development of indigestion, catarrh, gout, rheumatic and glandular inflammations, tubercular developments, congestions, sluggish secretions and excretions, or inhibitions of various functions, both mental and physical, wherever the environmental or habit strain is greater than usual. The health standard may be

such--the standard of resistance may be opposed so strenuously by habits and unusual physical agencies--that the body gives down under the strain. This is a crisis. Appetite fails, discomfort or pain forces rest, and, as a result of physiological rest (fasting) and physical rest (rest from daily work and habits), a readjustment takes place, and an unusual standard is attained for a short time--the patient is "cured." This is what the profession and the people call a cure; and it is for the time being--until the customary habits and usual style of living have had time to establish the regular ante-crisis standard. This standard is maintained until an unusual enervation is brought on from accident or dissipation; then another crisis. These crises are the ordinary sicknesses of all communities--all catalogued diseases. Cold and hay-fever are simply forms of crises belonging to a chronic state of toxin poisoning characterized by catarrhal inflammations of mucous membranes. When the cold is gone, or the hay-fever fully relieved, it does not mean that the patient is cured. Indeed, he is as much diseased as before he suffered the attack (?)--the crisis--and he never will be cured until the habits of life that keep up toxin poisoning are corrected. If the intoxicating habits are continued, nature will undertake to cure by hardening the tissues--sclerosis. Arterio-sclerosis is one of nature's cures. Such a cure will not take place before old age, if not forced to.

A standard of health may be such as to be forced into frequent small crises, such as colds, frequent headaches, neuralgias, toothache, acute fevers, throat affections diarrheas, constipation, etc. Each of these attacks may be looked upon as a crisis. To recover from a crisis is not a cure; the tendency is back to the individual standard; hence all crises are self-limited, unless nature by maltreatment is prevented from reacting.

All so-called healing systems ride to glory on the backs of self-limited crises, and the self-deluded doctors, and their credulous clients, believe, when the crises are past. that a cure has been wrought, whereas the real truth is that the treatment may have delayed reaction. This is largely true where anything has been done except rest. A cure consists in changing the manner of living to such a rational standard that full resistance and a balanced metabolism are established.

One hundred per cent efficiency is seldom seen. No one with an established sensual habit is one hundred per cent efficient.

Tobacco, coffee, tea, cocoa, alcohol, drug habits of all kinds lower the standard of resistance and personal efficiency; and if the habitue starts life with less than one hundred per cent efficiency, his habit or habits will bring him into more pronounced inefficiency and more frequent crises.

Any habit of mind or body that uses energy faster than it is generated must establish a resistance and an efficiency below the normal standard. Then, if the normal standard is below the ideal one hundred per cent, it must be obvious to all thinking minds that those who belong to this class must have a very precarious hold on health, and must be of the class forced into a crisis at every unusual change of environmental influences. Babies will have the diseases peculiar to nursing and teething; older children will develop the so-called contagious diseases; while grownup people will have crises peculiar to, and in keeping with, their diatheses.

All of the above concerning crises is demonstrable. Indeed, so self-evident is it that it has taken a lot of selfish conceit and dogmatism to prevent these simple truths from becoming commonplace.

I suppose it is not quite human to expect those of a standardized school of healing to give utterance to discovered truth which, if accepted by the people, would rob them of the glory of being curers of disease. Indeed, nature, and nature only, cures; and, as for crises, they come and go, whether or not there is a doctor or healer within a thousand miles. For the good of most patients, it would be well if the schools of slightly varying phases of fallacious therapeutics were driven into the sea of oblivion.

If typhoid or any disease is managed correctly, the patient will recover, and if the habits of life are corrected and the patient continues to live right, there can be no sequel from the typhoid; but if the style of living followed before the fever be continued after it, other diseases will be developed; and if an organic change has been caused by the interpolated disease, then certainly the organs so affected is most liable to give down from years of toxic infection.

Disease, functional or organic, must be looked upon as interpolated affections. The real disease is in faulty nutrition, and is of daily development.

Intestinal intoxication, from bacterial fermentation due to overeating, improper eating, and eating potentially acid foods, and foods devoid of enzyme, is a constant source of toxin poisoning. This condition is added to by retained excretions, which will always take place when the organism is enervated. The amount of food intake may not be too great under correct conditions, but the subject's power to digest and assimilate is impaired by overwork, worry, venereal excess, alcoholics, tobacco, coffee, tea, and other stimulants.

Without impaired nutrition, which is initiated by toxins introduced from without, or developed in the body, diseases, acute or chronic, cannot develop.

Suppose we take heart disease. It may have developed with rheumatism, typhoid fever, or other diseases. The effects on the heart are identical. The new disorder--the heart disease--is not caused by the rheumatism, the fever, or any other disease, but evolves from the same cause that evolved the rheumatism or other diseases--namely, the toxemia.

To treat any disease correctly, its cause must be understood. To say that the heart was diseased by rheumatism is an etiological error. The heart was poisoned by the toxins that created the rheumatism, and the drugs and other treatment for rheumatism joined the, toxins to put the heart out of commission.

The leading authorities say that visceral diseases take their origin from some antecedent cause, but that the initial disease is not always easy to find. They declare that the disease may be dormant, or develop silently, for twenty or thirty years before manifesting. This is true and it is not true. A tuberculous diathesis favors the development of tuberculosis, and the gouty diathesis favors the development of gouty diseases; but the primary cause is the same--namely, chronic toxin poisoning. This state of the blood and other fluids of the body must exist before any of the organs can go into a state of degeneration.

If the subject is scrofulous, scorbutic, or has developed a state of acidosis, and the glandular system has once been septically infected from a syphilis, gonorrheal bubo, carbuncle, vaccination, or wound infection, the gland lesions will get well under proper treatment; but if the subject becomes careless in his habits, and builds back the chronic autotoxemia, it would be the natural thing for the glands to become diseased. When the glands are once infected, they are made sensitive and will respond to toxic influences more readily.

A. ETIOLOGY

Post-mortems are held for the purpose of discovering the cause of death, and the cause is found. It may be an organic change of the heart, liver, lungs, or some other organ. Suppose an abscess is found in the liver, spleen, pleura, or elsewhere; suppose apoplexy is found; without doubt a reasonable cause for death has been discovered. But what light has been shed on the real cause of disease?

None whatever. Post-mortern revelations are as silent on the subject of ancestry as they are on the cause or causes of disease.

To find an abscess of the liver or spleen may account for death, but the very important knowledge of what caused the abscess, or what caused the cause of the abscess, is not found. On knowledge of morbid processes that would help the living to shun a like fate, all post-mortems

are as silent as death--except in deaths from injury, and in those cases only the cause of death is found; the dead tell no tales regarding the cause or causes bringing about the accident.

How is anyone who has not studied the history of morbid processes to know that a slight injury to the neck of the womb twenty years ago is one cause of cancer today? Or that the habit of drinking hot coffee twenty years ago caused chronic inflammation of the stomach that ends today in cancer of the stomach?

After having gained the knowledge that injuries, such as related above, are the cause of a fatal disease twenty years or more afterward, it is rather confusing to be confronted with the truth that only a few of those who have suffered a like cause have also suffered a like effect. Hence there must be collateral causes which are not considered, and without which the true causes and effects leading to the final fatal effect remain speculative. The profession moves in a diagnostic circle of misapprehension, always coming back to the starting point with no more true knowledge of cause than at the start.

So very obscure are the real causes of disease that it is not strange that nearly all professional men willingly disregard anything pertaining to disease except the symptoms which palpably present.

1. Enviromnent in Its Relationship to Health and Disease

The two words "health" and "disease" are used daily, but few know anything, except in a general way, of what either means.

The general conception is that health is a fixed, ideal state or entity, and that disease is a fixed state or entity whose particular purpose it is to war on health.

In aboriginal man's conception, disease was an evil spirit. In the early days epilepsy was caused by the devil. According to the Bible, an epileptic was a person possessed of the devil, or of devils.

A doctor in Cincinnati has discovered that epilepsy is caused by a particular germ, which the doctor has named "bacillus epilepticus."* (* Since this was put in type the doctor has recanted.) This devil germ takes up his abode in the colon, and from this throne torments his victim.

The Bible doctors cast out the devil Epilepticus in the name of the Lord. The Cincinnati doctor advocates casting the throne or habitat of this devil bacillus out by a surgical operation, on the theory that by destroying his abode Mr. Devil will depart forever.

It takes about as much faith to accept the germ theory as the devil theory. Indeed, both are conceptions built out of hypotheses that have their foundation in the false theory that the universe is governed by two Deities--namely, God and Devil. The whole germ theory is a refined and modernized demonology.

Cell-Life

As soon as a cell is born it begins to die. Man's body is made up of cells, and his continuance in life depends entirely upon cell renewal and cell integrity.

The cell is in an ideal state only at the instant of completion; then it begins to wear out. Man's body during his fetal life is in as near a state of equilibrium as is possible; for the temperature of the mother's body is maintained at about ninety-nine degrees F., and his life is carried on by proxy, so to speak. When born, he is subjected sooner or later to all the influences of his environment.

Health is an abstract idea. It cannot be well defined, for it necessarily must vary from birth to the grave.

Living organisms never more than approach a state of equilibrium. Indeed, no man would accept life if he could be guaranteed equilibrium; for that would be a neutral state devoid of experience, consequently with no knowledge. He could not enjoy; he could not love; he could not hate; he could not eat; he could not lose his temper; he could not be happy; he could not have friends or enemies; all of which are necessary to his development.

All man's pleasures and displeasures--happiness and unhappiness--come from the varying of his environment. Through attention, thought, and reflection on these influences is he educated. Man too often goes through life giving no attention whatever to the influences, from a health standpoint, of these various shocks to his nervous system. Indeed, very few recognize the sense of pleasure as a shock, and that evil can come from it. Just a few of the people are beginning to realize that taking food into the system is a shock, notwithstanding the fact that it is a pleasure to take it into the system, and a necessity from a building and repairing point of view. When this subject receives the serious thought and consideration of laymen, as well as professional men, there will be more inquiry for knowledge of just how far stimulation can be carried without harm, and when people get sick they will know that they have been imprudent and gone beyond the point where health can be maintained in eating and caring for the body.

When man is born in the backwoods, and his mental and physical experiences are confined to a very limited environment, the number of pleasurable and disagreeable shocks which he experiences must be almost nil compared with what he would experience in the heart of population.

Everything else being equal, he should live longer in his secluded home; but such is not the experience of mankind. The limited experience--the limited shocks--in this restricted home fail to interest him, and he grows old young, and tires of life, and dies. We cannot live longer than we want to. Books and music help to fill the life and will prolong it.

The metropolitan man is shocked by so much of love and hate, and his experiences are so educational, that life has too much of interest for him to leave it. This does not apply to the sensualist--the man who lives for pleasure; for he becomes ennuied and dies from lack of interest. The man who lives for gain will live long if he continues to be interested in gain; but if he fails, and hope is gone, his health fails and death comes soon. Unfortunately, those who have the faculty for making money--becoming wealthy--are exceedingly unwise in placing it where it will do them the greatest good, or the greatest good to the greatest number.

The body is made stronger by the shock of exercise and work. Too much exercise pushes development beyond the normal. Most athletes are overdeveloped, and as a consequence die early.

Men, after they pass middle age, should have a certain amount of exercise; but those who live a sedentary life will not live as long if their exercise is pushed to a hardening of the muscles as they will if they exercise just enough to keep the muscles well shaped--keep the tissues from falling down. Old men never have muscles that stand up and are individual, such as the athlete prides himself upon. A man who is in a trade or business that requires continuous hard work will keep his muscles well up into old age, if he is regular about his work. If he works up to sixty years of age, keeping his muscles hard from his labor, and then retires, he will not live many years--not nearly so many as he would live if he should continue his work, perhaps not doing quite so much; yet, on account of his being accustomed to work, he will live very much longer if he keeps at his labor than he will if he stops and retires.

Most men of sedentary lives are underdeveloped; their organic life runs down, and many die early.

Over-mental development always means early death. This is especially true where the knowledge is not of a character to make one wise about his proper relation to his environment.

When a great physician dies too early because of lime deposit in his arteries, what is the reason? He has not had the proper conception of his relationship to his environment.

The riddle of health in its varying stages must be known before man can brace himself against the over- and under-effects of environmental shock.

We have seen that development means shock. The shock of too much nourishment, and of too much exercise, produces disease. Neither of these causes is disease-producing within itself. Food is necessary. The body cannot live long without the stimulation (shock) which it gets from food, and certainly it must have the building material that food furnishes. When food and exercise are given within the needs of the body, everything else being equal, the body may be said to be in a state of health.

When food and exercise are supplied beyond the needs of the system, or below the needs of the system, disease is said to prevail.

There is but one deduction from these facts, and that is that health and disease come from the same cause.

Perfect health does not exist. The state varies from one that is known as robust health to fatal disease. Yet both extremes are states of health.

How can there be an entity, disease, coming out of food, exercise, pleasure, work, or anything that affects man in his environment? The answer is: There cannot be. As stated before, life is made worth while because of the various influences affecting man.

Once it was thought that the force which animated living matter was an autogenerated vital energy, but now it is thought to be reactions produced by various agents.

About as good a definition for health as can be given, according to the foregoing, is: an equilibrium established between external stimulation and internal reaction.

The temperature of the body in health is about 37' C., or 98-1/2° F. If the temperature of the room or weather is about 60, and is kept at that point, the body becomes adjusted. If the temperature rises or falls slowly, reaction on the external medium will be gradual. Where the change is sudden, either plus or minus, it upsets the heat equilibrium and may cause much disorder, resulting in disease. What is the disease? Enervation and retention of excretion. This produces toxic poisoning.

Becoming adjusted to any sudden changes causes so much agitation that life may be endangered.

The cause of disease, or the cause of a departure from health, or health perverted, is not some mysterious entity; it comes from shocks imparted by environmental agents, which cause reactions; and the reactions are for the purpose of modifying the shocks and making them compatible with life's requirements.

2. Physical Agents

Air.--Air is not classed as a food; yet it is the most important food. We can live without the ordinary foods from thirty to forty days, and we can live without water for a few days, but we cannot live without air for more than a few minutes.

Air is the gaseous substance that envelops the earth and forms its atmosphere. It consists almost entirely of the gases oxygen and nitrogen, which are merely mixed and not chemically combined.

An ordinary-sized man is supposed to take through the lungs about two thousand cubic feet of

air each twenty-four hours. It is from the air that we secure our greatest supply of oxygen.

Air at sea-level has a pressure of about fourteen and three-fourths pounds to the square inch. It decreases about one-twentieth of a pound per square inch for every ninety feet of altitude. High altitudes cause a quickening of the pulse and breathing. Most people have an idea that there is much danger in going to a high altitude quickly. There is very little discomfort, and almost no danger, to persons in good health.

It is said that, whatever the altitude, the composition of the air is always the same; namely, 21 parts of oxygen, 78.06 of nitrogen, 0.94 of argon, and a trace of carbonic acid.

The only change in the composition of the air in high altitudes is an increase in ozone. Ozone is an allotropic (allotropism: the existence of an element in two or more distinct forms--distinct physical properties).and more active form of oxygen. The variations of the chemical composition of the air do not account for the evil effects experienced in high altitudes; hence the effects must be caused by temperature, pressure, and the action of the sun's rays, which strike more perpendicularly in high than in low altitudes. At an altitude of 4,500 to 5,000 feet the temperature will mark a difference of ten to twelve degrees Fahrenheit in the sun and in the shade. If the bulb of the thermometer be covered with black cotton, the difference will often reach sixty degrees Fahrenheit. This should warn. those in delicate health to prepare themselves with a proper amount of clothing when going into high altitudes. It should not be forgotten, however, that the cold of high altitudes is more tolerable than that of low altitudes, because the air is drier.

The sun, however, does not melt snow unless accompanied with warm air. Black or dark clothes retain the sun's heat and enable the traveler to keep warm in a temperature that would be very uncomfortable at sea level.

The absence of wind and humidity in high altitudes gives comfort, whereas in low altitudes, with a much higher temperature, those who are sick and of low resistance will suffer from the cold.

Altitude.--Snow does not melt in high altitudes, even when the sun's rays are quite warm, until the air becomes warm. Snow, or white clothing reflects the sun's rays; hence dark clothing should be worn in winter, and white or light-colored clothing in summer.

As an experiment: Place a dry leaf on a bank of snow where the sun is shining; in a little while it will be seen that the snow under the leaf is melting.

Absence of wind and humidity causes high altitudes to be comfortable places to live.

Mountain air is so dry that putrefaction does not occur to the same extent as at sea level. In high altitudes meat will dry and cure without salt. Desiccation is effected before decomposition can set in. At St. Bernard, in the Swiss Alps, the corpses of men and animals never decay. The dead are placed in morgues, where they are preserved indefinitely--a form of immortality.

The air is so rarefied in high altitudes that patients are made quite nervous because of the absence of noise. Sound does not carry, because the air is not dense enough to transmit it.

It is said that the absence of noise causes a feeling of sadness.

The effect of altitudes ranging from six to twelve thousand feet, on one seeking health, will be at first, while becoming acclimated, that of a feeling of warmth on the skin. The lips will redden, and the eyes will flush. For a while one will be troubled with insomnia; a slight palpitation; or, if the heart is weak, the palpitation may be severe. There will be a feeling of dyspnea (shortness of breath); dizziness; and sometimes headache. The urine is dark, and constipation is the rule; and, from the first, the appetite is increased.

In a short time the skin becomes a tan color. The lips, nose, and hair become so dry that salves and vaseline are used to secure relief from the dryness. Strength increases, and long walks, and even mountain-climbing, do not fatigue until overeating brings on the tired feeling peculiar to food poisoning.

There is mountain sickness, which is said to be unavoidable in altitudes of from twelve to fifteen thousand feet, but not equally in all countries--probably the result of overeating and fatigue. The exhilaration caused by the mountain atmosphere induces the traveler or sightseer to exercise to excess; this uses up so much nerve energy that imperfect digestion results, following which comes intestinal toxin infection; and that is what mountain fever is.

Mountain-climbers are not equally subject to mountain sickness. This, of course, is true of every section of the country. It is said that the lack of oxygen, the increased cold, and the fatigue have much to do with bringing on mountain sickness. Obviously harm must follow an increased appetite and a decrease in oxygen supply. A decrease of oxygen favors decomposition; this is one reason for auto-intoxication.

The symptoms of mountain sickness are a feeling of growing malaise; pains in the legs, especially the knees; the mouth fills with saliva; sickness of the stomach, followed by vomiting of food; and, in severe attacks, bilious and even blood vomiting. In the advanced stages of the disease, pain in the bowels and diarrhea set in.

According to Paul Bert: "The quantity of oxygen in the blood diminishes as the atmospheric pressure diminishes. If the rarefaction corresponds to pressure existing at 6,000 feet of altitude, the oxygen diminishes thirteen per cent; at 9,000 feet, twenty-one per cent; at 25,000 feet, fifty per cent." He thinks oxygen starvation causes death in these high altitudes, and experiments that he has carried out have proved that he is right.

By "becoming acclimated" is meant that the blood acquires an increased capacity for absorbing oxygen; which means an increase in the red corpuscles and an increase in the iron contents. This being true, patients suffering from anemia, and especially chlorosis, will find benefit in living in high altitudes. They will also suffer much in traveling in high altitudes.

This is according to the best medical authority. I will say in this connection, however, that such diseases are brought on from imprudent eating. My experience is that anemic and chlorotic patients eat foods that are devoid of oxygen, until they lose their power for carrying oxygen. Why should not this be true? Nature removes an organ no longer used. If oxygen is not taken into the system in large enough quantities to supply work for the red corpuscles, there will be a gradual diminution of these corpuscles to correspond with requirements. High altitudes force breathing; hence the demand for more blood corpuscles, and the supply.

To those who are anemic or chlorotic I will say: If resort to a high and dry altitude cannot be taken, do not be discouraged; stay at home and get well. Stop sugar-, candy-, and cake-eating; use sugar in foods very sparingly. Eat uncooked fruit, also salads made from fresh, crisp vegetables, or a slaw, every day; and teach yourself deep breathing.

An increased capacity for absorbing oxygen may be developed in low as well as high altitudes by getting rid of toxins in the blood. This can be done by correcting the eating: by lessening the amount of the so-called staples--meat, bread or cereals, pudding, pie, cake, etc.--and eating more fresh fruit and vegetable salads; and exercise should not be forgotten.

Pulmonary tuberculosis is a disease supposed to be best treated when sent to high and dry altitudes. This supposed benefit is not without its drawbacks. All lung cases with a high pulse-rate should seek as dry a climate as possible, but avoid altitudes more than a mile above sea level.

Almost irreparable harm is done to blood-making and nutrition before the tubercular bacillus

is discoverable in the lungs. Prevention of this disease must start in childhood, with those of the tubercular diathesis. After adenitis (lymphatic infection) has been developed in a tuberculous diathesis, it will require unusually good judgment on the part of the patient, and unusual medical skill on the part of the medical adviser, to bring the patient back to the normal. To stay normal with a diathesis and a record of one breakdown will require great good judgment--certainly more than a residence in a high altitude, etc.

I have learned from observation that those who are well advanced with pulmonary tuberculosis, and who have a high pulse-rate, die off very rapidly when brought to Denver.

If we are to believe in the eternal logic of the universe, we must believe that sound judgment is an accompaniment of a sound body. This being true, all tubercular subjects should be directed by the wisest minds; for their own is as prone to go wrong as the sparks are to fly upward.

Curing this disease means correcting the mind and body-it means right thinking and acting.

If it is a fact that more lung capacity is needed in high altitudes, is it wise to force diseased lungs to expand? Oxygen starvation is one of the symptoms of tuberculosis, due to imperfect lung action. The lungs of these subjects are not used to their full capacity, and, as the disease advances, breathing grows more shallow, because the lungs grow more sensitive to the air. Cold air irritates and causes coughing, and, to avoid coughing, the patient learns to breathe in a more shallow manner all the time; and, of course, the less oxygen taken in, the less food is digested, and the farther away from health the victim drifts.

Sleeping-porches and other devices for furnishing fresh air and a greater oxygen consumption have been a dominating fad since a few years ago, when it was the custom to have patients sit out-of-doors in the coldest weather--wrapped, of course, enough to keep warm.

Obviously both plans are rather more detrimental than good. The object is fine, for it is necessary to have as pure air as possible; but the good is, according to my way of thinking, more than offset by the irritating effect of the cold on the lungs. Reader, stop and think: These patients are in heated houses all day, and some of them in superheated houses. At night they breathe an atmosphere many degrees colder than it is throughout the day. The house temperature through the day is seventy degrees Fahrenheit, or more; while on the porch it ranges, in Denver, from thirty-two degrees above to ten degrees below zero. The range is from thirty-eight to eighty degrees. Can anyone with common sense believe that a weak, diseased lung will thrive subjected every twenty-four hours to such extremes of temperature?

If the above is true, the modem treatment of this disease could not possibly be much worse.

If houses are as clean as they should be; if bedding is as clean as bedding should always be, patients will do much better in a closed house--closed up for the entire night--and fire enough to keep the night temperature within ten or twenty degrees of the day temperature.

All of us (doctors and laymen) must go through the fresh air insanity. Converts to new thoughts, or old thoughts, are always nearsighted, enthusiastic, and even fanatical in their loyalty in following literally and not wisely such fads. The fresh air craze has surely killed its quota. Filthy houses have done their share. Now sensible people should split the difference and keep both foul and cold air out of their lungs. To encourage those who read this, I will say: The composition of the atmosphere is always the same,* and, like all organs, it is maintained at the same composition, and must remain so until destroyed; and along with its destruction must go all animal life. (*This does not mean that the air of proper composition cannot be made the vehicle of filth. Houses, bedding, clothing, and the body must be clean.)

It is all nonsense to talk about burning up or breathing out of the atmosphere all the oxygen. If houses are clean, no harm will come to the sick by closing doors and windows to prevent them from chilling their lungs and blood by breathing an atmosphere much colder than their bodies.

Harm from breathing cold air does not end with simply causing irritation; the patient's nerve energy is used up in resisting the cold. It takes nerve energy to resist cold; it takes nerve energy to digest food. This being true, should not sick people be kept in a warm atmosphere, and fed on food that will nourish the body at the least expenditure of energy in digestion?

The nervous system of a plithisical patient should not be severely taxed in resisting cold. It must be remembered that digestion cannot be carried on with a bodily temperature varying much from 99' F.

It is a mistake for sick people to live in an atmosphere so cold that wool or other heavy, impervious underwear is thought to be necessary to keep the body warm. Air is a tonic and stimulant to the skin, and, neither last nor least, it is a disinfectant. To keep the surface of the body sweet and clean, air must get to it, and it cannot when the body is swathed in tight-fitting woolen or other underwear. Open-woven cloth is better; no underwear at all is best.

It matters not how clean a housewife may be-if she does not air her closets and clothing, she cannot boast of her cleanliness. Men who ruin their homes with tobacco smoke, rendering them unfit for women and children to live in, certainly pay a lot for their pleasure. I have known of invalid wives who could get well if their homes could be freed from stale tobacco smoke. Invalid wives are expensive.

A part of humanity live in ill-smelling houses and clothing. Many men think they are excused for ill-smelling bodies because their work is dirty. This is not necessary. Grease, smoke, dust, and iron rust or filings will make the clothes, hands, and face dirty; but I deny that it is necessary for any man to emit an odor that is offensive.

Women who take advantage of dirty work as an excuse for making themselves a nuisance from malodor should be boycotted. It is no disgrace to do work that makes one's body and clothes dirty; but there never can be any excuse for filth, and the odor that accompanies it. People who are filthy are a menace to society and should be taken care of by the health authorities, in the same manner that all decomposition is cared for.

Air and dust, sometimes called dirt, are aseptic and antiseptic. Dust is fought against by housewives, and cities hold it down with the sprinkling cars. In this way one of nature's health-imparting agencies is made inefficient.

Winds and storms are necessary; they are nature's sanitary measures. Wind is necessary for lowlands and low altitudes. Canyons are frequently swept by windsthe reason given being that they act as chimneys for conveying hot air out of the plains: the hot air rises and the cold air goes to the bottom, creating currents. These winds are sanitary; they carry out of the canyons malodors, and antisepticize the accumulated decomposition.

Vegetation grows more luxuriantly, everything being equal, in a windy country than it does in a windless country. Trees grow more rapidly in Kansas because of its winds. Chicago is noted for large, fine-looking girls, and wind. The relationship is obvious.

Walls of wood and stone around private residences in cities are menacing to the health of the neighborhood.

Houses for stock and chickens should be nothing more than windbreaks--never airtight pens or houses. All that animals need are windbreaks; they do not need warm houses, notwithstanding the fact that such protection is often given as a matter of economy--the warmer the animal is kept, the less food is needed. But this is economy at the expense of health. Warm houses and tuberculosis are close friends, and are found among the human animals as well as the brute creation.

The more air we breathe, the better our digestions will be. Warm, close houses are not so menacing to health as people generally believe. The real health-destroyer in our houses is dirt

that is taking on septic change: dirty clothes, kept in closets that cannot be ventilated and are not cleaned; decaying food, and never thoroughly cleaned pantries and ice-chests; old beds that are dressed with nice, white pillows and spreads--veritable whited sepulchers; and then the habit of keeping an ill-smelling cesspool under the diaphragm, from eating beyond the digestive capacity.

Keep the home, in every comer and recess, sweet and clean; keep dirty clothing from accumulating; keep the body and mind clean; then, when cold weather comes, it will not be necessary to keep doors and windows open or to sleep out-of-doors. Keep clean and comfortable, and avoid shocking the lungs and nervous system by breathing air seventy to eighty degrees colder at night than at midday. When necessary to breathe cold air, do so in action--when walking, exercising, or at work. Do not sit out-of-doors wrapped up, or sleep out-of-doors.

In all things it is worth while to take a commonsense view; and in the care of the body, moderation--avoiding fanaticism, which is another name for ignorance--is the safer practice, and much more conducive to long life and success.

Heat.--Heat is not food; yet it is one of food's most important allies.

A temperature of the body of approximately ninety-eight degrees Fahrenheit is necessary to insure digestion and assimilation. A continuous temperature of one degree less than normal will lead to physical destruction sooner than a continuous temperature of one degree above normal.

Just what causes the increased temperature in fevers is an unsolved problem; and it is doubtful whether it ever will be solved. Every case of fever will have to be settled individually; for, as in all things connected with health and disease, there are no unitary causes. Every effect depends upon multiple causes.

The nervous system presides over organic functioning. When nerve energy is below normal, the functions of secretion and excretion are impaired. As secretions are necessary to digestion and assimilation, these functions are impaired, and, excretions being imperfect, the waste products are retained and act as inhibitors of functioning.

Following this state will be cold hands and feet. People are said to have poor circulation, which, indeed, is true; but poor circulation must have an explanation, for those two words are meaningless in themselves. Poor circulation means enervation; means that nerve energy is low; means that the nerves distributed to the blood vessels fail to impart tonicity to their muscular and fibrous coats, stimulating normal contraction.

Heart and blood-vessels in health act rhythmically--contract and relax--under the influence of nerve energy; and this causes what we know as circulation of the blood.

Nerve energy is necessary to keep up the blood circulation and the normal temperature of the body indicated by warm feet and hands.

Anything that uses up nerve energy brings on enervation and, as hinted before, impairment of the functions of secretion and excretion. The lungs fail to exchange carbonic-acid gas for oxygen gas. When there is imperfect exchange of gases in the lungs, digestion is impaired; for perfect digestion requires that oxygen be brought in by the lungs.

Nerve energy and heat are generated when the oxygen in the blood of the arteries acts upon the carbon in the veins; and when, from any cause, the supply of oxygen is low, heat is not generated, and cold hands and feet follow. The remedy must be to remove the first cause of enervation. What is it? Excessive eating, drinking, enjoying, working, or what not. The feeding must be in keeping with digestive limitations, not in keeping with the bodily needs. There is little science and less sense in advising an enervated patient to eat "lots of good, nourishing food." The chasm that exists between my dietetic system and every other system that I have

heard of is too great to be bridged with any possible compromise. I feed my patients in keeping with their digestive capacity, while all others endeavor to force feeding in keeping with apparent systemic needs, without respect or consideration for the patient's ability to digest and assimilate.

The foods that furnish heat are the carbohydrates. Sugar is the most rapid heat-producer, fat next, and starch next.

An oversupply of heat-producing foods, indulged in continually, will end in great enervation and whatever disease the individual has a predisposition to develop.

When sugar is eaten beyond the system's needs, it will not be acted upon. If all were used up and heat generated, life would be put out from hyperpyrexia, or overheating. The amount taken above the body's needs will go out of the body by way of the kidneys or bowels; not, however, without more or less injury to these organs of excretion. It is a mistake to believe that we may indulge ourselves beyond the system's needs, with any food or drink, with impunity. Indeed, the surplus is a tax on energy to get rid of it, and this tax divides the work of nutrition. Ideal nutrition cannot be had when its work is interfered with by the work of eliminating a lot of unnecessary material.

It should be bome in mind that the law of correlation of forces must govern in the matter of food and nutrition, the same as in dealing with natural law anywhere in the realm of knowledge and science.

Heat is being consumed when the body is in pain; when overclothed or overworked; and when mentally worried, depressed, or overjoyed.

Fever is not an indication of the generation of surplus heat. Indeed, quite the contrary is true; for the body is not generating so much as when normal. The reason for the excessive temperature is that nerve energy is impaired; elimination by the skin, lungs, and kidneys is suspended, and, as a result, the excretions are retained. One of the functions of the skin and lungs is to radiate heat. If, through food or other poisoning, the nerve energy supplied to these organs is cut off, heat is retained in the body. If the cause is infection from an injury, or pent-up decomposition in the bowels, the source of infection must be got rid of as soon as possible; then the temperature will run down. Physicians in general practice often see an increase of temperature from two or three to five and six degrees Fahrenheit following indigestion caused by overeating, and if the indiscretion is not repeated, the fever may subside in twelve to twenty-four hours.

After childbirth or abortion, if from any cause the uterine discharge becomes pent up, pain and fever will quickly follow. If understood, however, and the womb washed out, and drainage established, pain and increased temperature will be controlled at once, never to return, unless the cause is allowed to return.

Pain inhibits the physiological manufacture of heat, and if it did not stop radiation, the patient would probably die from refrigeration--from loss of all bodily heat. Hence fever may be looked upon as one of the most remarkably uniquely conservative acts in all the world of pathological conservatism.

Health and long life cannot be looked for by those who are careless and indifferent about keeping their extremities warm. Cold, clammy hands and feet indicate malnutrition, and must be cured by correcting the bad daily habits that build this symptom.

Until the extremities keep warm from restored circulation, following the correcting of the disease-producing habits, artificial heat must be used to keep the feet warm. Covering on the feet and legs to the knees should be double the weight of that over the body and shoulders; or a jug of hot water may be kept in the foot of the bed to use when necessary. Do not sleep with the

feet against the heater. Through the day, if sitting much, an electric pad should be used. Keep the feet warm, and prevent further decline in health.

Do not overclothe in an effort to keep warm. Lightweight, open-woven underwear, with heavy top clothing when going out, is the proper way to meet the cold. When riding in cold weather, the feet must be kept warm. Overeating and chilling spell pneumonia.

Heat of summer can be easily borne--in fact, enjoyed--if the eating is correct. Cut the heat-producing foods down to the minimum; meat, with all fat trimmed away, not oftener than once a day or three times a week; fruit and salads, with milk and cheese; bread once a day for those who are not overweight. Wear only the lightestweight, open-woven underwear.

People who persist in overeating make themselves very uncomfortable, and they are the people who meet with prostrations and sunstrokes.

Workmen who are subjected to great heat should leave starch, fats, and sugar, or any form of sweets, alone. Drink freely of pure water--positively no alcoholics; for lunch, ice cream and fruit. The ice cream is sweet and fat and evolves heat. its effects should be watched, and if the heat is harder to endure on days that the ice cream is used, it would be wise to stop it.

Ices may be used too often, and to the detriment of health. The injurious effects of all classes of foods are so little known by laymen, and even by physicians, that few are willing to believe that their favorite "bonnes bouches" cause the discomfort they experience. I see people daily suffering so greatly that they are driven to seek relief and cure; yet they are unwilling to part with the habit that causes their unhappiness. Indeed, it is almost impossible to convince them that ill can come from so simple a pleasure.

Iced drinks should be taken in great moderation. The cold drink habit is like all other habits--it grows on what it feeds. The more ice used, the stronger the demand. A drink of ice water taken an hour after a hearty meal often generates an insatiable thirst, which, if satisfied, will positively cause indigestion, and not infrequently start a derangement that may end in typhoid fever or some other acute malady; or a chronic irritation may be started that will end in ulcer or cancer of the stomach.

Extremely cold drinks and extremely hot drinks are equally injurious. The very sick should always be watched, and artificial heat used continually to keep the extremities warm.

Thousands and thousands have died who would have lived if that one little chore of keeping their feet warm had been attended to properly.

If it could be generally known and remembered that the function of heat-making is suspended during sickness, and that the very old, the very young, and those who are greatly run down are liable to freeze up--collapse--in the hottest weather, deaths from this cause might be prevented by seeing to it that they are kept comfortably warm.

Many cholera-infantum cases die every summer--July and August--because those who care for them believe the babies feel the heat as other people do, and no attention is given to keeping them warm. Death in such cases comes from chilling or freezing to death.

Dry heat is more endurable than moist heat. A humid atmosphere is very enervating.

Every summer nearly all cities of this country suffer deaths from heat strokes.

Sunstroke usually occurs among those who are dissipated. Sensuality perhaps covers the whole class. I do not believe any suffer from this disease who are not enervated from sensuality.

Those who work in overheated places and are food- or alcohol-poisoned are in line for heat prostrations.

Various disorders may persist after a recovery from heat stroke; namely, neuralgia, headache, and sometimes strange ideas or notions. These troubles, however, result as much from wrong daily life as from the previous sickness . Indeed, such cases may be cured of these relics of former sickness if the patients will follow a proper style of living.

Cold.--Cold climates are said to be more healthful than warm climates. I am not prepared to accept that statement without qualifications. Under correct sanitary control, I believe that warm countries are more conducive to long life than are cold countries; but under neglected and bad dietetic, hygienic, and sanitary conditions, cold countries are better. And, of all countries, those of high altitudes are best. Decomposition is the menace to health in warm countries; the people die of sepsis--blood poisoning--and hepatic derangements; whereas in cold countries health and life are menaced by overstimulation and its consequent enervation.

It is true that heat is enervating, but the bad habit of eating heat-producing foods in hot countries causes hot climates to be more unhealthful than is natural. Investigation will show that there are more people who grow old in warm countries. Cold is hard on old, and on very young, people.

Explorers of the polar regions state that they stood a temperature of from forty to fifty degrees Fahrenheit below zero, without suffering, when there was no wind. It is said that life may be maintained at from seventy to ninety-five degrees Fahrenheit below zero. Authors of this statement, however, counsel against exaggerating the importance of this fact. On an average, about seven hundred persons perish every year in Russia from cold.

All ages do not stand cold equally well. Adults resist the cold best. The old and young chill easily.

The enervated, or those with weakened nutrition, must keep warm.

Discouragement, overwork, starvation, or any influences that depress the mind as well as the body, render the individual unfit to stand exposure to cold. Any enervating habit removes resistance to cold. Drinking of alcoholics overcomes man's resistance. Brandy-drinking, as practiced in Russia, often causes serious suffering, and a few fall dead on being exposed to extreme cold after indulging.

There still persists a popular obstinacy or ignorant belief that alcoholics, or so-called stimulants, are an advantage to those who are exposed to cold, or subjected to fatiguing labor. The truth is exactly the opposite of this belief; for alcohol, in any form, enervates by removing the normal tonicity. Man in a full state of health has tone--a normal irritability or excitability--that enables him to act and react on his environment. A man in full vigor can control or react of strike back, but the impotent man has no control and cannot react or strike back. The rage of King Lear marks the acme of senile impotency. Indeed, anger means impotency; the greater the lack of self-control, the more impotency is marked.

Alcohol is not a stimulant nor a tonic; it is a drug that deadens sensation. Hence its first, last, and only effect is to paralyze. The reason why drinkers like it is because it deadens sensation. The more enervated the alcoholic habitue, the less responsible he is for his acts.

To send a drunkard or a drug fiend to the electric chair is certainly the acme of social stupidity. We have quit legally killing those whom we know to be insane; yet we are slow to recognize the drunk or the dope fiends as artificially and temporarily insane.

Fever often produces mental hallucinations, but these states of aberration are not so often due to fever as to drugs. Alcohol and opium have sent many patients through windows to their death. Suicides and homicides are oftener the acts of brains crazed with drugs than the result of viciousness. And society is so ignorantly stupid as to license drug and gin shops, and clothe physicians with authority to build lunatics for our courts to run into the penitentiaries, hang, or

electrocute.

Habits are easily formed. It is an easy matter to go from alcohol to morphine. These drugs do not act the same, yet both of them deaden sensation and are habit-forming, and both produce physical and mental impotency. It matters not in what quantities taken, they weaken resistance and render those who use them less and less efficient for their work.

There is nothing except food that gives man strength. And too much food--eating beyond the digestive capacity--will cause weakness. When food is taken beyond digestive capacity, and a habitual intestinal fermentation is established, the individual loses his power to keep warm. Victims of this state may put on the heaviest clothing--indeed, they usually wear heavy woolen underwear, often two suits, and the heaviest top clothing--yet the more clothing they put on, the more they may. Still there is no comfort for them; for the more clothing put on the body, beyond just enough to protect from wind and weather, the more such people suffer from cold. Heavy clothes break down resistance, and if the habit of wrong eating and heavy clothing is continued, the refrigeration of death will relieve the unfortunate victims of this health-destroying habit.

When a man is in full health, nothing can add to his strength. Emotional excitement may cause him to use all the power he has for the moment, but the result is enervation that will require more than the usual amount of rest to restore. The same is true of protection with clothing. The body in health has power to protect itself from the varying temperatures. It can adjust itself to all degrees of heat and cold, and needs no protection except from inclemency. And when these facts are ignored and artificial protection is indulged in, self-protection is lost, which results in disease.

Food and clothing beyond necessity, close houses, artificial heat, stimulants (?), and tonics (?), make a conglomeration of influences that spell d-i-s-e-a-s-e and early death.

The body should be protected from wind and weather, but not from contact with the air. The body must live in the air. Open-woven cotton or linen underwear, or a sleeveless and legless light-weight garment that stands for cleanliness rather than bodily protection, is all that is necessary; then the top clothing may be adjusted to be in keeping with the weather conditions.

This is quite the opposite of what is recommended by modem medical science. But it should be known that modem medical science is a wonderfully wroughtout system of palliation which in every particular "borrows from Peter to pay Paul;" breaks down health to relieve suffering; builds a fatal disease by relieving or palliating an innocent one.

In the matter of prescribing for those who are breaking themselves down--becoming so enervated that the chill of death is sending its messengers of warning--the really up-to-date doctor will prescribe heavy woolen underwear and more "good, nourishing food;" and, as auxiliaries, stimulants and tonics to quicken the circulation and give strength! Such trifling with health and life is a disgrace to our civilization. Patients applying for advice--for relief from such symptoms--should be educated into health habits; not turned off with short-lived palliatives that will become allied with the patient's bad habits to hasten his destruction.

Those who find themselves distressed by a weather temperature that does not appear to inconvenience those about them should get busy correcting bad eating, clothing, and housing habits.

Do these people need heat-producing foods? Most of them have broken themselves down by overindulgence in these very same foods. Will they be benefited by eating more of them? This is exactly what modem medical science declares; and the result is more breaking-down, more disease, and at last premature death.

Rest--physiological and physical--whole or partial withdrawal of food, and quiet in bed, with artificial heat, and food only when comfortable, will soon right such patients.

As soon as habitual decomposition in the bowels is overcome, these patients begin to warm up; feet and hands gradually grow warm; the mind and body grow more active; the outlook becomes brighter. Often this change not only restores physical and mental health, but it puts the victim on a solid financial basis. People poisoned with alcohol or drugs, or who are toxin-infected, stumble over opportunities every day; they see others succeeding by, perhaps, picking up the opportunities over which they themselves have stumbled.

Those who are cultivating cold feet must not be surprised to find themselves lagging behind in the affairs of life; and they will certainly grow more diseases from day to day.

Death is a coldness that knows no warming; and the unfortunate person who has cultivated cold hands and feet is started toward that final state.

The greater the intensity of cold, the more pronounced its effects on the parts exposed. At three or four degrees below zero, redness is excited; treble the amount will cause swelling; and six times that amount of cold will result in gangrene.

The first effect of cold is a feeling of fatigue and a desire to sleep. But if sleep be indulged in, there will be no awaking.

Light.--Light is necessary for health. Germ life is destroyed by it. Plants do not thrive any better than animals in the absence of light.

Light is a stimulant, and of course can do injury to those who overindulge in it. Those who chase fad cures, and who are not happy until everyone is in the ground too deep for resurrection, will, while taking the sun-bath cure, blister their bodies and torture themselves in every way, that the sun's rays may be used. When this so-called cure ceases to be disagreeable, they will decide that the remedy has lost its effect, and away they go searching for a new cure that will be disagreeable enough to be curative. A cure with them is valued according to the extent of its disagreeableness. The cure idea with such people has not evolved away from exorcism--disease and cure still being a system of demonism. With the profession the demon has dwindled to a microscopic germ.

Clothes keep the light away from the body, and, because of this, man suffers more or less from light starvation. When such subjects are persuaded by a monomaniac healer to expose their delicate bodies to the direct rays of the sun, they will be very uncomfortable.

When people become accustomed to living in Colorado, and have cultivated the sunshine habit, they are not satisfied to make their homes in a country where the sunlight is shut out by clouds and rain. Light builds optimism, while cloudiness or shade causes more or less pessimism.

Light increases the amount of carbonic acid thrown off. It is said that when the body is brought into the light with the eyes shaded, carbonic acid rises twelve per cent; then, if the eyes are bared and the body covered, the carbonic acid rises to fourteen per cent; when eyes and body are exposed simultaneously, this acid rises to thirty-six per cent, exceeding the combined separate exposures by ten per cent. This increase indicates more combustion; and, in fact, there is a slight elevation of temperature. In children it ranges from one-tenth to one-half degree Centigrade.

The sun's rays, either direct or reflected, will cause a skin irritation--erythema--accompanied by an elevation of the epidermis, with serous liquid; that is, the skin blisters and causes great discomfort. When the sun's rays are reflected from water, the action on the skin in one day is very pronounced.

Pellagra is supposed by a few to be caused by the sun's rays; by others, to be caused by consuming spoiled maize--corn. It has not been my privilege to see more than one or two cases of pellagra; but, judging from what writers say about it, it is probably caused by excessive

starch-eating; or it may be the combined effect of starch, sweet (molasses), and the sun's rays and hot weather. This disease, and hookworm, should be eradicated by correcting the personal habits of those afflicted with them. It is a mistake to look for a unitary cause for these diseases; for, as with all others, there are many causes, and just what causes them in one individual may not be the cause in another. impaired nutrition is the fundamental cause.

Darkened houses are proverbially unwholesome houses. All houses should be built in such a manner as to secure as much light as possible. When light is furnished, air is sure to be, and provision for both these elements makes it almost impossible to overheat.

Blue rays have been used to restore hair; Roentgen, or X-rays, and violet rays are used to treat cancer; and all the rays of the spectrum have been used as remedies for diseases. But these remedies soon fall into disuse because of lack of merit. A few enthusiasts--specialists on skin diseases, or cancer specialists--have lost their lives from administering the X-ray; others have lost fingers, hands, and arms. I have seen cancer patients fearfully burned by the use of the X-ray--and that, too, without corresponding benefit.

The ability of radium to disorganize tissue has caused it to be used and recommended. All these remedies, including the plaster cure made from escharotics, appeal to patients as well as to doctors. Why not? If these remedies can cause the disease to drop out, "root and all," what can possibly do more? Commercialism is just now exploiting radium; but, like all cures based on a false theory of disease, it must fail.

The professional mind seldom thinks farther than to the radical removal of the disease-which is seldom, if ever, anything more than removing effects. That the cause may hark back to a faulty nutrition, and that this fault may be caused by one or more of a thousand-and-one enervating causes, is not thought of; or, if it is, no consideration is given it. It is easier to think palliation and work palliatives.

It is doubtful if anyone will develop a cancer who lives in a properly lighted, aired, and heated home, and who takes reasonable care of his body and mind, and keeps intensely interested in life.

Shut out the light and air from the body with thick, closely woven, close-fitting, and overheating underwear; live in a house in keeping; then have a dietary to correspond, and this will create a habitat in which any disease is liable to spring up and thrive.

A bright light held before the eyes and gazed upon is liable to bring on a state known as artificial slumber or hypnosis. The name of "Braidism" is given to this phenomenon because a man by the name of Braidy discovered it.

The influence of light and shade on the nervous system must be very great, and it should be better understood. Let us hope that it will be.

I have seen young children thrown into convulsions by allowing a bright light to glare into their faces when they were nervous and feverish.

Care should be exercised with babies to prevent shocking them by allowing strong lights to flash into their eyes.

The moving picture shows, attended frequently and over a long period of time, will create nervous derangements. No doubt many are being injured in this way. Those with functional, as well as organic, diseases are having their symptoms aggravated by frequent attendance at these shows; but they have not suspected the cause. One or two hours at a picture show will use up as much nerve energy as a whole day at the usual vocation. The combined effect of eye- and ear-strain--the picture and the music--is very strenuous and nerve-exhausting.

Sound.--The nervous system of those who live in large towns and cities is put to great stress.

We are fast approaching a time when the noise nuisance will have to be legislated out of existence, the same as other nuisances that have been squelched.

The automobile need not be a nuisance, but it certainly is. The majority of people who drive their machines act as though they had a special commission to make as much noise, split as much air, and kick up as much dust as possible.

Since the automobile and motorcycle have come to stay, there has sprung up a type of people who really believe that their other name is pandemonium. Unless they are kicking up enough noise to wreck the "nerve" of a political lobbyist, they will not be able to "split the ears" of His Majesty, the Prince of Perdition, when they go to him; which they will, for they certainly will be out of place at a "rest" resort. The average chauffeur plays with the cut-off as the average motorman on the street car plays with his bell.

The street car is made up of the quintessence of noise, and the motorman has become so noise-crazed that he clangs his bell--not because he is approaching a crossing; not because he has a slow coach in front of him, but because he is playing an accompaniment to his thoughts. He thinks noise, hence he plays noise.

The car itself is a gamester of noise "par excellence.'? But health declares it a disgrace to civilization. Not the slightest attention has ever been given to constructing a silent-running car; it is put together so that every part becomes a rival of every other part in creating din. Then, when this roar-monger is manned by a real bellringer, hell is certainly turned loose when this peace- and quiet-destroyer is sent over a street every thirty to sixty seconds. There is positively no excuse for inflicting such punishment on humanity. Surprise is expressed at the number of people committing suicide and going insane every year. Unless commercialism is controlled in its selfishness, it will fill the world with mad-houses and penitentiaries.

Fill a street with modern cars, and a lot of automobiles with their cut-offs opened and conks conking, and we certainly have a state of uproar that must cause degeneration of the nervous system of all human beings subjected to it.

Why should we wonder at the increase of insanity and crime, when we add to the din the thousand-and-one other nerve-destroying habits of social and business life?

Every lover of music and art should protest without ceasing against the growing tendency to convert this beautiful world into a hideous nightmare of inharmony. When it is admitted that "silence is more musical than any song," why should the mongers of noise be allowed to rule?

Is there anyone so simple-minded as to need to be told that such a bedlam as exists in every large town and city is subversive of ethics, art, and religion? The beautiful, sonorous, and euphonious sounds are suppressed by the uproar, and the prospective mothers of the coming generation are forced into developing a distorted nervous system to impart to their children.

We must certainly expect to reap as we sow. Can any but the fool believe that we can sow inharmony and reap harmony--sow pandemonium and reap Utopias?

Disagreeable sounds, smells, sights, tastes, and feelings are so intimately united and blended with commercialism that there is little hope of overcoming them. With this it is the same as with disease-producing beliefs and so-called cures. The present style of curing and immunizing is so much a part of Rockefeller's millions, and other millions, that there is no hope of any considerable reform. The masses move along tied to the yoke of mammon; the poor, sick fools denounce the system that they declare usurps and exploits them; yet in every other way they uphold it with ballot and voice.

The noise system is a cheap-John scheme. It gets up cars as cheaply as possible--which means that they must be noisy. It charges as much as the law will allow. The patrons are shaken and jolted as only a springless and bumperless car or wagon can shake or jolt; and then their finer

senses are shocked, through the auditory nerves, by the noise that almost prevents thinking. All this wears out the patron; it injures him as a citizen; his health is impaired. The health, morality, estheticism, and artistic development of the people of any city may largely be measured by its cleanliness and absence of noise. A public utility that is grossly selfish, and tears the people down to lift itself, is certainly penny-wise and pound-foolish.

When people are nervous, they lack in judgment--they do not make the progress in trades, professions, arts, music, and business that they should. A city made up of noise-crazed people will not make progress in a substantial way. Why? Because noise-crazed people are nervous selfish, disloyal, and unable to see that to gratify themselves to the detriment of the city's best interests is to cut their own economic throats. This is exactly what every street-car company is doing when its economy lowers the moral, health, and sanity standard of its patrons.

Make a city clean and quiet-or as nearly noiseless as possible. Every utility should be run in the interests of its patrons, on the principle that people well served are happy, healthy, and prosperous, and possess drawing power. They attract other people to their city. Such a city grows; its property advances; and, according to the law of "like attracts like," a prosperous community attracts prosperity.

All physicians who know that sickness is brought on, wittingly or unwittingly, from practicing many bad habits, and from unwholesome environments, by wearing out the nervous system with a lot of unnecessary noise, or by any influence that uses up nerve energy, know that rest is one of the most important elements in any therapeutic plan-rest of body and mind. This means that the body must not labor; that the mind must not labor; and that the nerves of special sense-namely, sight, sound, taste, smell, and touch--must rest from labor.

Everything may be done for a broken-down individual except securing quiet--absence from noise; and if this requirement alone is neglected, restoration to health will not take place. Nervous people must secure rest from noise, because nothing is so uncompromisingly destructive to the nervous system as noise.

It is the duty of parents to control children. When several get together, they are inclined to push their funmaking to excess, and from small noises they go to larger and larger, until they become hysterical. If this is permitted day after day, the decidedly nervous temperament will lose more or less power over coordination, and this will lead to chorea, or St. Vitus' dance, or other nervous diseases.

Light, very restricted eating, and quiet in bed, with visits from children interdicted, is the proper treatment. Such patients must be kept in bed until every sign of irritability and muscle-twitching has subsided.

After nervous children recover, a limit must be set to the amount of play indulged in; and excitement of all kinds must be avoided. The diet of such children must be simple: toasted non-yeast bread, butter, and milk for two meals each day; and fruit, cottage cheese, and milk for one meal. Quiet and rest is the principal remedy.

Not many know that music has other qualities besides the power to "soothe the savage breast;" or perhaps I would better say that most people think that only good can come from music. Inharmony disturbs rhythm, and anything that interferes with rhythm strikes at the base of development and interferes with growth--nutrition.

Everything capable of producing an effect may be said to have at least four influences; namely: a good, natural, or wholesome influence; then an excessive, defective, and perverted influence. This is true of music. I know of people who are made very miserable by music--it might be said that they are badly influenced by it. Then there are strong, healthy people who are driven almost mad by poor or defective musical execution, but who thrive in an atmosphere of harmony.

All people are not attuned to the same key; or it may be possible that it is easier to adjust the nervous system to the different tones than to fall into harmony with varying time.

Sensitive children drive themselves into nervous prostration by the inharmony they produce when compelled to spend long hours in practice.

It may be that only inharmony (noise called music) is to blame for the nervousness I have seen in music teachers and their pupils; but I know that many suffer much from music, or the noise of practice, or butchered harmony. Of course, there are other influences which must be considered besides the noise of musical instruments. They are food, mental, and physical bad habits that help noise build nervousness and break nervous people down.

School children are overworked. School, music, and social duties wear some of those who are food-poisoned to nerve exhaustion.

When enervation is pronounced, as we often see in mothers of undisciplined children, such mothers must be taken away from home environments to be cured of their diseases. There is always something unusual--something out of the ordinary--the matter with mothers who cannot get well in the environment of home and children; for the mother-love converts din--what uninterested people would call bedlam--into sweet music. The ear-splitting shouts coming from one of her future great men she interprets as orders by the captain of the guards; another, whose voice dominates all others, is her Beecher or Spurgeon; still another is a captain of industry who will control all the iron industries of the country. So intensely is her mind fixed on the future of her children that their noises are material out of which she builds their future, and the success that she has in placing each one at the head of his specialty medicines every pain she has. Where this is not true, an accident at one of her confinements has caused septic poisoning, which has reduced the oxygen-carrying power of the blood fifty per cent, causing oxygen starvation; and her brain is so illnourished that her self-protecting imagination fails to convert din into sweet music, and she languishes and dies unless removed and carefully nursed back to the normal.

If our noises are grinding a grist that feathers our nests, the success antidotes to a degree their evil influences on the nervous system.

When a din becomes the vehicle in which to ride to success, it becomes for the time being a tonic, even if it builds insanity when reverses come.

Sound may be health-building and it may be mind-destroying; it all depends on our relationship to it. It comes under the old rule: What is one man's food is another man's poison.

Electricity is a mode of motion. It is said to be interchangeable with light, heat, cold, and sound. The power of a waterfall, and mechanical energy generally, may be converted into electricity, and it may be generated by transforming chemical energy also.

Life may be looked upon as a mode of motion; or, if you please, transformed light, heat, or electricity.

Matter and motion appear to be the cause and effect, and the effect and cause, of everything. It is a mistake to look upon matter and motion as two entities. Matter is. In one of its states, when at rest, it is static--in a condition of absence of motion; when active, it is in a dynamic state--in a state of motion. Motion is inconceivable as an entity; it must be the expression of something--and something is mentally conceived as matter. There are no such things as matter and motion, health and disease, strength and weakness, knowledge and ignorance, etc.

There is matter, and it may be in a static or dynamic state; there is health, and it may be in a good or bad state; there is force or strength, and it may be in a strong or weak state.

In the last analysis there is something, and we call that something matter. The various manifestations-the various shocks and reactions that we experience--are caused by the different

states of matter of which we ourselves are a part.

The primary or elementary states of matter we denominate light, heat, cold, sound, life, etc. Why light, life, or any other state of matter presents may be explained in many correct ways, but a kindergarten explanation may be such as I have sometimes used, namely: The elements of matter may be brought together in such a way that the summa summarum (sum-total) expression is that of light. A little change in the arrangements of atomic structure gives out heat, and another change gives out sound; and so the changes may be made, each giving out a sum-total expression, one of which we call life, and still another, more subtile than all the rest, we call mind. And all these states of matter we like to think of as entities'. but they are notthey are different states of matter.

Animal life cannot be suspended longer than a few minutes at a time, with any hope of resuming its manifestation. Hence it is possible that the elements of the body may be so compounded as to develop the different states we call light, heat, cold, sound, electricity; and, in doing so, air, food, and water are converted into life.

It is almost, if not quite, proved that the energy presiding over, or governing form, is electrical energy. Probably all formative energy is electrical, and possibly the question of sex is a question of a given number of electrons in the atoms comprising embryonic cells.

The ultimate atom, or unit of matter, according to present scientific developments, is conceded to be the electron, which is declared to be a literal atom of negative electricity.

We have become so used to thinking of the various states of matter as entities that it becomes almost impossible to express ourselves in any other form. If I lapse into referring to the different states as individual, I crave the reader's pardon and his indulgence in substituting in his mind the word "state" where I possibly may express myself as referring to "entity."

If in what follows I appear to individualize, entitize electricity, I do not mean it. Electricity, the same as every natural force, is a state of matter.

"Like electricities tend to repel one another," and, according to Lord Kelvin, the atom is held together by a core of positive electricity, which is known as an "ion." The problem of atomic architecture is to reconcile the common attraction of the ion for all the electrons with the mutual repulsion of the electrons themselves, so as to produce a stable structure.

By the aid of mathematical theory, checked by actual experience with magnetized needles--to represent electrons--floating freely in water, under the influence of a centrally placed electromagnet, Professor Thompson has been able to unravel the architecture of the atom.

The atoms of the different "elements" vary only in the number and arrangement of their electrons; every electron, wherever observed, being absolutely identical with every other.

Electrons are found to be arranged in concentric rings within the atom, and the presence of a certain number of them in each ring is necessary for holding any given number in place outside of them. The stability of the atom, therefore, depends on the number and arrangement of the electrons it contains.

Such a thing as an absolutely stable atom--a fixed, never-changing atom--is inconceivable.

Professor J. H. Thompson, of Cambridge, explains how atoms of one element, by losing their outer ring of electrons may be transformed into those of another. This also explains or suggests a law of natural selection among atomic species.

Of the many atoms that have attempted to gain a place for themselves during the countless past eons, there are some eighty that have survived.

This theory is consistent with evolution, and it is to be hoped that it will be proved out in all departments of learning.

We have seen, according to the latest accepted theories, that atoms are in reality atomic electric batteries--that each atom is an arrangement of electrons, or negative atoms of electricity with central core, or ion, of positive electricity.

To prevent perplexity, I will say that, from present knowledge, there are no literal atoms except electrons; all other so-called atoms are compound structures, made up of positive and negative electricity.

Electrical energy is hardly ever used as such, and only after it is transformed into other forms of energy; namely, mechanical, heat, chemical, and light.

Electricity as a remedy for the cure of disease is one of the fads of modern therapeutics. Outside of the benefit derived from suggestion, and the harm caused by so-called therapeutists in their endeavor to cure the sick, there is nothing in the remedy as understood and used today. The market is full of electric belts, garters, amulets, rings, hair-restorers, oxonizers, and all sorts of monstrosities in the shape of instruments and appliances, too numerous to mention. Outside of the suggestion of cure, or what the patient believes will take place after their use, they are not worth a fig a carload.

The profession uses the galvanic and faradic currents; also the X-ray, high-frequency, and static electricity. Very little good comes from any of these. A foreign body and broken bones may be diagnosed by the X-ray, and as a means for diagnosis this form of electricity has come to stay. For the generation of mechanical power, electricity is used. Vibratory instruments for giving mechanical massage are beneficial; but electricity is used only as a generator of the power. X-ray and other light-producing agents are used for the effect of the light--for the stimulation and tonic action. The X-ray can and does kill the tissues, and causes sloughing. Cancer has been, and is yet, treated with electric light. Results are unsatisfactory and doubtful. The radium treatment causes sloughing of tissue. All the new fangled remedies are not a whit better than the old-fashioned escharotic drugs that have been used in the manufacture of the well-known cancer plasters; some of which are "trained to eat out only the cancerous tissue. root and all"!

Electricity, as electricity, cannot be utilized by the human organism. How is it possible to use a state of matter? Life, light, heat, cold, sound, electricity, are states of matter. How can these states be used as food or remedy? Perhaps only as electrons, found in atomic and cellular lifein organized form. Is electricity utilizable? Possibly as electrons--units of matter--but not the force with which these units are torn from organized matter. The force is what is called electricity--not the units of matter carried with the force. The debris gathered in a cyclone is not the cyclone; the force or energy set in motion is the cyclone. The idea of imparting electrical energy to the human body lacking in energy is one of many common errors.

An enervated subject cannot be forced to receive energy. This is attempted by many physicians when they undertake to force food on those who are run down and enervated from lack of digestive power. Nature will not stand for forcing measures. There is no place for heroic treatment. Every vital process has safeguards thrown about it by nature, and those guards cannot be ignored or torn down with impunity.

In enervation, organic functioning is impaired. This means that the organism is deficient in power to take from the blood such matters as are necessary for repair or for the performance of its normal functioning. The organism, once reduced to this state, will remain so, unless the necessary rest can be procured. It is not mere building material that is needed; it is not stimulation that is needed; for enervation is the sequel of overstimulation. Rest is the remedy; and, as rest is secured, electrical energy will be supplied by food, air, water, light, and heat. This subtile energy cannot be forced on the organism in the gross manner offered by the bull-in-the-china-shop methods of modern medical therapeutics; an enervated state cannot be cured other

than by physiological rest--fasting--and physical rest; not exercise, work, stimulation, and starvation. Electric therapeutics amounts to but little more than chemical or mechanical irritation. Locally applied, it may do as much good as a mustard plaster-act as a counter-irritant.

Giving iron to those who are anemic or dysemic, and lime to those who need lime, is on the same order. The rule is that very few are dysemic because their food is deficient in the elements needed. The cause of deficiency is lost selective and appropriative power, and the more of the inorganic elements offered the system by way of drugs, as remedies or food, the more the dysemia develops, until the unfortunate victim is forced from functional to organic derangement, and on to premature death. This is not necessarily a rapid development. Such patients are seeking in vain for cures for from ten to twenty-five years. If they start at from twenty-five to thirty, and require twenty-five years to wear out, trying palliatives and false cures, they certainly die early enough. Besides, efficiency has been wasted in physical and mental impairment caused by disease and so-called cures.

If present scientific developments augur well, it will not be long before we shall know positively that electricity, or electrical energy, or more surely the electron, is the alpha and omega of all things; and, from a health standpoint, a knowledge of bow to conserve, utilize, and generate this energy will be the "summum bonum" of a successful therapeutics.

The most we know today of how to supply electric energy is to have the enervated--the impotent-rest. In a state of rest this energy appears capable of accumulating; and we know from daily observation that unrest, activity, and overstimulation cause its dissipation.

The farmer knows that rest restores energy and potency to land that has lost its fertility from use. But he does not know that ground granite or feldspar will restore its productiveness, and that in all probability the fertilizer "par excellence" contained in it is the static electricity that has entered into its formation and is liberated when the rock is made into bread.

I have proved out on electricity as a remedy the same as I proved out on the regular materia medica.

I once used the galvanic current in treating fibroid tumors, and believed that the electricity caused absorption. But I have learned, after years of experience, that the only really effective remedy is the correcting of bad habits which break down resistance, after which, physiological equilibrium is lost, and this allows cell growth to be perverted.

Lost resistance means lack of energy--lack of life force; and, according to the few hints thrown out regarding the electric architecture of the atoms, when enervation is pronounced, there is probably a dissipation of electricity--electrons--and a consequent change in the structure of the atoms that build the cells. As a result, we see tumors and growths of different kinds, and hardening of tissue--arteriosclerosis--stone formation, etc. If this is a true explanation of the cause, the logical remedy would be to furnish the system with electricity; but to turn. the battery and flood the body with a great current of electricity would be about as appropriate or logical as to tie a rock around the neck of a thirsty man and throw him into a river to relieve his need of water.

Nature never supplies wants in such a blustering way. The rock is built by feeding it with an impalpable supply. If this is true of rock-building, what must be the subtleness of tissue growth, and how slight the change required to convert normal tissue into abnormal-healthy flesh into cancerous!

Instead of flooding the surface of the body with a current of electricity--which the use of a battery means--the therapeutist must know how to cause the body to secure its electricity from the air, light, and food.

The average work done by physicians and surgeons in their application of remedies is what

one would expect of a house painter put to work to paint a portrait. There is a lack of delicacy. It is true that there are many skillful and delicate operations performed; there are also skilled matadors and butchers who perform skilled operations. We should not hold the idea that expert skill in operating is sufficient excuse for operating. I say, with no fear of successful contradiction, that the majority of operations performed have no excuse for being done except that they are done skillfully. In treating patients with electricity, they must be placed in a state favorable to receiving the inflow as offered by nature. All that is necessary, usually, is to learn in what way this energy is being dissipated; then stop the waste. Indeed, this is the simple formula for supplying the human body with all its needs.

3. Chemical Agents

Caustics

Caustics are chemical agents which produce disease through their power to destroy tissue.

As followers of my medical philosophy will use no drugs, they will not be interested in drugs, either of high or low degree.

The action of a caustic is that of causing necrosis or gangrene of the flesh that comes in contact with it. After the flesh is killed, the process of sloughing takes place. This process means that under the dead tissue the living is carrying on the work of separating the living tissue from the dead. The dead undergoes suppuration--disintegration--dissolves, and runs away as pus. Enough serum of the blood is carried to the borderland of the injury to neutralize and wash away the poison of putrefaction.

The normal chemical state of the fluids of the body is alkaline, while that of decaying tissues is acid. To prevent the acid--the septic--fluid of decaying tissue from being absorbed or taken into the body, where it would set up septicemia--blood poisoning--the living tissue that is in proximity to the sloughing tissue is infiltrated--saturated--to overflowing with the alkaline serum of the blood. This accounts for the great amount of fluid and pus seen in all suppurating processes. Pus is laudable when alkaline. Pure vaccine--if there is any--is dried laudable pus, and is inert.

If a wound is closed and the discharge has no outlet, the pus becomes ichoroid--septic--poisonous, sets up blood poisoning when forced absorption takes place, and death follows from blood poisoning. Septicemia is the professional term for pus poisoning.

It is said that the skin resists the action of caustics by throwing out a secretion which furnishes chemical elements that join the caustic elements to make an insoluble compound. Nature is busy meeting and destroying the influence of enemies of health and life. In this work help is needed, and the physician should be able to read the language of nature and assist her in her efforts to keep a rational and sane balance. On account of misunderstandings or lack of interpretation of systemic needs, the physician is often enlisted with the body's foes, and is tearing down rather than building up or defending the body.

Caustics are divided into **coagulating** and **liquefying.**

Coagulating caustics are those known as metallic salts, the various acids, etc. Nitrate of silver, nitric acid, nitrate of mercury, zinc chloride, and the actual cautery (white-hot) are a few that may be listed with these chemicals. These are so powerful that they kill the skin at the instant of contact.

Acids may be neutralized at once if plenty of water is handy; for water dissolves the acid and dilutes it into a harmless solution. The leading acids are: nitric, hydrochloric, sulphuric, and chromic.

Nitric acid produces a yellow eschar; sulphuric causes a black eschar.

Liquefying caustics are potash, soda, and ammonia.

The scars following the sloughing caused by caustics are often severe, causing contractions and disfigurements.

Toxin (Poison)

Any poisonous nitrogenous compound produced by animal or vegetable cells.

"Any poisonous substance--protein in nature--produced by animal or vegetable cells."--Gould's Medical Dictionary.

Toxins are those substances which, when taken into the body, or if developed within the body, are capable of so changing the fluids as to cause sickness or death.

There are two orders of toxins resulting from the fermentation of protein and protein compounds. One is physiological and the other pathological. Snake venom is a type of the first, and sepsin---putrefaction--is a type of the other.

Toxins that are developed physiologically, like the venom of the snake, are said to be for the purpose of defense. If we could know all about the subject, it is possible that the poison serves a physiological purpose in his snakeship's physical economy.

Man's interpretation of venom, odors, teeth, beaks, horns, hoofs, and claws has been from the standpoint of an eternal warfare for existence. Those attributes of animal life--physiological functioning--have been studied quite largely from the standpoint of weapons of offense and defense. If studied from an optimistic point of view, all those supposed defensive and offensive organs, and their functions, will be found to be indispensable aids to metabolism--digestion and assimilation--and to be physiological necessities.

When we keep steadily before the mind's eye that what we call bad is the reverse side of good, that unity is the key to universal order, and that the old and childish belief in two warring forces, namely, good and bad--God and Devil--is unworthy of present-day enlightenment, we are equipped mentally for analyzing chemical, physiological, and pathological processes rationally and certainly sanely.

There is no question but that autogenous toxins are first of all physiological necessities, and when forced to play the role of an enemy in physical economy, it is because it serves nature's purpose better. Hence optimism sees only good in all processes.

It may be asked: What of it, if the ending must be the same?

But the ending is not to be the same. A father chastises his son, not because he is an enemy of the boy, but because he is vitally interested in the son's welfare.

If God is good, then His chastening rod is not to defeat His purpose--to oppose cosmic necessity.

Pain is for good, for education, for development. No good can come from assuaging pain without removing cause; and certainly no good can come from negating--denying its existence, It is true that the opiate stops pain, but the patient dies afterward because the cause of the pain was not removed. It is true that removing the fibroid tumor cures (?) the patient of the tumor, but it does not remove the cause, and in from one to ten years afterward the patient dies of a pneumonia, kidney disease, or cancer. That the doctor is too limited in his reasoning to trace the connection between the cured (?) disease--the removed tumor--and the disease that proves fatal years afterward, does not militate at all against the truth that the two are one, neither does it change the working out of the unchangeable law of cause and effect.

To negate--to deny that there is pain--may banish nature's warning voice, but it does not alter the law of cause and effect; and if cause is not removed, the effect will certainly obey the laws of its nature; for law is God, and God is unchanging--not even the prayer of all mankind centered on one purpose will change one iota or tittle of law.

Pain and discomfort are reactions from undesirable influences. Remove the cause of the irritation, and the irritation and the discomfort of it disappear.

With an understanding of the inflexibleness of the laws of nature, in little as in great things, we should proceed with the subject of toxins with a mind cleared of some of the befogging beliefs of superstition and modern false reasoning.

The toxins that form within the organism are called endogenous poisons. They are called auto-intoxicants, and they set up autotoxemia when not eliminated properly.

These poisons alter the chemistry of the fluid medium--blood and other fluids--in which anatomical elements--tissues of the body--live and are nourished. It may be well to carry the idea that all the tissues of the body live in a sea of blood, as fish live in water, from which they gather nourishment.

At this point it may be well to say that health depends entirely upon the proper chemistry of the fluids of the body; and the chemistry depends upon the elements in the food, the mind, and the toxins developed or taken in. How is it possible otherwise for the various tissues of the body to select the elements needed for their upkeep? This being true, the importance of the part played by food in health and disease should be obvious to all giving any thought to the subject.

Toxins are divided into two groups; namely, **exogenous,** those formed in the alimentary canal from fermentation and decomposition following imperfect or faulty digestion. These toxins are attributed to germ secretions, but in all probability the ferment furnished by the germ is no more toxic than the ferments (ptyalin, pepsin, et al.) furnished by the digestive organs of the body.

The action of the germs is to set up fermentation (for the ever-present germ is a ferment) in all the foods taken into the alimentary canal beyond the digestive limit of the body's physiological ferments.

As a result of germ fermentation, toxins are formed, and their nature is in keeping with the chemic medium. If the fermentation is of vegetables or fruit, the toxins are **irritating,** stimulating, and enervating, but not so dangerous or destructive to organic life as **putrefaction,** which is a fermentation set up in nitrogenous matter--protein-bearing foods, but particularly the animal foods.

Endogenous toxins are autogenerated. They are the waste products of metabolism.

Metabolism means the power possessed by organized bodies of continually using up and renewing the tissues composing the body. In the process of building there must, of necessity, be a waste. This waste must be carried out of the body by the emunctory organs; but if, because of enervation, excretion does not take place, this waste product (toxin) is left in the body to poison it.

Exogenous toxins are those taken in with food and those formed outside of the body, and **endogenous,** those generated within the body.

When the body is enervated from any cause, or from many causes, excretion is always more or less inhibited, and as a result of accumulating the natural excretions (toxins) the fluids of the body are poisoned. The first symptom is a toxic stimulation--intoxication state; then comes a general soreness of the flesh, which is described as an aching from head to foot. A pronounced state causes one to feel very old, and unless relief comes in a few days, life loses all interest to the sufferer. An interested, hustling person will be transformed into a discouraged pessimist in a

few days.

Alimentary Poison.--Potash salts are necessary to the well-being of the body. It is said that dogs fed on meat freed from potash died in ten days--sooner than by starvation--showing that potash is necessary to prevent putrefaction.

Scurvy (acidosis), or ship disease, is due to a deficient supply of potash, furnished by fruit and vegetables, which, when oxidized in the process of digestion, renders the fluids of the body potentially alkaline.

To eat fresh or cured meat, eggs, fish, oatmeal, cookies, bread, rice, cake, puddings, coffee, tea, chocolate, etc., is to generate a slow acid poisoning.

Fruit and raw vegetables--salads--will correct any type of disease caused by acid poisoning.

Meat, potatoes, tomatoes, lettuce, cabbage, coffee, or tea, without fruit, will cause potash poisoning.

Albumin is a rank poison when injected into the blood; but when converted into peptones by the digestive secretions, it becomes one of the most important foods.

Where albumins (nitrogenous foods) are taken in excess, fermentation (putrefaction) takes place, and the absorption of this toxin causes enervation, high blood pressure, **arterial diseases,** heart diseases, catarrhal inflammations, and other ailments.

Beverages

Water, alcohol, coffee, tea, chocolate, and cocoa are common sources of toxin poisoning.

Water quite often contains minerals and organic matter in a state of putrefaction. Water with these elements in it is not so toxic as many professional men believe.

The elements--earth, air, water, and fire--are self-purifying; hence putrefaction taking place in water of sufficient protein toxic potency to render it dangerous to drink will be so offensive to the nerves of special sense that the one about to imbibe will turn away from it in disgust. Too much mineral in drinking water is not desirable, because it is left in the system to harden the tissues and prematurely age those who drink it.

Alcohol is toxic and inclined to bring on rheumatism of joints, gout, gastric and liver diseases, and in time neuritis and other nervous diseases. Why? Because all stimulants continued for any length of time bring on enervation. When the system is enervated, elimination is imperfect; then the toxins resulting from metabolism are retained in the system to poison. The deposits of these waste products in the muscles or the tissues of the body create such diseases as rheumatism.

The danger from fatal poisoning--from taking fatal doses of alcohol--is not so great as that resulting from the slow toxic poisoning--chronic poisoning--or alcoholism.

There is very little drunkenness today, compared with fifty to a hundred years ago, notwithstanding the fact that there is more alcohol consumed per capita. The reason for this is that alcohol is taken in the form of beer and wine, which are not so toxic as brandy and rum.

The continuous stimulation from the daily use of alcoholics causes enervation and imperfect elimination.

The use of alcoholics whips the appetite into taking an excess of animal proteid; and this is the reason why many users of alcohol have rheumatism and gout.

Absinthe contains nine different essences. All are toxic. There is very little of this poison

consumed now in this country. New Orleans has an absinthe house which ranks in age with her most ancient relics.

Coffee is a slow, insidious poison that encourages retention of excretions by its slow but sure enervation.

Coffee fools many into believing that it is an eliminant, because while they use it they have an action of their bowels daily. This is a false belief; for all the time coffee is used as a daily beverage there is a gradual enervation, with retention of the toxins or excretory products--waste from body--building. Coffee outranks alcohol in building endocarditis and sclerosis of blood vessels.

Ordinary reasoning should help anyone to understand that a drug that stimulates as coffee does, must in time cause much trouble by way of enervation, faulty elimination, and autotoxemia.

Tea stimulates, and in time enervates; following which comes retention of toxins in the system. Tea has a special toxic and sedative influence on the nervous system, and when used for a long time it causes neuralgia of an intractable nature.

Coffee and tea cause deposits in the grooves and openings in the bones through which nerves pass, causing in time neuritis or neuralgia that will not down until the habit of taking these table beverages is given up. These are the cases that surgeons undertake to cure by nerve-cutting or nerve-stretching.

Chocolate builds catarrh, and should not be used as a daily table beverage.

Cocoa is a stimulant and, like all stimulants, develops a habit. It brings on enervation and the usual consequences.

Lead.--Nearly all beverages--even water--contain lead. Water pipes, cisterns, reservoirs, etc., are built in such a way as to impart more or less lead to the water. All soft drinks charged with carbonic acid carry lead. Seltzer water and the lighter alcoholic beverages all carry more or less lead. Flour and bread often contain lead. Pewter, which is used to solder, contains lead. The pewter foil around chocolate, and the grinding machines used by butchers, impart more or less lead to the materials with which they come in contact. The diseases developed from lead toxin are what are known as lead colic, arteriosclerosis, kidney and other diseases.

Copper finds its way into the body in bread and wine. When copper vessels are used in preparing food and drink, copper can be found in wine, cider, and beer. It is said that condiments prepared with vinegar and pickles always contain copper.

In the quantities taken into the system from the sources named, copper is not thought to be greatly detrimental.

Arsenic is far more injurious than copper. It is to be found in wines. It is used as a preservative--to prevent fermentation in food. Since the pure food laws have been put into effect, this drug is not so extensively used in preserving food.

Salicylic acid is one of the most extensive poisons used as a preservative. Its use today is not so extensive as a few years ago.

Non-edible vegetables, such as **toadstools, sprouting potatoes,** and others, furnish an amount of poisoning every year,

Poisoning by animals occurs mainly in hot countries. In our country there are **snake-bite, bee-sting,** and poisoning by the eggs of various fishes.

Fish eggs provoke symptoms of cholera--vomiting and diarrhea--accompanied by skin irritation--erythema and urticaria.

Fish are said to be made toxic by living in water containing putrefactive matter.

Oysters are said to be poisonous when living close to the outlets of sewers.

The wholesomeness of healthy fish is questioned. Those who use much fish food are liable to develop skin and liver diseases. Probably, however, one is no more liable to develop disease from fish than from other food eaten beyond the power of the organism to utilize well.

All foods become toxic when indulged in beyond the real needs of the body.

The meat from **overworked animals,** those run down and killed, those that are slaughtered after **fatty degeneration** has well set in, is poisonous.

Stall-fed animals, that would die from disease in a short time if not butchered, are disease producing.

Blasted grains--wheat, rye, and corn--are poisonous to animals as well as to man. Pellagra comes from starch poisoning--so we are informed by those who have had experience in treating the disease.

Poisons in the Air.--People living close to smelters, slaughter houses, soap and glue factories, the outlets of sewers, etc., are injured more or less by poison gases.

Tobacco is a stimulant and sedative. Its stimulant effect is that of irritation. It is a rank heart irritant. During the first ten to twenty years of its use the heart is made to work overtime--often from twenty-five to forty per cent. Through years of use there becomes established more or less toleration. So great does this toleration appear to be that the use of the drug is looked upon by many as of no serious consequence.

The influence of the poison is to lower the individual's self-respect and dull his moral responsibility. It builds selfishness and prevents the evolution of higher efficiency.

At the beginning the effect of tobacco is that of a poison. it causes nausea, vomiting, and great depression of the nervous system. This being true, can anyone so far forget these facts as to say that tobacco is not a rank poison?

The reason why the system appears gradually to develop a toleration is because the irritating effects fail in time to cause the system to react against it as powerfully as at first; but this is no proof that it has lost its influence and is no longer an irritant--a poison. Indeed, the body continues to react, but it is in the form of fortifying against the influence of the poison. The heart and blood vessels are enlarged--these organs are thickened, hardened, and rendered less capable of performing their most delicate functions--namely, renewal of cell life and elimination. As a result, the walls of these organs become thick, hard, and lose their resiliency. This state, when established, is called hardening of arteries--arteriosclerosis, sclerosis, cancer, etc.

The chronic effects of tobacco on other organs of the body are that it causes enervation, and in many people emaciation.

"Tobacco heart" is recognized by the least observant when far advanced. The effect of tobacco on the eye is well known.

Many nervous "breakdowns" come from tobacco rather than from too much work.

Epilepsy, bronchitis, neuralgia, **rheumatism**, and many nervous disorders are brought on, directly or indirectly, by tobacco.

Nicotine is the active principle of tobacco. It is more deadly than arsenic, strychnin, or morphine. The odor will kill a bird.

Women and children are frequently invalided because husbands and fathers practice the filthy habit of smoking in the home.

When smoking is practiced in it daily, a home soon becomes saturated with smoke; after which it becomes a menace to the health of wife and children.

No man would willingly double his expense for tobacco if he knew this. Some might not worry about how uncomfortable wives are made by ill-smelling homes, but if they realized that a hundred dollars expended each year for sickness legitimately belonged to their tobacco bill, they probably would stop ruining their homes.

The use of one stimulant and narcotic calls for another. The smoker usually uses coffee, tea, or alcohol.

Diseased plants may produce digestive disturbances.

Plants infested with disease-producing germs are believed to be a source of much disease. Lettuce has been denounced by experts as a vegetable unfit to eat, because it is a germ-carrier. Personally I have not found this true of any vegetable, and, what is more, I know it is not true. Even if the vegetables that are eaten raw should carry germs, the germs stand no show against normal digestion. This I have been proving for years by prescribing the Tilden salad to every patient as a food to eat with every dinner.

Poison gases are generated in the bowels. The gas coming from putrescence should be washed out of the bowels by enemas, and eating should be suspended until lost digestive tone is restored.

Illuminating gas is very toxic. It contains carbonic oxide.

In cities where gas is manufactured there is more or less loss--waste--and the soil becomes saturated. The atmosphere of Paris is said to contain 1 part per 10,000 parts of carbonic oxide. Much more is believed to exist in houses into which, because of high temperature, the gas is drawn. This is added to by paintings and tapestry.

There is some little excuse for being poisoned by many of the items above pointed out; but what excuse can be given for the wholesale poisoning brought about by the use of tobacco?

Man deliberately poisons himself, but the layman can hardly be held responsible for doing so when we take into consideration that his medical adviser is offensively saturated by the weed.

So long as the world knows so little as to believe that a man who deliberately poisons his own body with tobacco is a safe medical adviser, and is justly a celebrated physician, just so long will rational healing be refused. Man will never come into a satisfying knowledge of anything until he wants to, and then he must put himself "en rapport" with the psychology that will bring it.

We cannot serve two masters. We must choose between the false and the true. And this decision is "up to" us every day and every hour in the day.

Tobacco is a poison that soon establishes a reign over the will of man. The mind is weakened in many respects. Memory for proper names is lost. Dyspepsia and heart disease ended the career of Mark Twain. His discomfort and heart disease were built by tobacco and coffee.

4. Animate Agents

History of Infection

Infection is divided into three stages, according to bacteriology; namely, animate agent, a fermentation, and intoxication. I would divide the history of toxemia--infection--into **Enervation and Autotoxemia.**

Enervation is brought on from one or many causes which use up nerve energy, both of a mental and of a physical character. Then, when enervation is established, functional efficiency is lost, and with this follows a "slump" in the production of physiological ferments, after which the omnipresent pathologic ferment--infectious agent--becomes "master of the show;" and if the good ship of health does not at once discard its jetsam and refuse to take on any flotsam, pathologic fermentation and decomposition will follow.

So long as the body is normal, and secreting a normal amount of physiological ferments, pathological ferments are made to dance attendance upon the body in the capacity of menial servants; and they will serve long and well in that capacity, if the master is sober and sane. But when licentiousness and sensuality force physical insolvency, then servants become masters; and whether this reversed order is ever righted depends entirely upon the amount of organic integrity left, and the skill used in suppressing the insurgents--bacteria--and reestablishing the home guard-enzymes.

This being a true statement of how disease is established, time and attention should be given to methods of keeping up the health standard, rather than spending all the time and attention in the study of bacteriology, when germs are at most only auxiliary agents in the development of health and disease.

Pasteur, after his researches in fermentation, took up the subject of disease. He assumed that disease was caused by fermentation; hence he searched for germs. The rank and file of the medical, as well as the non-drugging, profession filed in after their medical bellwether without question. The reason for so much unquestioning acceptance of the dicta of this great French germophobiac was that the profession was in chaos regarding cause, and it was ready to accept a savior of any kind without question. Today the germ theory fits well only those who take it without thought. Its popularity comes from numbers, not reason.

It will be well to keep in mind that Pasteur, Koch, and Metchnikoff were not practicing physicians; they were laboratory experts who--a priori--assumed that germs cause disease, and undertook to discover the specific germs that cause each specific disease, by experimenting on guinea pigs, chickens, and other animals; and, by making research in human and other excreta, they endeavored to discover the habits and customs of the flora and fauna of the intestinal canal.

In their explorations, experimentations, and deliberations, they found themselves sometimes on one side and sometimes on the other side of the question of whether or not germs were friendly to their host.

The material in the digestive tract, in bacterial form, is said to number one hundred and twenty-six billions for the daily human excreta. This certainly indicates that man has a powerful resistance, or none would reach the age of from sixty to a hundred years. By some observers it is said that guinea pigs have been successfully reared without germs, and that the polar bear and other animals of the arctic region have no bacteria; that even in the temperate regions there are animals whose alimentary tracts contain comparatively few bacteria. The parrot is one. Other observers have arrived at quite different conclusions.

Experiments have shown that, when chickens are fed on sterile food, they fail to develop, or are retarded in growth, and that they show normal growth only when fed food containing bacteria. It is said that Madame Metchnikoff arrived at the same conclusions in her experiments with tadpoles.

Pasteur's research work on the diseases of the silkworm was followed by a study of diseases of mammalia. He created the fundamental methods of bacteriology. It was in this field that Koch

achieved fame and was rewarded by his government, being awarded a title, a hundred thousand dollars, and a pension.

Koch discovered a cure for tuberculosis. In this field of discovery he has had many successful understudies, or imitators, of whom--neither last nor least--was Friedmann with his turtle serum.

That tuberculosis still thrives, except as it has been handicapped by the growing intelligence of the people and an improved sanitary science, is easy of observation to all but prejudiced eyes; yet, notwithstanding, this truth does not militate against the Koch, or bacteriological, theory of cause and cure. Once a fallacy is in the saddle, it rides, for a time, rough-shod over truth.

To utter a word of doubt or protest, that the theories of Pasteur, Koch, Metchnikoff, et al., are not the whole truth, consigns one, so stupidly ignorant, to total professional darkness--oblivion.

It should not be forgotten, in passing, that Koch abdicated his theory regarding bovine tuberculosis, but the profession out-Koched Koch and repudiated Koch's repudiation.

Reader, do not pass judgment on my protesting until you know all I have to say--until all the testimony is in! It is just barely possible that some of it may be evidence, and such haste on your part might not prove wise; for time--the court of last resort--may reverse your decision.

One of these laboratory experts has practiced medicine, thereby familiarizing himself with the peculiarities, habits, and customs, of both a mental and a physical character, of sick people. Theoretically they perhaps knew all about man, his mind and body; but to know--positively know--all knowledge must be lived. A doctor may have a lot of textbook and laboratory knowledge; but, unless he spends years in applying it, it is not his knowledge, and he only thinks he knows.

According to the laboratory expert's opinion, man is an automaton--a fixed entity--that has no power within himself to stay well or make himself sick. It is true that there is a perfunctory recognition that the body has within itself anti-bodies--a given amount of self-protection or immunization; but that activities, both mental and physical, have more than anything else to do with determining whether man shall be sick or well, is not recognized as the great field of causation; and, as to man's having within himself power to live in health--as to his having autoinimunizing power--being a living, breathing, activating knowledge--this is left out of the mental equation of all these eminent bacteriologists; hence the inexplicable failures that have accompanied every well-worked-out plan of cure on a bacteriological basis that has been advanced by them.

Perhaps I should not be personal; but, inasmuch as what I am about to say is of vital importance, I am justified in declaring that each one of the eminent gentlemen named above was a semi-invalid--and that, too, with his knowledge of germs. If germ infection was the cause of their ill-health, they certainly should have kept their bodies free enough from unfriendly organisms to have enjoyed health. A theory of cause and cure that will not give a reasonable amount of health to its possessor is not of great importance.

The conclusions arrived at by the bacteriological experts have been reached by approaching the subject of disease with the fixed hypothesis that there is but one cause of disease; namely, animate agents--that of germs; and then taking for granted that the cause--germs--is irresistible, unless headed off by immunizing the body by inoculating it with the virus of disease--germs. Then the logically obvious must follow; namely, if disease is headed off by immunization, health must be inevitable.

The absurdity of this one-sided search after the cause of disease should be apparent to any intelligent observing mind.

At this point a little reasoning should not be despised: There are a few people who enjoy

health and long life. Is it because they are not exposed to the omnipresent germ? They have not been made immune by virus or serum inoculation. This cannot be the reason. Then it must be because they have within themselves power to resist the influence of germs.

There are people who are well a part of the time, and a part of the time they are sick. Is it because they are exposed to germs a part of the time, and a part of the time they are not? This is not true. Then what causes the immunization a part of the time? They have no artificial immunization. If germs cause them to be sick a part of the time, why not all the time? Do germs cause disease a part of the time, and then a part of the time not? If so, are there subjects whom they never influence, and others whom they never immunize?

There are people who are, like Pasteur and Metchnikoff during their lifetime, in poor health all the time. Is it because they are infected and infested with germs more than other people? Surely this could not have been true of the laboratory experts! Who, knowing the cause of disease, would willingly suffer when a cure was at their hand?

If all that they taught about germs causing disease were true, surely a willingness to live as semi-invalids would be most inexplicable in the two great bacteriological experts.

In our own country, C. A. Herter, M.D.--once a very popular professor in Columbia University, and author of a book on bacterial infections of the digestive tract--died quite young. His perfected knowledge of germ influence in disease availed him nothing when he was called upon to save himself.

Of course, I do not believe that death can be done away with, but we should be able to have health for the most part while we do live, and certainly avoid premature death and waste of life.

Why do germs, in chronic invalids, fail to work out an immunization? Why is it that this class of invalids can be put in very good health when trained into health-producing habits--and this, too, when no attention whatever is paid to the germs that are supposed to produce the disease?

To illustrate my meaning: A few years ago a gentleman living in Tampico, Mexico, wrote me, saying that he understood I did not believe in drugs, and he wished to know if I would undertake his case. He had been suffering from malaria for five years, and every drug having a reputation as a cure for the disease had been tried and found wanting.

I gave him correspondence advice for one month. At the end of the month he said: "You have made good, and that, too, with a skeptical, doubting patient."

Two and a half years afterwards I heard from him, and he was still enjoying health, having had no return of the malaria.

The treatment I gave him was simply correcting all errors of eating and care of the body.

What caused the malarial fever in this case? The malaria germ? Or was it wrong life? Certainly both; but the question is: Which was the real cause? The malarial influence failed in five years to create an immunization; all "specific" drugs had failed. Treatment that allowed nature to return to the normal ended the malarial influence. If germs create immunization, why do we have chronic diseases? What causes chronic disease?

I have many cases of syphilis consulting me every year. According to medical authority, this disease is most positively "specific" in character, and should, according to the germ theory of disease, require a "specific" treatment; but in all cases I never resort to a more specific remedy than that related above in connection with malaria. Correct the habits, and feed properly--and all diseases will get well.

After years of experience in treating disease, I have found that health is the greatest and most reliable foe of disease.

The questions to decide are: Do germs per se cause disease? If germs cause disease, do they cause all diseases, or only a part of diseases? Which diseases are caused by germs, and which are not caused by germs? If there are people who are, and all their lives have been, in good health, without extrinsic or artificial immunization, what is the cause? If the cause is good health, then can the secret of good health be known; and if it can, may the secret be imparted to others who are not so fortunate? If good health immunized the organism to every normal disease-producing influence in man's environments, why cannot his normal immunization be increased to meet extraordinary disease-producing agents and influences? This can be done, and is being done at our "School for Teaching Health," to the satisfaction of many people from many parts of the world.

There are two groups of animate agents which are said to cause disease in man; namely, infectious and parasitic.

It has been thought that natural history could be taken as a basis for the study of animate agents as a cause of disease; and if infection is really produced by an infectious germ, then natural history must embrace all causes of disease. In other words, if infectious-microscopic germs and parasites are the cause of infection, then there is no excuse for dividing animate agents into parasites and infections; they can all come under the head of animate agents. Perhaps it would be well to divide parasites into exogenous and endogenous--those that are confined to the outside of the body and those that are on the inside--in the blood. A parasite that is on the body or in the bowels is still on the outside of the body.

If there are infectious animate agents, they should be divided into specific and non-specific; for, before we get through with the subject, we should see that there are germs which cause (using the word "cause" in a bacteriological sense) different diseases; and, on the other hand, different germs which cause the same disease; this, too, in diseases supposed to be clinically well defined.

As to specific germs, perhaps the gonococcus is one of the most pronounced types; yet it, too, fails to infect in those of pronounced resistance. This being true, what must constitute resistance?

As nerve energy appears to give power--as steam ,gives force to the engine, and as electrical energy gives power to move powerful machinery--so it is apparently necessary that nerve energy must be the force that enables man to resist environmental influences. But we see the physically strong giving way before influences that fail to prostrate others decidedly less strong. The question as to why this is, will not down.

The matter of feeding to keep up strength, so as to enable a patient to resist or throw off disease, is a professional fallacy that has cost, and is costing, more lives than perhaps all other fallacies combined, It is easily demonstrable that, without giving food and drugs, it is impossible to develop a "clinically well-defined" disease. Indeed, this epoch-making truth holds good in venereal diseases as in all others.

Any physician who, is not helplessly and hopelessly swallowed up by the whale of medical fallacy can in a very short time demonstrate, and prove to himself, the truth of all I say.

My theories and practice are not only simple, but they are logical; they are not only logical, but true. And the reason they are true is because they work. If they do not work, it is from a lack of knowledge in applying them. It is never necessary to fall back on that blanket excuse that has covered so much professional ignorance in the past; namely, "idiosyncrasy."

Malaria (malarial fever) is caused by a sporozoid; yet the disease may easily be cured by simply correcting the life of the patient--correcting the eating habits and care of the body generally. Then, when the disease is gone, if the patient continues to live right, he may stay in the malarial country, free from another attack. This being true, what really causes malarial fever?

Are those who continue to live in such countries, without becoming malarial, immune to the poison because of an idiosyncrasy; or are they carriers of the disease, having become immune to its influence? Can one person become immune and another not? The dilemma appears to be fully settled when it is understood that health--full health--is the only reliable opposition to disease; that everything which improves health builds immunity to all disease-building influences; that every influence injurious to health is an ally to disease,

While medical opinion is largely favorable to the idea that germs are disease-building, I should say that even those germs denominated infectious are not autonomous--individual--specific and self-acting, but by nature are convertible allies. When conditions are favorable to health, they add to the body's power of resistance; but when disease-producing influences--influences that lower the body's self-protecting energies--are in the ascendency, then they become allies to health's foes.

It appears reasonable that as germs are omnipresent, they, like the excretory products of the body, are allies for health, when limited to a health-standard percentage; but when that percentage is exceeded, these quondam friends become allies of disease-producing influences.

The treatment of disease, since germs have been recognized as the cause, parallels the treatment given when the profession was pruning itself on being conservative, yet wisely selective from the maze of theories advanced in the past hundred or more years. Perhaps it will be well to name a few theories that have been chaotically mixed in the medical mind previous to the germ theory:

Empiricism (experimental treatment), which is denounced as quacking, has always been handy for all grades of physicians to fall back on.

Organicism--organic disease.

Humoral pathology--all diseases come from derangement of the fluids of the body.

Symptomatology (treating symptoms)--a form of empiricism.

Phlebotomy (blood-letting)--one of the most popular theories previous to the germ theory.

Depleting system--blood-letting, calomel, and opium practice.

The various theories of inflammation.

Organotherapy--organ treatment; the treatment of diseases by the administration of animal organs, or extracts prepared from them. This treatment has existed from ancient times, the method as now practiced being of recent origin.

Hundreds of other theories might be cited, but what is the use? The popular treatment of disease, it matters not what has been the theory of cause, has always been the same; namely, ignoring the power of the body and mind to get well and stay well, when given a chance.

For the main part of all treatment, the medical man has believed it to be his duty to knock down and drag out. Indeed, he has appeared to believe that the more vandalism he practiced on the human body, the better for the victims of disease.

Just before my debut in the profession--in my father's day--the most popular remedy was blood-letting. When my day dawned, it was the physician's duty, according to the then dominant school, to purge, sweat, micturate, and salivate heroically.

Every treatment was heroically carried out. All the natural tendencies of the body to react and throw off disease were ignored, and a physician who would fold his arms and give nature a chance was a fiend, quack, a being to get rid of for the good of the people.

Even today the majority of physicians at the bedside will say of my suggestions--my heroic methods of let-alone treatment: "Such trifling, ineffectual methods may do in a case where there is nothing the matter, but in such cases as this (typhoid fever, pneumonia, appendicitis, or whatever the disease may be) it would be criminal to stand by and do nothing. What are physicians for? If their function is to do nothing, it is time to close medical schools." Indeed, I agree that, if the physician's function must be that of a disease-builder, and the function of the surgeon, two-thirds of the time, that of a vandal, it is time to close all medical schools.

Old methods are extensively carried out all over the world. Germs, serums, and vaccines are the slogans of medical men today; but many drugs are in constant use: quinine for malaria; mercury, iodine of potash, and "606"--the old salvarsan--and neo-salvarsan, and many times neo(new) salvarsan, the great twentieth-century remedy for syphilis which out-specifics all other specifics in "curing" syphilis; then opium and morphine are still working over-time for pain; and when the opiates are not used, the coaltar heart-paralyzers are used-to the death in many cases.

There is a great deal of perfunctory talk, on the part of medical men, about not believing in drugs, and of much believing in diet. But it is a trick of the trade; it is that old, professional, stock-in-trade buncombe that is often used to cover ignorance. If they could not prescribe drugs, and were required to make an effective diet prescription, they would be out of a job.

There is a lot of buncombe by way of professional talk in favor of diet and against drugs; but this is to meet the demand for physicians who understand diet--a demand that is fast running ahead of the supply. That is, the average doctor is compelled to prescribe a diet; and his prescription would be a joke, if it were not so stupid. There is a time and place for everything; but the burlesque acted by many physicians today, in pretending that they know how to diet the sick, is certainly too asinine even to create a smile.

That bacteriology is not satisfying the profession, there are evidences galore. And so long as common sense regarding the cause and cure of disease is to be ignored, all theories of cause and cure must be founded on shifting sand.

There are millions of money , and all the bluff that can be mustered by influence, behind the germ theory; consequently its death-struggles will be long and agonizing. But it must go. Of course, its fossilization stage will be long, and interesting to curio fiends and ancient respectability.

In what follows on the subject of germs, I shall endeavor to do justice to the germ theory. If I too frequently say that germs cause this, that, or the other disease, please understand that I am writing from the standpoint of an advocate.

What is the difference between parasitic and infectious agents, according to the accepted theory?

The parasite is supposed to be much easier on its host. It draws only what it needs for subsistence, and remains on the outside of the body; while the infectious agent invades the sanctity of the blood and fluids of the body, and spreads devastation and anarchy everywhere. It develops rapidly, and destroys organic functioning by exciting intense reactions.

When the parasite causes death, it is more accidental than otherwise. The intestinal worm causes death by finding its way into the lungs. The hydatid disease of the liver (a parasite belonging to the dog) is fatal. The parasites, when they kill, do so by causing tumors, which cause pressure or obstruction.

Both parasites and infection produce toxic substances; it is a question of more or less. The poison is that of intoxication. In parasites, intoxication is reduced to the smallest amount.

The definition of infectious disease is: Disease developed from toxins produced by parasites. The word "parasite" in this case is made to cover all animate agents.

Infection, defined, is a history of intoxication.

There are intoxicants which are not infectious agents. Alcohol, coffee, tea, tobacco, various drugs, and all legitimate foods, are stimulants; and stimulation is the first stage of intoxication. Thoughts stimulate the mind and body, and thoughts may be pushed to intoxication. To aid intoxicating habits to overcome resistance, we have all the domestic and social requirements--habits in daily life, in business and social life--the carrying-out of which uses up more nerve energy.

Intoxication means prostration. The body in a state of drunkenness--in a state of intoxication--is at first exalted until reaction comes; then it is prostrated--enervated. Understand, once for all, that there are many varieties and stages of drunkenness besides alcohol inebriety. The commonest drunkenness is food drunkenness--and it is not often recognized.

A body that is enervated is crippled in its functioning. Elimination is impaired, and this favors auto-intoxication; for the excretions are toxic, and when not carried out as fast as generated, they become a poison to the system.

Besides the intoxicants (stimulants) named, there is no question but that, when enervation is established, the process of digestion is imperfect; then pathologic fermentations take place; and this process generates toxins, which, when added to the daily or habitual supply, add to the enervating influence to such an extent that systemic protection--resistance--is lost. Then it is that bacterial invasion, with bacterial toxins, overwhelms the body, and the victim dies from an infectious type of disease.

Everything points to the fact that so long as the human body is normal, and not overtaxed by care and bad habits, parasites are either suppressed entirely or held down to inoffensive guests of the body. But when enervation is established, the body loses its immunizing power; then, and not before, do germs become the allies of bad habits in destroying health.

Pasteur demonstrated that germs were in the atmosphere, and that, falling into certain liquids, if they there found conditions favorable for their development, they caused fermentation. The great point that should never escape the mind's eye is: If germs find conditions favorable, they set up fermentation.

What are unfavorable conditions? Health! A normal type of health is capable of resisting even an abnormal type of fermentation, when health is not handicapped in some way. For example: In flesh wounds, if drainage is perfect, health defies septicemia. If uterine drainage is perfect, puerperal fever--septicemic fever--is defied. Large quantities of germs--putrescence--may be swallowed, and a normal digestion will defy them.

When putrescence is injected subcutaneously, beyond the immunizing power of the blood, the health is overcome, and the disease and death are enthroned.

When an injection of antitoxin, or even water, is made into the spine, it may kill from shock in a child that is enervated, and its system taxed at the time with an oversupply of food. The body is off guard, or preoccupied, so to speak, when taxed with a large meal, when mentally occupied, or when fear has possession. Under such conditions, a shock that ordinarily would be easily rallied from may prove fatal.

An irritable state and lack of poise are antidotal to resistance, and such subjects become easy victims of infection.

Any influence that consumes energy may become an ally of germs, if pushed to nerve exhaustion.

The human body becomes a victim of germs after resistance is broken down from any cause.

A Reasonable Explanation of Germ Action

Animate agents which have to do with the life and health of man may be divided into **Parasites** and **Microbes,** or **Bacteria.**

Parasites, in biology, are organisms that inhabit another organism and obtain nourishment from it. Microbes, or bacteria, are micro-organisms which should be thought of as yeast fungi, and as the inciters of fermentation, which are as necessary to man as his own unorganized ferments--his digestive secretions. These fungi, or germs, may be divided into as many genera and species as the microscope and the imagination of the bacteriologist may suggest. That the explorers of the microscopic world have some excuse for the infinite number of varieties already discovered, there is no question; for these infinitely small beings have the habit of taking on an individuality, or personality, in keeping with the chemic changes of the medium with which they are correlated. Instead of the bacteria setting up changes peculiar to themselves, they excite fermentation; and the resultant is the sum of the elements involved. These microbes become putrefactive germs when they carry their ferment to nitrogenous--protein--matter. The germ subject is wonderfully simplified when we know that the metamorphosis is in keeping with the chemistry, or the chemic changes taking place in the medium.

Ferments are divided into two classes--namely, unorganized, or enzymes, and organized, or bacteria, or microbes. The unorganized are produced by animal and vegetable life. Enzyme is a product of all living cells; without it there could be no tissue formation. Pepsin is a type of animal ferment, and the so-called vitamin is one of the refined products of metabolism.

When man's body is normal, the digestive secretions--the unorganized ferments--are quite sufficient protection against the metamorphosis of microbes into toxic germs in numbers great enough to do the body harm from the fermentation and decomposition which they may set up in the food intake.

When man's digestive and assimilative powers are reduced, and he fails to digest the food intake, the ever-present germs establish a pathological fermentation which hastens the disorganization and exit from the body of the superfluous food.

The monistic doctrine--the theory of the unity of all things--appears most rational, and should be satisfying to the most philosophic mind. When used medically, it clears the mind on the subject of cause and effect, wiping out many fallacies and superstitions

The negative and the positive, the good and the bad, health and disease, life and death, are two different states of one and the same thing. Of course, this is a theory that the child-mind cannot be expected to grasp instantly; for it requires a very great experience, and much reflection; it requires a priori--beforehand--knowledge, and a posteriori--from experience--knowledge.

In applying the monistic philosophy to digestion, a posteriori--according to experience--we know that digestion is carried on by ferments which are secreted by the body. In keeping with the great truth of the unity of all things, and the dual attributes of all things, a priori we reason that, if digestion is carried on by a ferment--a physiological ferment--indigestion must be the negative side of this phenomenon--it must be a pathological ferment. We must have indigestion if we have digestion; one is the reverse of the other, and one is as necessary as the other. If physiological digestion (fermentation) does not take place, then pathological fermentation (digestion) must; for action and reaction are going on all the time; nothing stands still.

Since Pasteur et al. discovered that there are microorganisms everywhere, which only await a favorable condition to set up fermentation, we reason, a priori, that this fermentation is the other half of physiological digestion or fermentation; and, in harmony with this monistic philosophy, this phenomenon--pathological fermentation--is necessary and physiologically conservative, rather than pathologically destructive.

Bacteriology assumes, a priori, that bacterial ferments cause disease; but all the cures based upon this assumption have failed, and all the testimony advanced in support of it has been more partisan than loyal to truth.

It is reasonable to assume that the ever-present bacteria, or germs of fermentation, are as necessary for physiological fermentation as they are necessary for pathlogical fermentation. Without the aid of these neutral germs of fermentation, it is doubtful whether the unorganized ferments--the digestive ferments of the body (ptyalin, pepsin, et al.)--would be capable of serving the great purpose of nutrition. I say "neutral," as they are found unchanged in nature. But they may be converted into allies or enemies--it all depends upon the chemic nature of the medium. It should always be borne in mind that yeast per se is non-toxic; toxicity is developed by the chemic changes which take place in disorganization. Food is disorganized when pathological digestion fits it for expulsion from the body.

These friends of man, against which Pasteur and Metchnikoff warred, and the influences of which in their own bodies they possibly were successful in controlling sufficiently to render them both semi-invalids, are in reality for man's good rather than his bane.

In this connection, perhaps it would be well to reflect, or to assume a priori, that when mind enters potentially into a compound in which the microbe, or ferment, and nitrogen, or protein, are associated, the character of the resultant must take the form of the mental concept. That is, the toxin that develops must correspond to the chemic change; but the form of the disease must be mentally directed. The disease may be a hydrophobia, a syphilis, or a tuberculosis. The location of the disease is perhaps chemically directed, but the type of symptoms may be directed by the mental concept.

To be more specific: A person is bitten by a supposedly mad dog. This fact starts a chain of morbid suggestions and expectations. Fear perverts digestion; pathological fermentation supplants physiological fermentation; the microbe, or neutral ferment, is made to take on a toxicity in keeping with the chemic agents involved; and all are given form by the mental suggestion, plus the added compound, protein-serum injection, known as the Pasteur serum. When the element of fear cannot be overcome, it is well to keep in mind the possibility that antitoxin serums may be reconverted into toxins and act contrary to expectation. Psychology must be considered.

The average medical treatment, or mistreatment, of supposed rabies is on the order of "a bull in a china shop."

The treatment is brutal, unscientific, and death-dealing in its application. The same is true of syphilis, and, to perhaps a less extent, of all other diseases.

What is the virus--admitting, for the sake of argument only, that there is a specific poison introduced into the human body by the dog's teeth? It must be a protein ferment, which is a pathological ferment. What is man's defense against such poisons? The neutralizing effect of hope, and the unorganized ferments. The normal blood can unhorse, so to speak, a great deal of poison, if the mind is free from fear. But fear kills.

The average physician is a fear-monger, if he is anything. He goes about like a roaring lion, seeking whom he may scare to death.

A normal man, devoid of fear, can develop antidote for poison. Those who are killed by snake bite have a paralyzing fear, which means surrender to the enemy. Keepers of snakes have no great trouble with bites until fear overtakes them.

Confidence in one's self-power is the secret of health and long life. This confidence, with the providence bestowed by a knowledge of the laws of health, is the most dependable immunizer known.

The influence of mind on fermentation is positive The mind may stimulate physiological fermentation, and it may stimulate pathological fermentation. In other words, the neutral germs are made by mind to ferment

physiologically or pathologically. The character of the toxin evolved must be in keeping with the chemical agents involved, but the Psychology of the disease is determined by the mental concept of what the disease must be.

When mind plays only an indifferent role, disease is commonplace.

It should be understood that anything in the alimentary canal (bowels) is still on the outside of the body. To nourish the body, food is taken into this canal, or digestive pouch, but, before it can be absorbed, it must be reduced to a fluid state by the various digestive secretions. When, from whatever cause, the food is not digested in a reasonable time, it must be disposed of--it must be thrown out--and the canal cleaned out. The cleaning is attended to by scavenger parasites.

The toxins resulting from the decomposition are unfit for absorption, and irritate the mucous membrane. The irritation causes the membrane to secrete mucous and serum. The mucous is tenacious and hangs on, coating over and protecting the mucous membrane. The office of the serum is to antidote and hasten the ferment germs and their toxins out of the bowels, and also to disinfect, or help the scavengers destroy, what remains of the transformed neutral germs and their ferment or toxin.

This is a necessary process, going on in the alimentary canal of man daily as long as he lives. If man breaks down his energy, and then persists in eating more than he can take care of by physiological digestion, the surplus must be disposed of by pathological digestion.

Physiological ferments are secreted by the body, and are necessary to prepare food for metabolism. The disposal of food takes place after it is absorbed, and this disposition is called metabolism.

Pathological ferments are generated by the neutral microbes when the latter are made to develop fermentation other than physiological. Their purpose is to dissolve the surplus food intake, and hurry it out of the body. This process is necessary for the life and health of man. When digestion is abused by a constant intake of food beyond digestive ability--beyond the power of physiological ferments--then the bacteria set up a pathological fermentation, which breaks down and disorganizes the surplus food, and forces it out of the alimentary canal by stimulating the expulsive power of the canal.

This work takes place on the outside of the body, in spite of the fact that it is in the bowels. A like work, only much more refined, is going on in the lungs in all cases of tuberculosis.

When digestion and absorption are carried on in the alimentary canal, beyond the needs of repair and building, the surplus must be disposed of. The duty of the lungs is to furnish the oxygen necessary to bum up this surplus. But this function is often overtaxed, and, to get rid of surplus nutritive material, the lungs are requisitioned by the central powers to do vicarious excretory work. In addition to performing their function of exchanging carbon dioxide for oxygen gas, they become excretory organs; and, as the bronchial tubes and air- cells of the lungs, like the bowels, are simply excavations into the body, and their closed cavities are on the outside of the body, germs have free access to them. When the lungs are forced to take up the task of excretion, to aid in freeing the body from its accumulation, a cough develops, which is necessary to rid the lungs of the accumulated matter. When there is no systemic infection, the cough and expectoration may be what is known as bronchitis; or perhaps bronchorrhea, asthma, etc.

When toxins, the result of putrefaction in the bowels, enter by way of the absorbents in the bowels, the lymphatic system arrests the toxin and renders it innocuous; but when the infection, or toxin absorption, is too great for the lymphatics to dispose of, nature undertakes to expel it by

way of the lungs. The neutral germs that join the process are metamorphosed into tubercle bacilli. They undertake to dispose of the accumulation by disorganizing it--causing a disorganization of the hyperplasia, or the protoplasmic deposits; in other words, a disorganization of the tubercles which have been forced to develop from the irritation of the toxins absorbed from the bowels. This disease is called pulmonary tuberculosis. The simple germs of fermentation become the germs of putrefaction. Putrefaction hastens the exit of accumulation by breaking down and liquefying it. The putrefactive germs, because of the chemical medium, metamorphose into T. B.'s.

Bacteriology, like theology, makes the bad more powerful than the good.

The old theology made the devil and sin greater than God and good; and the medical profession has always put disease far ahead of health. The devil, disease, is much more powerful than health; and I admit, when disease has modern, or ancient, medical science as an ally, the combination is more potent than health.

Bacteriology is a splendidly wrought fallacy. How long it will hold the center of the arena of human endeavor, as far as the cause, effect, and cure of disease are concerned, is hard to say. There are millions of dollars invested in exploiting bacteriology; and millions of dollars may keep a fallacy alive for ages. Besides, the fallacious system offers such splendid rewards during the lifetime of its devotees; and, neither last nor least, it gives immortality to those who .are worthy.

To have a germ named after its discoverer is far greater than to have a continent bear the name of its discoverer.

Bacteriological science is so grandly scientific that one who has mastered all its details is entitled to a niche in the Hall of Fame, despite the fact that he can never be a physician--can never know anything of value about the cure of disease-until he has forgotten all he has been taught.

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CHAPTER III

The Study Of Medicine

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The study of medicine is divided into four subjects, namely

I. Pathology: that part of medical science which studies disease.

A. Etiology: the investigation of morbific causes.

B. Pathogeny: an explanation of the mode of action of causes-how cause produces the development of disease.

C. Pathological Physiology: morbid reactions under disease-producing causes.

D. Pathological Anatomy: which reveals the structural change resulting from disease.

E. Symptomatology: which accounts for disturbances.

F. Nosology: which describes and classifies disease.

II. Diagnosis: which determines the place where a given disease belongs in Nosology.

III. Prognosis: which fortells the outcome of disease.

IV. Therapeutics: which endeavors to relieve, modify, and cure disease.

I. PATHOLOGY

According to medical science, pathology is the science of disease--that branch of medical science which treats of the modifications of function and structure of organs caused by disease. Disease defined is: inharmonious action of one or more of the various organs, owing to functional or structural change.

There is special pathology, which means analyzing disease. This is divided into internal or medical, and external or surgical, pathology. Then there is comparative pathology, which considers a study of diseases in man, animals, and vegetables; experimental pathology, and general pathology.

General pathology defines terms and fixes meanings; determines the laws of morbid phenomena, determines causes, defines symptoms, names diseases.

Pathology is a description of the body, and the organs which compose it, when they are laboring under the effects of abnormal, unusual, and perverting influences.

Physiology is the study of the body and its organs in that state known as health, and under influences that give health and strength.

Pathology, then, is that state of the body known as bad health, while physiology is that state of the body known as good health.

Disease is inharmony, and health is harmony. Both are different states of one and the same thing.

When we study pathology in connection with the influences that produce it, we learn in time to recognize real cause in its effect.

To study effectually the phenomenon pathology--disease--we must combine with it physiology--health--and etiology--cause.

To study pathology--to note change in function and structure--without a correct understanding of the cause of the change, leads nowhere. To study physiology-to study the secretions and excretions from men en masse, like a composite picture--will show an average--show about what an average individual should secrete and excrete under a given environment and a measured dietary. This is good as far as it goes, but no approximation can do more than give general knowledge of physiology and pathology. This generalization will give a like knowledge of dietetics, hygiene, and all branches of medical science.

Morbific effects will be found following certain morbific causes; but on closer investigation it will be found that there are exceptions to every cause--that there is no cause that always produces the same effect; hence pathology, physiology, their causes and effects, must be studied, not only in a general way, but in a special way, and the reason for exceptions must be as thoroughly understood as the rules.

Health and disease are related in that they are two phases of one state, and neither can be known without contrasting it with the other.

Living organisms are unstable. Their state must vary with the changes that take place in the environing influences.

The phenomena recognized as different acts of life are not dependent on some mysterious force outside of the body--some vital energy animating the body--but are simply actions and reactions produced by external agents.

For example, when external variations are slight, adjustments are readily made in those of a full measure of health, but not so readily adjusted in those with resistance broken down. Where the temperature falls forty to sixty degrees in a day or night, the most robust will suffer more or less from the adjustment, and the delicate may be killed.

Pathology given exclusive attention is a fruitless study. Health in all its phases must be studied, and cause and effect must be found in everything that affects the body.

The general study of pathology today too frequently starts with an established state of the blood or the organs of the body. The primary causes are ignored or not thought of. For example: Typhoid fever is thought of as cause, which leaves, when over, modifications which persist; being too slight to be recognized, they nevertheless continue their evolution. Ten to fifteen years later a heart, lung, liver, or kidney disease develops, which is ascribed to the changes wrought by the initial fever. A correct way to view these phenomena is to recognize the typhoid as an accidental but possible link in a morbific chain started in perverted nutrition, back perhaps in childhood, or back farther in a nutritional diathesis, that makes the development of a morbid chain of perverted nutrition, with possible links of typhoid, pneumonia, catarrhal inflammations, et al.

Crises.--Life is made up of crises. The individual establishes a standard of health peculiarly his own, which must vary from all other standards as greatly as his personality varies from others. The individual standard may be such as to favor the development of indigestion, catarrh, gout, rheumatic and glandular inflammations, tubercular developments, congestions, sluggish secretions and excretions, or inhibitions of various functions, both mental and physical, wherever the environmental or habit strain is greater than usual. The health standard may be

such--the standard of resistance may be opposed so strenuously by habits and unusual physical agencies--that the body gives down under the strain. This is a crisis. Appetite fails, discomfort or pain forces rest, and, as a result of physiological rest (fasting) and physical rest (rest from daily work and habits), a readjustment takes place, and an unusual standard is attained for a short time--the patient is "cured." This is what the profession and the people call a cure; and it is for the time being--until the customary habits and usual style of living have had time to establish the regular ante-crisis standard. This standard is maintained until an unusual enervation is brought on from accident or dissipation; then another crisis. These crises are the ordinary sicknesses of all communities--all catalogued diseases. Cold and hay-fever are simply forms of crises belonging to a chronic state of toxin poisoning characterized by catarrhal inflammations of mucous membranes. When the cold is gone, or the hay-fever fully relieved, it does not mean that the patient is cured. Indeed, he is as much diseased as before he suffered the attack (?)--the crisis--and he never will be cured until the habits of life that keep up toxin poisoning are corrected. If the intoxicating habits are continued, nature will undertake to cure by hardening the tissues--sclerosis. Arterio-sclerosis is one of nature's cures. Such a cure will not take place before old age, if not forced to.

A standard of health may be such as to be forced into frequent small crises, such as colds, frequent headaches, neuralgias, toothache, acute fevers, throat affections diarrheas, constipation, etc. Each of these attacks may be looked upon as a crisis. To recover from a crisis is not a cure; the tendency is back to the individual standard; hence all crises are self-limited, unless nature by maltreatment is prevented from reacting.

All so-called healing systems ride to glory on the backs of self-limited crises, and the self-deluded doctors, and their credulous clients, believe, when the crises are past. that a cure has been wrought, whereas the real truth is that the treatment may have delayed reaction. This is largely true where anything has been done except rest. A cure consists in changing the manner of living to such a rational standard that full resistance and a balanced metabolism are established.

One hundred per cent efficiency is seldom seen. No one with an established sensual habit is one hundred per cent efficient.

Tobacco, coffee, tea, cocoa, alcohol, drug habits of all kinds lower the standard of resistance and personal efficiency; and if the habitue starts life with less than one hundred per cent efficiency, his habit or habits will bring him into more pronounced inefficiency and more frequent crises.

Any habit of mind or body that uses energy faster than it is generated must establish a resistance and an efficiency below the normal standard. Then, if the normal standard is below the ideal one hundred per cent, it must be obvious to all thinking minds that those who belong to this class must have a very precarious hold on health, and must be of the class forced into a crisis at every unusual change of environmental influences. Babies will have the diseases peculiar to nursing and teething; older children will develop the so-called contagious diseases; while grownup people will have crises peculiar to, and in keeping with, their diatheses.

All of the above concerning crises is demonstrable. Indeed, so self-evident is it that it has taken a lot of selfish conceit and dogmatism to prevent these simple truths from becoming commonplace.

I suppose it is not quite human to expect those of a standardized school of healing to give utterance to discovered truth which, if accepted by the people, would rob them of the glory of being curers of disease. Indeed, nature, and nature only, cures; and, as for crises, they come and go, whether or not there is a doctor or healer within a thousand miles. For the good of most patients, it would be well if the schools of slightly varying phases of fallacious therapeutics were driven into the sea of oblivion.

If typhoid or any disease is managed correctly, the patient will recover, and if the habits of life are corrected and the patient continues to live right, there can be no sequel from the typhoid; but if the style of living followed before the fever be continued after it, other diseases will be developed; and if an organic change has been caused by the interpolated disease, then certainly the organs so affected is most liable to give down from years of toxic infection.

Disease, functional or organic, must be looked upon as interpolated affections. The real disease is in faulty nutrition, and is of daily development.

Intestinal intoxication, from bacterial fermentation due to overeating, improper eating, and eating potentially acid foods, and foods devoid of enzyme, is a constant source of toxin poisoning. This condition is added to by retained excretions, which will always take place when the organism is enervated. The amount of food intake may not be too great under correct conditions, but the subject's power to digest and assimilate is impaired by overwork, worry, venereal excess, alcoholics, tobacco, coffee, tea, and other stimulants.

Without impaired nutrition, which is initiated by toxins introduced from without, or developed in the body, diseases, acute or chronic, cannot develop.

Suppose we take heart disease. It may have developed with rheumatism, typhoid fever, or other diseases. The effects on the heart are identical. The new disorder--the heart disease--is not caused by the rheumatism, the fever, or any other disease, but evolves from the same cause that evolved the rheumatism or other diseases--namely, the toxemia.

To treat any disease correctly, its cause must be understood. To say that the heart was diseased by rheumatism is an etiological error. The heart was poisoned by the toxins that created the rheumatism, and the drugs and other treatment for rheumatism joined the, toxins to put the heart out of commission.

The leading authorities say that visceral diseases take their origin from some antecedent cause, but that the initial disease is not always easy to find. They declare that the disease may be dormant, or develop silently, for twenty or thirty years before manifesting. This is true and it is not true. A tuberculous diathesis favors the development of tuberculosis, and the gouty diathesis favors the development of gouty diseases; but the primary cause is the same--namely, chronic toxin poisoning. This state of the blood and other fluids of the body must exist before any of the organs can go into a state of degeneration.

If the subject is scrofulous, scorbutic, or has developed a state of acidosis, and the glandular system has once been septically infected from a syphilis, gonorrheal bubo, carbuncle, vaccination, or wound infection, the gland lesions will get well under proper treatment; but if the subject becomes careless in his habits, and builds back the chronic autotoxemia, it would be the natural thing for the glands to become diseased. When the glands are once infected, they are made sensitive and will respond to toxic influences more readily.

A. ETIOLOGY

Post-mortems are held for the purpose of discovering the cause of death, and the cause is found. It may be an organic change of the heart, liver, lungs, or some other organ. Suppose an abscess is found in the liver, spleen, pleura, or elsewhere; suppose apoplexy is found; without doubt a reasonable cause for death has been discovered. But what light has been shed on the real cause of disease?

None whatever. Post-mortern revelations are as silent on the subject of ancestry as they are on the cause or causes of disease.

To find an abscess of the liver or spleen may account for death, but the very important knowledge of what caused the abscess, or what caused the cause of the abscess, is not found. On knowledge of morbid processes that would help the living to shun a like fate, all post-mortems

are as silent as death--except in deaths from injury, and in those cases only the cause of death is found; the dead tell no tales regarding the cause or causes bringing about the accident.

How is anyone who has not studied the history of morbid processes to know that a slight injury to the neck of the womb twenty years ago is one cause of cancer today? Or that the habit of drinking hot coffee twenty years ago caused chronic inflammation of the stomach that ends today in cancer of the stomach?

After having gained the knowledge that injuries, such as related above, are the cause of a fatal disease twenty years or more afterward, it is rather confusing to be confronted with the truth that only a few of those who have suffered a like cause have also suffered a like effect. Hence there must be collateral causes which are not considered, and without which the true causes and effects leading to the final fatal effect remain speculative. The profession moves in a diagnostic circle of misapprehension, always coming back to the starting point with no more true knowledge of cause than at the start.

So very obscure are the real causes of disease that it is not strange that nearly all professional men willingly disregard anything pertaining to disease except the symptoms which palpably present.

1. Enviromnent in Its Relationship to Health and Disease

The two words "health" and "disease" are used daily, but few know anything, except in a general way, of what either means.

The general conception is that health is a fixed, ideal state or entity, and that disease is a fixed state or entity whose particular purpose it is to war on health.

In aboriginal man's conception, disease was an evil spirit. In the early days epilepsy was caused by the devil. According to the Bible, an epileptic was a person possessed of the devil, or of devils.

A doctor in Cincinnati has discovered that epilepsy is caused by a particular germ, which the doctor has named "bacillus epilepticus."* (* Since this was put in type the doctor has recanted.) This devil germ takes up his abode in the colon, and from this throne torments his victim.

The Bible doctors cast out the devil Epilepticus in the name of the Lord. The Cincinnati doctor advocates casting the throne or habitat of this devil bacillus out by a surgical operation, on the theory that by destroying his abode Mr. Devil will depart forever.

It takes about as much faith to accept the germ theory as the devil theory. Indeed, both are conceptions built out of hypotheses that have their foundation in the false theory that the universe is governed by two Deities--namely, God and Devil. The whole germ theory is a refined and modernized demonology.

Cell-Life

As soon as a cell is born it begins to die. Man's body is made up of cells, and his continuance in life depends entirely upon cell renewal and cell integrity.

The cell is in an ideal state only at the instant of completion; then it begins to wear out. Man's body during his fetal life is in as near a state of equilibrium as is possible; for the temperature of the mother's body is maintained at about ninety-nine degrees F., and his life is carried on by proxy, so to speak. When born, he is subjected sooner or later to all the influences of his environment.

Health is an abstract idea. It cannot be well defined, for it necessarily must vary from birth to the grave.

Living organisms never more than approach a state of equilibrium. Indeed, no man would accept life if he could be guaranteed equilibrium; for that would be a neutral state devoid of experience, consequently with no knowledge. He could not enjoy; he could not love; he could not hate; he could not eat; he could not lose his temper; he could not be happy; he could not have friends or enemies; all of which are necessary to his development.

All man's pleasures and displeasures--happiness and unhappiness--come from the varying of his environment. Through attention, thought, and reflection on these influences is he educated. Man too often goes through life giving no attention whatever to the influences, from a health standpoint, of these various shocks to his nervous system. Indeed, very few recognize the sense of pleasure as a shock, and that evil can come from it. Just a few of the people are beginning to realize that taking food into the system is a shock, notwithstanding the fact that it is a pleasure to take it into the system, and a necessity from a building and repairing point of view. When this subject receives the serious thought and consideration of laymen, as well as professional men, there will be more inquiry for knowledge of just how far stimulation can be carried without harm, and when people get sick they will know that they have been imprudent and gone beyond the point where health can be maintained in eating and caring for the body.

When man is born in the backwoods, and his mental and physical experiences are confined to a very limited environment, the number of pleasurable and disagreeable shocks which he experiences must be almost nil compared with what he would experience in the heart of population.

Everything else being equal, he should live longer in his secluded home; but such is not the experience of mankind. The limited experience--the limited shocks--in this restricted home fail to interest him, and he grows old young, and tires of life, and dies. We cannot live longer than we want to. Books and music help to fill the life and will prolong it.

The metropolitan man is shocked by so much of love and hate, and his experiences are so educational, that life has too much of interest for him to leave it. This does not apply to the sensualist--the man who lives for pleasure; for he becomes ennuied and dies from lack of interest. The man who lives for gain will live long if he continues to be interested in gain; but if he fails, and hope is gone, his health fails and death comes soon. Unfortunately, those who have the faculty for making money--becoming wealthy--are exceedingly unwise in placing it where it will do them the greatest good, or the greatest good to the greatest number.

The body is made stronger by the shock of exercise and work. Too much exercise pushes development beyond the normal. Most athletes are overdeveloped, and as a consequence die early.

Men, after they pass middle age, should have a certain amount of exercise; but those who live a sedentary life will not live as long if their exercise is pushed to a hardening of the muscles as they will if they exercise just enough to keep the muscles well shaped--keep the tissues from falling down. Old men never have muscles that stand up and are individual, such as the athlete prides himself upon. A man who is in a trade or business that requires continuous hard work will keep his muscles well up into old age, if he is regular about his work. If he works up to sixty years of age, keeping his muscles hard from his labor, and then retires, he will not live many years--not nearly so many as he would live if he should continue his work, perhaps not doing quite so much; yet, on account of his being accustomed to work, he will live very much longer if he keeps at his labor than he will if he stops and retires.

Most men of sedentary lives are underdeveloped; their organic life runs down, and many die early.

Over-mental development always means early death. This is especially true where the knowledge is not of a character to make one wise about his proper relation to his environment.

When a great physician dies too early because of lime deposit in his arteries, what is the reason? He has not had the proper conception of his relationship to his environment.

The riddle of health in its varying stages must be known before man can brace himself against the over- and under-effects of environmental shock.

We have seen that development means shock. The shock of too much nourishment, and of too much exercise, produces disease. Neither of these causes is disease-producing within itself. Food is necessary. The body cannot live long without the stimulation (shock) which it gets from food, and certainly it must have the building material that food furnishes. When food and exercise are given within the needs of the body, everything else being equal, the body may be said to be in a state of health.

When food and exercise are supplied beyond the needs of the system, or below the needs of the system, disease is said to prevail.

There is but one deduction from these facts, and that is that health and disease come from the same cause.

Perfect health does not exist. The state varies from one that is known as robust health to fatal disease. Yet both extremes are states of health.

How can there be an entity, disease, coming out of food, exercise, pleasure, work, or anything that affects man in his environment? The answer is: There cannot be. As stated before, life is made worth while because of the various influences affecting man.

Once it was thought that the force which animated living matter was an autogenerated vital energy, but now it is thought to be reactions produced by various agents.

About as good a definition for health as can be given, according to the foregoing, is: an equilibrium established between external stimulation and internal reaction.

The temperature of the body in health is about 37' C., or 98-1/2° F. If the temperature of the room or weather is about 60, and is kept at that point, the body becomes adjusted. If the temperature rises or falls slowly, reaction on the external medium will be gradual. Where the change is sudden, either plus or minus, it upsets the heat equilibrium and may cause much disorder, resulting in disease. What is the disease? Enervation and retention of excretion. This produces toxic poisoning.

Becoming adjusted to any sudden changes causes so much agitation that life may be endangered.

The cause of disease, or the cause of a departure from health, or health perverted, is not some mysterious entity; it comes from shocks imparted by environmental agents, which cause reactions; and the reactions are for the purpose of modifying the shocks and making them compatible with life's requirements.

2. Physical Agents

Air.--Air is not classed as a food; yet it is the most important food. We can live without the ordinary foods from thirty to forty days, and we can live without water for a few days, but we cannot live without air for more than a few minutes.

Air is the gaseous substance that envelops the earth and forms its atmosphere. It consists almost entirely of the gases oxygen and nitrogen, which are merely mixed and not chemically combined.

An ordinary-sized man is supposed to take through the lungs about two thousand cubic feet of

air each twenty-four hours. It is from the air that we secure our greatest supply of oxygen.

Air at sea-level has a pressure of about fourteen and three-fourths pounds to the square inch. It decreases about one-twentieth of a pound per square inch for every ninety feet of altitude. High altitudes cause a quickening of the pulse and breathing. Most people have an idea that there is much danger in going to a high altitude quickly. There is very little discomfort, and almost no danger, to persons in good health.

It is said that, whatever the altitude, the composition of the air is always the same; namely, 21 parts of oxygen, 78.06 of nitrogen, 0.94 of argon, and a trace of carbonic acid.

The only change in the composition of the air in high altitudes is an increase in ozone. Ozone is an allotropic (allotropism: the existence of an element in two or more distinct forms--distinct physical properties).and more active form of oxygen. The variations of the chemical composition of the air do not account for the evil effects experienced in high altitudes; hence the effects must be caused by temperature, pressure, and the action of the sun's rays, which strike more perpendicularly in high than in low altitudes. At an altitude of 4,500 to 5,000 feet the temperature will mark a difference of ten to twelve degrees Fahrenheit in the sun and in the shade. If the bulb of the thermometer be covered with black cotton, the difference will often reach sixty degrees Fahrenheit. This should warn. those in delicate health to prepare themselves with a proper amount of clothing when going into high altitudes. It should not be forgotten, however, that the cold of high altitudes is more tolerable than that of low altitudes, because the air is drier.

The sun, however, does not melt snow unless accompanied with warm air. Black or dark clothes retain the sun's heat and enable the traveler to keep warm in a temperature that would be very uncomfortable at sea level.

The absence of wind and humidity in high altitudes gives comfort, whereas in low altitudes, with a much higher temperature, those who are sick and of low resistance will suffer from the cold.

Altitude.--Snow does not melt in high altitudes, even when the sun's rays are quite warm, until the air becomes warm. Snow, or white clothing reflects the sun's rays; hence dark clothing should be worn in winter, and white or light-colored clothing in summer.

As an experiment: Place a dry leaf on a bank of snow where the sun is shining; in a little while it will be seen that the snow under the leaf is melting.

Absence of wind and humidity causes high altitudes to be comfortable places to live.

Mountain air is so dry that putrefaction does not occur to the same extent as at sea level. In high altitudes meat will dry and cure without salt. Desiccation is effected before decomposition can set in. At St. Bernard, in the Swiss Alps, the corpses of men and animals never decay. The dead are placed in morgues, where they are preserved indefinitely--a form of immortality.

The air is so rarefied in high altitudes that patients are made quite nervous because of the absence of noise. Sound does not carry, because the air is not dense enough to transmit it.

It is said that the absence of noise causes a feeling of sadness.

The effect of altitudes ranging from six to twelve thousand feet, on one seeking health, will be at first, while becoming acclimated, that of a feeling of warmth on the skin. The lips will redden, and the eyes will flush. For a while one will be troubled with insomnia; a slight palpitation; or, if the heart is weak, the palpitation may be severe. There will be a feeling of dyspnea (shortness of breath); dizziness; and sometimes headache. The urine is dark, and constipation is the rule; and, from the first, the appetite is increased.

In a short time the skin becomes a tan color. The lips, nose, and hair become so dry that salves and vaseline are used to secure relief from the dryness. Strength increases, and long walks, and even mountain-climbing, do not fatigue until overeating brings on the tired feeling peculiar to food poisoning.

There is mountain sickness, which is said to be unavoidable in altitudes of from twelve to fifteen thousand feet, but not equally in all countries--probably the result of overeating and fatigue. The exhilaration caused by the mountain atmosphere induces the traveler or sightseer to exercise to excess; this uses up so much nerve energy that imperfect digestion results, following which comes intestinal toxin infection; and that is what mountain fever is.

Mountain-climbers are not equally subject to mountain sickness. This, of course, is true of every section of the country. It is said that the lack of oxygen, the increased cold, and the fatigue have much to do with bringing on mountain sickness. Obviously harm must follow an increased appetite and a decrease in oxygen supply. A decrease of oxygen favors decomposition; this is one reason for auto-intoxication.

The symptoms of mountain sickness are a feeling of growing malaise; pains in the legs, especially the knees; the mouth fills with saliva; sickness of the stomach, followed by vomiting of food; and, in severe attacks, bilious and even blood vomiting. In the advanced stages of the disease, pain in the bowels and diarrhea set in.

According to Paul Bert: "The quantity of oxygen in the blood diminishes as the atmospheric pressure diminishes. If the rarefaction corresponds to pressure existing at 6,000 feet of altitude, the oxygen diminishes thirteen per cent; at 9,000 feet, twenty-one per cent; at 25,000 feet, fifty per cent." He thinks oxygen starvation causes death in these high altitudes, and experiments that he has carried out have proved that he is right.

By "becoming acclimated" is meant that the blood acquires an increased capacity for absorbing oxygen; which means an increase in the red corpuscles and an increase in the iron contents. This being true, patients suffering from anemia, and especially chlorosis, will find benefit in living in high altitudes. They will also suffer much in traveling in high altitudes.

This is according to the best medical authority. I will say in this connection, however, that such diseases are brought on from imprudent eating. My experience is that anemic and chlorotic patients eat foods that are devoid of oxygen, until they lose their power for carrying oxygen. Why should not this be true? Nature removes an organ no longer used. If oxygen is not taken into the system in large enough quantities to supply work for the red corpuscles, there will be a gradual diminution of these corpuscles to correspond with requirements. High altitudes force breathing; hence the demand for more blood corpuscles, and the supply.

To those who are anemic or chlorotic I will say: If resort to a high and dry altitude cannot be taken, do not be discouraged; stay at home and get well. Stop sugar-, candy-, and cake-eating; use sugar in foods very sparingly. Eat uncooked fruit, also salads made from fresh, crisp vegetables, or a slaw, every day; and teach yourself deep breathing.

An increased capacity for absorbing oxygen may be developed in low as well as high altitudes by getting rid of toxins in the blood. This can be done by correcting the eating: by lessening the amount of the so-called staples--meat, bread or cereals, pudding, pie, cake, etc.--and eating more fresh fruit and vegetable salads; and exercise should not be forgotten.

Pulmonary tuberculosis is a disease supposed to be best treated when sent to high and dry altitudes. This supposed benefit is not without its drawbacks. All lung cases with a high pulse-rate should seek as dry a climate as possible, but avoid altitudes more than a mile above sea level.

Almost irreparable harm is done to blood-making and nutrition before the tubercular bacillus

is discoverable in the lungs. Prevention of this disease must start in childhood, with those of the tubercular diathesis. After adenitis (lymphatic infection) has been developed in a tuberculous diathesis, it will require unusually good judgment on the part of the patient, and unusual medical skill on the part of the medical adviser, to bring the patient back to the normal. To stay normal with a diathesis and a record of one breakdown will require great good judgment--certainly more than a residence in a high altitude, etc.

I have learned from observation that those who are well advanced with pulmonary tuberculosis, and who have a high pulse-rate, die off very rapidly when brought to Denver.

If we are to believe in the eternal logic of the universe, we must believe that sound judgment is an accompaniment of a sound body. This being true, all tubercular subjects should be directed by the wisest minds; for their own is as prone to go wrong as the sparks are to fly upward.

Curing this disease means correcting the mind and body-it means right thinking and acting.

If it is a fact that more lung capacity is needed in high altitudes, is it wise to force diseased lungs to expand? Oxygen starvation is one of the symptoms of tuberculosis, due to imperfect lung action. The lungs of these subjects are not used to their full capacity, and, as the disease advances, breathing grows more shallow, because the lungs grow more sensitive to the air. Cold air irritates and causes coughing, and, to avoid coughing, the patient learns to breathe in a more shallow manner all the time; and, of course, the less oxygen taken in, the less food is digested, and the farther away from health the victim drifts.

Sleeping-porches and other devices for furnishing fresh air and a greater oxygen consumption have been a dominating fad since a few years ago, when it was the custom to have patients sit out-of-doors in the coldest weather--wrapped, of course, enough to keep warm.

Obviously both plans are rather more detrimental than good. The object is fine, for it is necessary to have as pure air as possible; but the good is, according to my way of thinking, more than offset by the irritating effect of the cold on the lungs. Reader, stop and think: These patients are in heated houses all day, and some of them in superheated houses. At night they breathe an atmosphere many degrees colder than it is throughout the day. The house temperature through the day is seventy degrees Fahrenheit, or more; while on the porch it ranges, in Denver, from thirty-two degrees above to ten degrees below zero. The range is from thirty-eight to eighty degrees. Can anyone with common sense believe that a weak, diseased lung will thrive subjected every twenty-four hours to such extremes of temperature?

If the above is true, the modem treatment of this disease could not possibly be much worse.

If houses are as clean as they should be; if bedding is as clean as bedding should always be, patients will do much better in a closed house--closed up for the entire night--and fire enough to keep the night temperature within ten or twenty degrees of the day temperature.

All of us (doctors and laymen) must go through the fresh air insanity. Converts to new thoughts, or old thoughts, are always nearsighted, enthusiastic, and even fanatical in their loyalty in following literally and not wisely such fads. The fresh air craze has surely killed its quota. Filthy houses have done their share. Now sensible people should split the difference and keep both foul and cold air out of their lungs. To encourage those who read this, I will say: The composition of the atmosphere is always the same,* and, like all organs, it is maintained at the same composition, and must remain so until destroyed; and along with its destruction must go all animal life. (*This does not mean that the air of proper composition cannot be made the vehicle of filth. Houses, bedding, clothing, and the body must be clean.)

It is all nonsense to talk about burning up or breathing out of the atmosphere all the oxygen. If houses are clean, no harm will come to the sick by closing doors and windows to prevent them from chilling their lungs and blood by breathing an atmosphere much colder than their bodies.

Harm from breathing cold air does not end with simply causing irritation; the patient's nerve energy is used up in resisting the cold. It takes nerve energy to resist cold; it takes nerve energy to digest food. This being true, should not sick people be kept in a warm atmosphere, and fed on food that will nourish the body at the least expenditure of energy in digestion?

The nervous system of a plithisical patient should not be severely taxed in resisting cold. It must be remembered that digestion cannot be carried on with a bodily temperature varying much from 99' F.

It is a mistake for sick people to live in an atmosphere so cold that wool or other heavy, impervious underwear is thought to be necessary to keep the body warm. Air is a tonic and stimulant to the skin, and, neither last nor least, it is a disinfectant. To keep the surface of the body sweet and clean, air must get to it, and it cannot when the body is swathed in tight-fitting woolen or other underwear. Open-woven cloth is better; no underwear at all is best.

It matters not how clean a housewife may be-if she does not air her closets and clothing, she cannot boast of her cleanliness. Men who ruin their homes with tobacco smoke, rendering them unfit for women and children to live in, certainly pay a lot for their pleasure. I have known of invalid wives who could get well if their homes could be freed from stale tobacco smoke. Invalid wives are expensive.

A part of humanity live in ill-smelling houses and clothing. Many men think they are excused for ill-smelling bodies because their work is dirty. This is not necessary. Grease, smoke, dust, and iron rust or filings will make the clothes, hands, and face dirty; but I deny that it is necessary for any man to emit an odor that is offensive.

Women who take advantage of dirty work as an excuse for making themselves a nuisance from malodor should be boycotted. It is no disgrace to do work that makes one's body and clothes dirty; but there never can be any excuse for filth, and the odor that accompanies it. People who are filthy are a menace to society and should be taken care of by the health authorities, in the same manner that all decomposition is cared for.

Air and dust, sometimes called dirt, are aseptic and antiseptic. Dust is fought against by housewives, and cities hold it down with the sprinkling cars. In this way one of nature's health-imparting agencies is made inefficient.

Winds and storms are necessary; they are nature's sanitary measures. Wind is necessary for lowlands and low altitudes. Canyons are frequently swept by windsthe reason given being that they act as chimneys for conveying hot air out of the plains: the hot air rises and the cold air goes to the bottom, creating currents. These winds are sanitary; they carry out of the canyons malodors, and antisepticize the accumulated decomposition.

Vegetation grows more luxuriantly, everything being equal, in a windy country than it does in a windless country. Trees grow more rapidly in Kansas because of its winds. Chicago is noted for large, fine-looking girls, and wind. The relationship is obvious.

Walls of wood and stone around private residences in cities are menacing to the health of the neighborhood.

Houses for stock and chickens should be nothing more than windbreaks--never airtight pens or houses. All that animals need are windbreaks; they do not need warm houses, notwithstanding the fact that such protection is often given as a matter of economy--the warmer the animal is kept, the less food is needed. But this is economy at the expense of health. Warm houses and tuberculosis are close friends, and are found among the human animals as well as the brute creation.

The more air we breathe, the better our digestions will be. Warm, close houses are not so menacing to health as people generally believe. The real health-destroyer in our houses is dirt

that is taking on septic change: dirty clothes, kept in closets that cannot be ventilated and are not cleaned; decaying food, and never thoroughly cleaned pantries and ice-chests; old beds that are dressed with nice, white pillows and spreads--veritable whited sepulchers; and then the habit of keeping an ill-smelling cesspool under the diaphragm, from eating beyond the digestive capacity.

Keep the home, in every comer and recess, sweet and clean; keep dirty clothing from accumulating; keep the body and mind clean; then, when cold weather comes, it will not be necessary to keep doors and windows open or to sleep out-of-doors. Keep clean and comfortable, and avoid shocking the lungs and nervous system by breathing air seventy to eighty degrees colder at night than at midday. When necessary to breathe cold air, do so in action--when walking, exercising, or at work. Do not sit out-of-doors wrapped up, or sleep out-of-doors.

In all things it is worth while to take a commonsense view; and in the care of the body, moderation--avoiding fanaticism, which is another name for ignorance--is the safer practice, and much more conducive to long life and success.

Heat.--Heat is not food; yet it is one of food's most important allies.

A temperature of the body of approximately ninety-eight degrees Fahrenheit is necessary to insure digestion and assimilation. A continuous temperature of one degree less than normal will lead to physical destruction sooner than a continuous temperature of one degree above normal.

Just what causes the increased temperature in fevers is an unsolved problem; and it is doubtful whether it ever will be solved. Every case of fever will have to be settled individually; for, as in all things connected with health and disease, there are no unitary causes. Every effect depends upon multiple causes.

The nervous system presides over organic functioning. When nerve energy is below normal, the functions of secretion and excretion are impaired. As secretions are necessary to digestion and assimilation, these functions are impaired, and, excretions being imperfect, the waste products are retained and act as inhibitors of functioning.

Following this state will be cold hands and feet. People are said to have poor circulation, which, indeed, is true; but poor circulation must have an explanation, for those two words are meaningless in themselves. Poor circulation means enervation; means that nerve energy is low; means that the nerves distributed to the blood vessels fail to impart tonicity to their muscular and fibrous coats, stimulating normal contraction.

Heart and blood-vessels in health act rhythmically--contract and relax--under the influence of nerve energy; and this causes what we know as circulation of the blood.

Nerve energy is necessary to keep up the blood circulation and the normal temperature of the body indicated by warm feet and hands.

Anything that uses up nerve energy brings on enervation and, as hinted before, impairment of the functions of secretion and excretion. The lungs fail to exchange carbonic-acid gas for oxygen gas. When there is imperfect exchange of gases in the lungs, digestion is impaired; for perfect digestion requires that oxygen be brought in by the lungs.

Nerve energy and heat are generated when the oxygen in the blood of the arteries acts upon the carbon in the veins; and when, from any cause, the supply of oxygen is low, heat is not generated, and cold hands and feet follow. The remedy must be to remove the first cause of enervation. What is it? Excessive eating, drinking, enjoying, working, or what not. The feeding must be in keeping with digestive limitations, not in keeping with the bodily needs. There is little science and less sense in advising an enervated patient to eat "lots of good, nourishing food." The chasm that exists between my dietetic system and every other system that I have

heard of is too great to be bridged with any possible compromise. I feed my patients in keeping with their digestive capacity, while all others endeavor to force feeding in keeping with apparent systemic needs, without respect or consideration for the patient's ability to digest and assimilate.

The foods that furnish heat are the carbohydrates. Sugar is the most rapid heat-producer, fat next, and starch next.

An oversupply of heat-producing foods, indulged in continually, will end in great enervation and whatever disease the individual has a predisposition to develop.

When sugar is eaten beyond the system's needs, it will not be acted upon. If all were used up and heat generated, life would be put out from hyperpyrexia, or overheating. The amount taken above the body's needs will go out of the body by way of the kidneys or bowels; not, however, without more or less injury to these organs of excretion. It is a mistake to believe that we may indulge ourselves beyond the system's needs, with any food or drink, with impunity. Indeed, the surplus is a tax on energy to get rid of it, and this tax divides the work of nutrition. Ideal nutrition cannot be had when its work is interfered with by the work of eliminating a lot of unnecessary material.

It should be bome in mind that the law of correlation of forces must govern in the matter of food and nutrition, the same as in dealing with natural law anywhere in the realm of knowledge and science.

Heat is being consumed when the body is in pain; when overclothed or overworked; and when mentally worried, depressed, or overjoyed.

Fever is not an indication of the generation of surplus heat. Indeed, quite the contrary is true; for the body is not generating so much as when normal. The reason for the excessive temperature is that nerve energy is impaired; elimination by the skin, lungs, and kidneys is suspended, and, as a result, the excretions are retained. One of the functions of the skin and lungs is to radiate heat. If, through food or other poisoning, the nerve energy supplied to these organs is cut off, heat is retained in the body. If the cause is infection from an injury, or pent-up decomposition in the bowels, the source of infection must be got rid of as soon as possible; then the temperature will run down. Physicians in general practice often see an increase of temperature from two or three to five and six degrees Fahrenheit following indigestion caused by overeating, and if the indiscretion is not repeated, the fever may subside in twelve to twenty-four hours.

After childbirth or abortion, if from any cause the uterine discharge becomes pent up, pain and fever will quickly follow. If understood, however, and the womb washed out, and drainage established, pain and increased temperature will be controlled at once, never to return, unless the cause is allowed to return.

Pain inhibits the physiological manufacture of heat, and if it did not stop radiation, the patient would probably die from refrigeration--from loss of all bodily heat. Hence fever may be looked upon as one of the most remarkably uniquely conservative acts in all the world of pathological conservatism.

Health and long life cannot be looked for by those who are careless and indifferent about keeping their extremities warm. Cold, clammy hands and feet indicate malnutrition, and must be cured by correcting the bad daily habits that build this symptom.

Until the extremities keep warm from restored circulation, following the correcting of the disease-producing habits, artificial heat must be used to keep the feet warm. Covering on the feet and legs to the knees should be double the weight of that over the body and shoulders; or a jug of hot water may be kept in the foot of the bed to use when necessary. Do not sleep with the

feet against the heater. Through the day, if sitting much, an electric pad should be used. Keep the feet warm, and prevent further decline in health.

Do not overclothe in an effort to keep warm. Lightweight, open-woven underwear, with heavy top clothing when going out, is the proper way to meet the cold. When riding in cold weather, the feet must be kept warm. Overeating and chilling spell pneumonia.

Heat of summer can be easily borne--in fact, enjoyed--if the eating is correct. Cut the heat-producing foods down to the minimum; meat, with all fat trimmed away, not oftener than once a day or three times a week; fruit and salads, with milk and cheese; bread once a day for those who are not overweight. Wear only the lightestweight, open-woven underwear.

People who persist in overeating make themselves very uncomfortable, and they are the people who meet with prostrations and sunstrokes.

Workmen who are subjected to great heat should leave starch, fats, and sugar, or any form of sweets, alone. Drink freely of pure water--positively no alcoholics; for lunch, ice cream and fruit. The ice cream is sweet and fat and evolves heat. its effects should be watched, and if the heat is harder to endure on days that the ice cream is used, it would be wise to stop it.

Ices may be used too often, and to the detriment of health. The injurious effects of all classes of foods are so little known by laymen, and even by physicians, that few are willing to believe that their favorite "bonnes bouches" cause the discomfort they experience. I see people daily suffering so greatly that they are driven to seek relief and cure; yet they are unwilling to part with the habit that causes their unhappiness. Indeed, it is almost impossible to convince them that ill can come from so simple a pleasure.

Iced drinks should be taken in great moderation. The cold drink habit is like all other habits--it grows on what it feeds. The more ice used, the stronger the demand. A drink of ice water taken an hour after a hearty meal often generates an insatiable thirst, which, if satisfied, will positively cause indigestion, and not infrequently start a derangement that may end in typhoid fever or some other acute malady; or a chronic irritation may be started that will end in ulcer or cancer of the stomach.

Extremely cold drinks and extremely hot drinks are equally injurious. The very sick should always be watched, and artificial heat used continually to keep the extremities warm.

Thousands and thousands have died who would have lived if that one little chore of keeping their feet warm had been attended to properly.

If it could be generally known and remembered that the function of heat-making is suspended during sickness, and that the very old, the very young, and those who are greatly run down are liable to freeze up--collapse--in the hottest weather, deaths from this cause might be prevented by seeing to it that they are kept comfortably warm.

Many cholera-infantum cases die every summer--July and August--because those who care for them believe the babies feel the heat as other people do, and no attention is given to keeping them warm. Death in such cases comes from chilling or freezing to death.

Dry heat is more endurable than moist heat. A humid atmosphere is very enervating.

Every summer nearly all cities of this country suffer deaths from heat strokes.

Sunstroke usually occurs among those who are dissipated. Sensuality perhaps covers the whole class. I do not believe any suffer from this disease who are not enervated from sensuality.

Those who work in overheated places and are food- or alcohol-poisoned are in line for heat prostrations.

Various disorders may persist after a recovery from heat stroke; namely, neuralgia, headache, and sometimes strange ideas or notions. These troubles, however, result as much from wrong daily life as from the previous sickness . Indeed, such cases may be cured of these relics of former sickness if the patients will follow a proper style of living.

Cold.--Cold climates are said to be more healthful than warm climates. I am not prepared to accept that statement without qualifications. Under correct sanitary control, I believe that warm countries are more conducive to long life than are cold countries; but under neglected and bad dietetic, hygienic, and sanitary conditions, cold countries are better. And, of all countries, those of high altitudes are best. Decomposition is the menace to health in warm countries; the people die of sepsis--blood poisoning--and hepatic derangements; whereas in cold countries health and life are menaced by overstimulation and its consequent enervation.

It is true that heat is enervating, but the bad habit of eating heat-producing foods in hot countries causes hot climates to be more unhealthful than is natural. Investigation will show that there are more people who grow old in warm countries. Cold is hard on old, and on very young, people.

Explorers of the polar regions state that they stood a temperature of from forty to fifty degrees Fahrenheit below zero, without suffering, when there was no wind. It is said that life may be maintained at from seventy to ninety-five degrees Fahrenheit below zero. Authors of this statement, however, counsel against exaggerating the importance of this fact. On an average, about seven hundred persons perish every year in Russia from cold.

All ages do not stand cold equally well. Adults resist the cold best. The old and young chill easily.

The enervated, or those with weakened nutrition, must keep warm.

Discouragement, overwork, starvation, or any influences that depress the mind as well as the body, render the individual unfit to stand exposure to cold. Any enervating habit removes resistance to cold. Drinking of alcoholics overcomes man's resistance. Brandy-drinking, as practiced in Russia, often causes serious suffering, and a few fall dead on being exposed to extreme cold after indulging.

There still persists a popular obstinacy or ignorant belief that alcoholics, or so-called stimulants, are an advantage to those who are exposed to cold, or subjected to fatiguing labor. The truth is exactly the opposite of this belief; for alcohol, in any form, enervates by removing the normal tonicity. Man in a full state of health has tone--a normal irritability or excitability--that enables him to act and react on his environment. A man in full vigor can control or react of strike back, but the impotent man has no control and cannot react or strike back. The rage of King Lear marks the acme of senile impotency. Indeed, anger means impotency; the greater the lack of self-control, the more impotency is marked.

Alcohol is not a stimulant nor a tonic; it is a drug that deadens sensation. Hence its first, last, and only effect is to paralyze. The reason why drinkers like it is because it deadens sensation. The more enervated the alcoholic habitue, the less responsible he is for his acts.

To send a drunkard or a drug fiend to the electric chair is certainly the acme of social stupidity. We have quit legally killing those whom we know to be insane; yet we are slow to recognize the drunk or the dope fiends as artificially and temporarily insane.

Fever often produces mental hallucinations, but these states of aberration are not so often due to fever as to drugs. Alcohol and opium have sent many patients through windows to their death. Suicides and homicides are oftener the acts of brains crazed with drugs than the result of viciousness. And society is so ignorantly stupid as to license drug and gin shops, and clothe physicians with authority to build lunatics for our courts to run into the penitentiaries, hang, or

electrocute.

Habits are easily formed. It is an easy matter to go from alcohol to morphine. These drugs do not act the same, yet both of them deaden sensation and are habit-forming, and both produce physical and mental impotency. It matters not in what quantities taken, they weaken resistance and render those who use them less and less efficient for their work.

There is nothing except food that gives man strength. And too much food--eating beyond the digestive capacity--will cause weakness. When food is taken beyond digestive capacity, and a habitual intestinal fermentation is established, the individual loses his power to keep warm. Victims of this state may put on the heaviest clothing--indeed, they usually wear heavy woolen underwear, often two suits, and the heaviest top clothing--yet the more clothing they put on, the more they may. Still there is no comfort for them; for the more clothing put on the body, beyond just enough to protect from wind and weather, the more such people suffer from cold. Heavy clothes break down resistance, and if the habit of wrong eating and heavy clothing is continued, the refrigeration of death will relieve the unfortunate victims of this health-destroying habit.

When a man is in full health, nothing can add to his strength. Emotional excitement may cause him to use all the power he has for the moment, but the result is enervation that will require more than the usual amount of rest to restore. The same is true of protection with clothing. The body in health has power to protect itself from the varying temperatures. It can adjust itself to all degrees of heat and cold, and needs no protection except from inclemency. And when these facts are ignored and artificial protection is indulged in, self-protection is lost, which results in disease.

Food and clothing beyond necessity, close houses, artificial heat, stimulants (?), and tonics (?), make a conglomeration of influences that spell d-i-s-e-a-s-e and early death.

The body should be protected from wind and weather, but not from contact with the air. The body must live in the air. Open-woven cotton or linen underwear, or a sleeveless and legless light-weight garment that stands for cleanliness rather than bodily protection, is all that is necessary; then the top clothing may be adjusted to be in keeping with the weather conditions.

This is quite the opposite of what is recommended by modem medical science. But it should be known that modem medical science is a wonderfully wroughtout system of palliation which in every particular "borrows from Peter to pay Paul;" breaks down health to relieve suffering; builds a fatal disease by relieving or palliating an innocent one.

In the matter of prescribing for those who are breaking themselves down--becoming so enervated that the chill of death is sending its messengers of warning--the really up-to-date doctor will prescribe heavy woolen underwear and more "good, nourishing food;" and, as auxiliaries, stimulants and tonics to quicken the circulation and give strength! Such trifling with health and life is a disgrace to our civilization. Patients applying for advice--for relief from such symptoms--should be educated into health habits; not turned off with short-lived palliatives that will become allied with the patient's bad habits to hasten his destruction.

Those who find themselves distressed by a weather temperature that does not appear to inconvenience those about them should get busy correcting bad eating, clothing, and housing habits.

Do these people need heat-producing foods? Most of them have broken themselves down by overindulgence in these very same foods. Will they be benefited by eating more of them? This is exactly what modem medical science declares; and the result is more breaking-down, more disease, and at last premature death.

Rest--physiological and physical--whole or partial withdrawal of food, and quiet in bed, with artificial heat, and food only when comfortable, will soon right such patients.

As soon as habitual decomposition in the bowels is overcome, these patients begin to warm up; feet and hands gradually grow warm; the mind and body grow more active; the outlook becomes brighter. Often this change not only restores physical and mental health, but it puts the victim on a solid financial basis. People poisoned with alcohol or drugs, or who are toxin-infected, stumble over opportunities every day; they see others succeeding by, perhaps, picking up the opportunities over which they themselves have stumbled.

Those who are cultivating cold feet must not be surprised to find themselves lagging behind in the affairs of life; and they will certainly grow more diseases from day to day.

Death is a coldness that knows no warming; and the unfortunate person who has cultivated cold hands and feet is started toward that final state.

The greater the intensity of cold, the more pronounced its effects on the parts exposed. At three or four degrees below zero, redness is excited; treble the amount will cause swelling; and six times that amount of cold will result in gangrene.

The first effect of cold is a feeling of fatigue and a desire to sleep. But if sleep be indulged in, there will be no awaking.

Light.--Light is necessary for health. Germ life is destroyed by it. Plants do not thrive any better than animals in the absence of light.

Light is a stimulant, and of course can do injury to those who overindulge in it. Those who chase fad cures, and who are not happy until everyone is in the ground too deep for resurrection, will, while taking the sun-bath cure, blister their bodies and torture themselves in every way, that the sun's rays may be used. When this so-called cure ceases to be disagreeable, they will decide that the remedy has lost its effect, and away they go searching for a new cure that will be disagreeable enough to be curative. A cure with them is valued according to the extent of its disagreeableness. The cure idea with such people has not evolved away from exorcism--disease and cure still being a system of demonism. With the profession the demon has dwindled to a microscopic germ.

Clothes keep the light away from the body, and, because of this, man suffers more or less from light starvation. When such subjects are persuaded by a monomaniac healer to expose their delicate bodies to the direct rays of the sun, they will be very uncomfortable.

When people become accustomed to living in Colorado, and have cultivated the sunshine habit, they are not satisfied to make their homes in a country where the sunlight is shut out by clouds and rain. Light builds optimism, while cloudiness or shade causes more or less pessimism.

Light increases the amount of carbonic acid thrown off. It is said that when the body is brought into the light with the eyes shaded, carbonic acid rises twelve per cent; then, if the eyes are bared and the body covered, the carbonic acid rises to fourteen per cent; when eyes and body are exposed simultaneously, this acid rises to thirty-six per cent, exceeding the combined separate exposures by ten per cent. This increase indicates more combustion; and, in fact, there is a slight elevation of temperature. In children it ranges from one-tenth to one-half degree Centigrade.

The sun's rays, either direct or reflected, will cause a skin irritation--erythema--accompanied by an elevation of the epidermis, with serous liquid; that is, the skin blisters and causes great discomfort. When the sun's rays are reflected from water, the action on the skin in one day is very pronounced.

Pellagra is supposed by a few to be caused by the sun's rays; by others, to be caused by consuming spoiled maize--corn. It has not been my privilege to see more than one or two cases of pellagra; but, judging from what writers say about it, it is probably caused by excessive

starch-eating; or it may be the combined effect of starch, sweet (molasses), and the sun's rays and hot weather. This disease, and hookworm, should be eradicated by correcting the personal habits of those afflicted with them. It is a mistake to look for a unitary cause for these diseases; for, as with all others, there are many causes, and just what causes them in one individual may not be the cause in another. impaired nutrition is the fundamental cause.

Darkened houses are proverbially unwholesome houses. All houses should be built in such a manner as to secure as much light as possible. When light is furnished, air is sure to be, and provision for both these elements makes it almost impossible to overheat.

Blue rays have been used to restore hair; Roentgen, or X-rays, and violet rays are used to treat cancer; and all the rays of the spectrum have been used as remedies for diseases. But these remedies soon fall into disuse because of lack of merit. A few enthusiasts--specialists on skin diseases, or cancer specialists--have lost their lives from administering the X-ray; others have lost fingers, hands, and arms. I have seen cancer patients fearfully burned by the use of the X-ray--and that, too, without corresponding benefit.

The ability of radium to disorganize tissue has caused it to be used and recommended. All these remedies, including the plaster cure made from escharotics, appeal to patients as well as to doctors. Why not? If these remedies can cause the disease to drop out, "root and all," what can possibly do more? Commercialism is just now exploiting radium; but, like all cures based on a false theory of disease, it must fail.

The professional mind seldom thinks farther than to the radical removal of the disease-which is seldom, if ever, anything more than removing effects. That the cause may hark back to a faulty nutrition, and that this fault may be caused by one or more of a thousand-and-one enervating causes, is not thought of; or, if it is, no consideration is given it. It is easier to think palliation and work palliatives.

It is doubtful if anyone will develop a cancer who lives in a properly lighted, aired, and heated home, and who takes reasonable care of his body and mind, and keeps intensely interested in life.

Shut out the light and air from the body with thick, closely woven, close-fitting, and overheating underwear; live in a house in keeping; then have a dietary to correspond, and this will create a habitat in which any disease is liable to spring up and thrive.

A bright light held before the eyes and gazed upon is liable to bring on a state known as artificial slumber or hypnosis. The name of "Braidism" is given to this phenomenon because a man by the name of Braidy discovered it.

The influence of light and shade on the nervous system must be very great, and it should be better understood. Let us hope that it will be.

I have seen young children thrown into convulsions by allowing a bright light to glare into their faces when they were nervous and feverish.

Care should be exercised with babies to prevent shocking them by allowing strong lights to flash into their eyes.

The moving picture shows, attended frequently and over a long period of time, will create nervous derangements. No doubt many are being injured in this way. Those with functional, as well as organic, diseases are having their symptoms aggravated by frequent attendance at these shows; but they have not suspected the cause. One or two hours at a picture show will use up as much nerve energy as a whole day at the usual vocation. The combined effect of eye- and ear-strain--the picture and the music--is very strenuous and nerve-exhausting.

Sound.--The nervous system of those who live in large towns and cities is put to great stress.

We are fast approaching a time when the noise nuisance will have to be legislated out of existence, the same as other nuisances that have been squelched.

The automobile need not be a nuisance, but it certainly is. The majority of people who drive their machines act as though they had a special commission to make as much noise, split as much air, and kick up as much dust as possible.

Since the automobile and motorcycle have come to stay, there has sprung up a type of people who really believe that their other name is pandemonium. Unless they are kicking up enough noise to wreck the "nerve" of a political lobbyist, they will not be able to "split the ears" of His Majesty, the Prince of Perdition, when they go to him; which they will, for they certainly will be out of place at a "rest" resort. The average chauffeur plays with the cut-off as the average motorman on the street car plays with his bell.

The street car is made up of the quintessence of noise, and the motorman has become so noise-crazed that he clangs his bell--not because he is approaching a crossing; not because he has a slow coach in front of him, but because he is playing an accompaniment to his thoughts. He thinks noise, hence he plays noise.

The car itself is a gamester of noise "par excellence.'? But health declares it a disgrace to civilization. Not the slightest attention has ever been given to constructing a silent-running car; it is put together so that every part becomes a rival of every other part in creating din. Then, when this roar-monger is manned by a real bellringer, hell is certainly turned loose when this peace- and quiet-destroyer is sent over a street every thirty to sixty seconds. There is positively no excuse for inflicting such punishment on humanity. Surprise is expressed at the number of people committing suicide and going insane every year. Unless commercialism is controlled in its selfishness, it will fill the world with mad-houses and penitentiaries.

Fill a street with modern cars, and a lot of automobiles with their cut-offs opened and conks conking, and we certainly have a state of uproar that must cause degeneration of the nervous system of all human beings subjected to it.

Why should we wonder at the increase of insanity and crime, when we add to the din the thousand-and-one other nerve-destroying habits of social and business life?

Every lover of music and art should protest without ceasing against the growing tendency to convert this beautiful world into a hideous nightmare of inharmony. When it is admitted that "silence is more musical than any song," why should the mongers of noise be allowed to rule?

Is there anyone so simple-minded as to need to be told that such a bedlam as exists in every large town and city is subversive of ethics, art, and religion? The beautiful, sonorous, and euphonious sounds are suppressed by the uproar, and the prospective mothers of the coming generation are forced into developing a distorted nervous system to impart to their children.

We must certainly expect to reap as we sow. Can any but the fool believe that we can sow inharmony and reap harmony--sow pandemonium and reap Utopias?

Disagreeable sounds, smells, sights, tastes, and feelings are so intimately united and blended with commercialism that there is little hope of overcoming them. With this it is the same as with disease-producing beliefs and so-called cures. The present style of curing and immunizing is so much a part of Rockefeller's millions, and other millions, that there is no hope of any considerable reform. The masses move along tied to the yoke of mammon; the poor, sick fools denounce the system that they declare usurps and exploits them; yet in every other way they uphold it with ballot and voice.

The noise system is a cheap-John scheme. It gets up cars as cheaply as possible--which means that they must be noisy. It charges as much as the law will allow. The patrons are shaken and jolted as only a springless and bumperless car or wagon can shake or jolt; and then their finer

senses are shocked, through the auditory nerves, by the noise that almost prevents thinking. All this wears out the patron; it injures him as a citizen; his health is impaired. The health, morality, estheticism, and artistic development of the people of any city may largely be measured by its cleanliness and absence of noise. A public utility that is grossly selfish, and tears the people down to lift itself, is certainly penny-wise and pound-foolish.

When people are nervous, they lack in judgment--they do not make the progress in trades, professions, arts, music, and business that they should. A city made up of noise-crazed people will not make progress in a substantial way. Why? Because noise-crazed people are nervous selfish, disloyal, and unable to see that to gratify themselves to the detriment of the city's best interests is to cut their own economic throats. This is exactly what every street-car company is doing when its economy lowers the moral, health, and sanity standard of its patrons.

Make a city clean and quiet-or as nearly noiseless as possible. Every utility should be run in the interests of its patrons, on the principle that people well served are happy, healthy, and prosperous, and possess drawing power. They attract other people to their city. Such a city grows; its property advances; and, according to the law of "like attracts like," a prosperous community attracts prosperity.

All physicians who know that sickness is brought on, wittingly or unwittingly, from practicing many bad habits, and from unwholesome environments, by wearing out the nervous system with a lot of unnecessary noise, or by any influence that uses up nerve energy, know that rest is one of the most important elements in any therapeutic plan-rest of body and mind. This means that the body must not labor; that the mind must not labor; and that the nerves of special sense-namely, sight, sound, taste, smell, and touch--must rest from labor.

Everything may be done for a broken-down individual except securing quiet--absence from noise; and if this requirement alone is neglected, restoration to health will not take place. Nervous people must secure rest from noise, because nothing is so uncompromisingly destructive to the nervous system as noise.

It is the duty of parents to control children. When several get together, they are inclined to push their funmaking to excess, and from small noises they go to larger and larger, until they become hysterical. If this is permitted day after day, the decidedly nervous temperament will lose more or less power over coordination, and this will lead to chorea, or St. Vitus' dance, or other nervous diseases.

Light, very restricted eating, and quiet in bed, with visits from children interdicted, is the proper treatment. Such patients must be kept in bed until every sign of irritability and muscle-twitching has subsided.

After nervous children recover, a limit must be set to the amount of play indulged in; and excitement of all kinds must be avoided. The diet of such children must be simple: toasted non-yeast bread, butter, and milk for two meals each day; and fruit, cottage cheese, and milk for one meal. Quiet and rest is the principal remedy.

Not many know that music has other qualities besides the power to "soothe the savage breast;" or perhaps I would better say that most people think that only good can come from music. Inharmony disturbs rhythm, and anything that interferes with rhythm strikes at the base of development and interferes with growth--nutrition.

Everything capable of producing an effect may be said to have at least four influences; namely: a good, natural, or wholesome influence; then an excessive, defective, and perverted influence. This is true of music. I know of people who are made very miserable by music--it might be said that they are badly influenced by it. Then there are strong, healthy people who are driven almost mad by poor or defective musical execution, but who thrive in an atmosphere of harmony.

All people are not attuned to the same key; or it may be possible that it is easier to adjust the nervous system to the different tones than to fall into harmony with varying time.

Sensitive children drive themselves into nervous prostration by the inharmony they produce when compelled to spend long hours in practice.

It may be that only inharmony (noise called music) is to blame for the nervousness I have seen in music teachers and their pupils; but I know that many suffer much from music, or the noise of practice, or butchered harmony. Of course, there are other influences which must be considered besides the noise of musical instruments. They are food, mental, and physical bad habits that help noise build nervousness and break nervous people down.

School children are overworked. School, music, and social duties wear some of those who are food-poisoned to nerve exhaustion.

When enervation is pronounced, as we often see in mothers of undisciplined children, such mothers must be taken away from home environments to be cured of their diseases. There is always something unusual--something out of the ordinary--the matter with mothers who cannot get well in the environment of home and children; for the mother-love converts din--what uninterested people would call bedlam--into sweet music. The ear-splitting shouts coming from one of her future great men she interprets as orders by the captain of the guards; another, whose voice dominates all others, is her Beecher or Spurgeon; still another is a captain of industry who will control all the iron industries of the country. So intensely is her mind fixed on the future of her children that their noises are material out of which she builds their future, and the success that she has in placing each one at the head of his specialty medicines every pain she has. Where this is not true, an accident at one of her confinements has caused septic poisoning, which has reduced the oxygen-carrying power of the blood fifty per cent, causing oxygen starvation; and her brain is so illnourished that her self-protecting imagination fails to convert din into sweet music, and she languishes and dies unless removed and carefully nursed back to the normal.

If our noises are grinding a grist that feathers our nests, the success antidotes to a degree their evil influences on the nervous system.

When a din becomes the vehicle in which to ride to success, it becomes for the time being a tonic, even if it builds insanity when reverses come.

Sound may be health-building and it may be mind-destroying; it all depends on our relationship to it. It comes under the old rule: What is one man's food is another man's poison.

Electricity is a mode of motion. It is said to be interchangeable with light, heat, cold, and sound. The power of a waterfall, and mechanical energy generally, may be converted into electricity, and it may be generated by transforming chemical energy also.

Life may be looked upon as a mode of motion; or, if you please, transformed light, heat, or electricity.

Matter and motion appear to be the cause and effect, and the effect and cause, of everything. It is a mistake to look upon matter and motion as two entities. Matter is. In one of its states, when at rest, it is static--in a condition of absence of motion; when active, it is in a dynamic state--in a state of motion. Motion is inconceivable as an entity; it must be the expression of something--and something is mentally conceived as matter. There are no such things as matter and motion, health and disease, strength and weakness, knowledge and ignorance, etc.

There is matter, and it may be in a static or dynamic state; there is health, and it may be in a good or bad state; there is force or strength, and it may be in a strong or weak state.

In the last analysis there is something, and we call that something matter. The various manifestations-the various shocks and reactions that we experience--are caused by the different

states of matter of which we ourselves are a part.

The primary or elementary states of matter we denominate light, heat, cold, sound, life, etc. Why light, life, or any other state of matter presents may be explained in many correct ways, but a kindergarten explanation may be such as I have sometimes used, namely: The elements of matter may be brought together in such a way that the summa summarum (sum-total) expression is that of light. A little change in the arrangements of atomic structure gives out heat, and another change gives out sound; and so the changes may be made, each giving out a sum-total expression, one of which we call life, and still another, more subtile than all the rest, we call mind. And all these states of matter we like to think of as entities'. but they are notthey are different states of matter.

Animal life cannot be suspended longer than a few minutes at a time, with any hope of resuming its manifestation. Hence it is possible that the elements of the body may be so compounded as to develop the different states we call light, heat, cold, sound, electricity; and, in doing so, air, food, and water are converted into life.

It is almost, if not quite, proved that the energy presiding over, or governing form, is electrical energy. Probably all formative energy is electrical, and possibly the question of sex is a question of a given number of electrons in the atoms comprising embryonic cells.

The ultimate atom, or unit of matter, according to present scientific developments, is conceded to be the electron, which is declared to be a literal atom of negative electricity.

We have become so used to thinking of the various states of matter as entities that it becomes almost impossible to express ourselves in any other form. If I lapse into referring to the different states as individual, I crave the reader's pardon and his indulgence in substituting in his mind the word "state" where I possibly may express myself as referring to "entity."

If in what follows I appear to individualize, entitize electricity, I do not mean it. Electricity, the same as every natural force, is a state of matter.

"Like electricities tend to repel one another," and, according to Lord Kelvin, the atom is held together by a core of positive electricity, which is known as an "ion." The problem of atomic architecture is to reconcile the common attraction of the ion for all the electrons with the mutual repulsion of the electrons themselves, so as to produce a stable structure.

By the aid of mathematical theory, checked by actual experience with magnetized needles--to represent electrons--floating freely in water, under the influence of a centrally placed electromagnet, Professor Thompson has been able to unravel the architecture of the atom.

The atoms of the different "elements" vary only in the number and arrangement of their electrons; every electron, wherever observed, being absolutely identical with every other.

Electrons are found to be arranged in concentric rings within the atom, and the presence of a certain number of them in each ring is necessary for holding any given number in place outside of them. The stability of the atom, therefore, depends on the number and arrangement of the electrons it contains.

Such a thing as an absolutely stable atom--a fixed, never-changing atom--is inconceivable.

Professor J. H. Thompson, of Cambridge, explains how atoms of one element, by losing their outer ring of electrons may be transformed into those of another. This also explains or suggests a law of natural selection among atomic species.

Of the many atoms that have attempted to gain a place for themselves during the countless past eons, there are some eighty that have survived.

This theory is consistent with evolution, and it is to be hoped that it will be proved out in all departments of learning.

We have seen, according to the latest accepted theories, that atoms are in reality atomic electric batteries--that each atom is an arrangement of electrons, or negative atoms of electricity with central core, or ion, of positive electricity.

To prevent perplexity, I will say that, from present knowledge, there are no literal atoms except electrons; all other so-called atoms are compound structures, made up of positive and negative electricity.

Electrical energy is hardly ever used as such, and only after it is transformed into other forms of energy; namely, mechanical, heat, chemical, and light.

Electricity as a remedy for the cure of disease is one of the fads of modern therapeutics. Outside of the benefit derived from suggestion, and the harm caused by so-called therapeutists in their endeavor to cure the sick, there is nothing in the remedy as understood and used today. The market is full of electric belts, garters, amulets, rings, hair-restorers, oxonizers, and all sorts of monstrosities in the shape of instruments and appliances, too numerous to mention. Outside of the suggestion of cure, or what the patient believes will take place after their use, they are not worth a fig a carload.

The profession uses the galvanic and faradic currents; also the X-ray, high-frequency, and static electricity. Very little good comes from any of these. A foreign body and broken bones may be diagnosed by the X-ray, and as a means for diagnosis this form of electricity has come to stay. For the generation of mechanical power, electricity is used. Vibratory instruments for giving mechanical massage are beneficial; but electricity is used only as a generator of the power. X-ray and other light-producing agents are used for the effect of the light--for the stimulation and tonic action. The X-ray can and does kill the tissues, and causes sloughing. Cancer has been, and is yet, treated with electric light. Results are unsatisfactory and doubtful. The radium treatment causes sloughing of tissue. All the new fangled remedies are not a whit better than the old-fashioned escharotic drugs that have been used in the manufacture of the well-known cancer plasters; some of which are "trained to eat out only the cancerous tissue. root and all"!

Electricity, as electricity, cannot be utilized by the human organism. How is it possible to use a state of matter? Life, light, heat, cold, sound, electricity, are states of matter. How can these states be used as food or remedy? Perhaps only as electrons, found in atomic and cellular lifein organized form. Is electricity utilizable? Possibly as electrons--units of matter--but not the force with which these units are torn from organized matter. The force is what is called electricity--not the units of matter carried with the force. The debris gathered in a cyclone is not the cyclone; the force or energy set in motion is the cyclone. The idea of imparting electrical energy to the human body lacking in energy is one of many common errors.

An enervated subject cannot be forced to receive energy. This is attempted by many physicians when they undertake to force food on those who are run down and enervated from lack of digestive power. Nature will not stand for forcing measures. There is no place for heroic treatment. Every vital process has safeguards thrown about it by nature, and those guards cannot be ignored or torn down with impunity.

In enervation, organic functioning is impaired. This means that the organism is deficient in power to take from the blood such matters as are necessary for repair or for the performance of its normal functioning. The organism, once reduced to this state, will remain so, unless the necessary rest can be procured. It is not mere building material that is needed; it is not stimulation that is needed; for enervation is the sequel of overstimulation. Rest is the remedy; and, as rest is secured, electrical energy will be supplied by food, air, water, light, and heat. This subtile energy cannot be forced on the organism in the gross manner offered by the bull-in-the-china-shop methods of modern medical therapeutics; an enervated state cannot be cured other

than by physiological rest--fasting--and physical rest; not exercise, work, stimulation, and starvation. Electric therapeutics amounts to but little more than chemical or mechanical irritation. Locally applied, it may do as much good as a mustard plaster-act as a counter-irritant.

Giving iron to those who are anemic or dysemic, and lime to those who need lime, is on the same order. The rule is that very few are dysemic because their food is deficient in the elements needed. The cause of deficiency is lost selective and appropriative power, and the more of the inorganic elements offered the system by way of drugs, as remedies or food, the more the dysemia develops, until the unfortunate victim is forced from functional to organic derangement, and on to premature death. This is not necessarily a rapid development. Such patients are seeking in vain for cures for from ten to twenty-five years. If they start at from twenty-five to thirty, and require twenty-five years to wear out, trying palliatives and false cures, they certainly die early enough. Besides, efficiency has been wasted in physical and mental impairment caused by disease and so-called cures.

If present scientific developments augur well, it will not be long before we shall know positively that electricity, or electrical energy, or more surely the electron, is the alpha and omega of all things; and, from a health standpoint, a knowledge of bow to conserve, utilize, and generate this energy will be the "summum bonum" of a successful therapeutics.

The most we know today of how to supply electric energy is to have the enervated--the impotent-rest. In a state of rest this energy appears capable of accumulating; and we know from daily observation that unrest, activity, and overstimulation cause its dissipation.

The farmer knows that rest restores energy and potency to land that has lost its fertility from use. But he does not know that ground granite or feldspar will restore its productiveness, and that in all probability the fertilizer "par excellence" contained in it is the static electricity that has entered into its formation and is liberated when the rock is made into bread.

I have proved out on electricity as a remedy the same as I proved out on the regular materia medica.

I once used the galvanic current in treating fibroid tumors, and believed that the electricity caused absorption. But I have learned, after years of experience, that the only really effective remedy is the correcting of bad habits which break down resistance, after which, physiological equilibrium is lost, and this allows cell growth to be perverted.

Lost resistance means lack of energy--lack of life force; and, according to the few hints thrown out regarding the electric architecture of the atoms, when enervation is pronounced, there is probably a dissipation of electricity--electrons--and a consequent change in the structure of the atoms that build the cells. As a result, we see tumors and growths of different kinds, and hardening of tissue--arteriosclerosis--stone formation, etc. If this is a true explanation of the cause, the logical remedy would be to furnish the system with electricity; but to turn. the battery and flood the body with a great current of electricity would be about as appropriate or logical as to tie a rock around the neck of a thirsty man and throw him into a river to relieve his need of water.

Nature never supplies wants in such a blustering way. The rock is built by feeding it with an impalpable supply. If this is true of rock-building, what must be the subtleness of tissue growth, and how slight the change required to convert normal tissue into abnormal-healthy flesh into cancerous!

Instead of flooding the surface of the body with a current of electricity--which the use of a battery means--the therapeutist must know how to cause the body to secure its electricity from the air, light, and food.

The average work done by physicians and surgeons in their application of remedies is what

one would expect of a house painter put to work to paint a portrait. There is a lack of delicacy. It is true that there are many skillful and delicate operations performed; there are also skilled matadors and butchers who perform skilled operations. We should not hold the idea that expert skill in operating is sufficient excuse for operating. I say, with no fear of successful contradiction, that the majority of operations performed have no excuse for being done except that they are done skillfully. In treating patients with electricity, they must be placed in a state favorable to receiving the inflow as offered by nature. All that is necessary, usually, is to learn in what way this energy is being dissipated; then stop the waste. Indeed, this is the simple formula for supplying the human body with all its needs.

3. Chemical Agents

Caustics

Caustics are chemical agents which produce disease through their power to destroy tissue.

As followers of my medical philosophy will use no drugs, they will not be interested in drugs, either of high or low degree.

The action of a caustic is that of causing necrosis or gangrene of the flesh that comes in contact with it. After the flesh is killed, the process of sloughing takes place. This process means that under the dead tissue the living is carrying on the work of separating the living tissue from the dead. The dead undergoes suppuration--disintegration--dissolves, and runs away as pus. Enough serum of the blood is carried to the borderland of the injury to neutralize and wash away the poison of putrefaction.

The normal chemical state of the fluids of the body is alkaline, while that of decaying tissues is acid. To prevent the acid--the septic--fluid of decaying tissue from being absorbed or taken into the body, where it would set up septicemia--blood poisoning--the living tissue that is in proximity to the sloughing tissue is infiltrated--saturated--to overflowing with the alkaline serum of the blood. This accounts for the great amount of fluid and pus seen in all suppurating processes. Pus is laudable when alkaline. Pure vaccine--if there is any--is dried laudable pus, and is inert.

If a wound is closed and the discharge has no outlet, the pus becomes ichoroid--septic--poisonous, sets up blood poisoning when forced absorption takes place, and death follows from blood poisoning. Septicemia is the professional term for pus poisoning.

It is said that the skin resists the action of caustics by throwing out a secretion which furnishes chemical elements that join the caustic elements to make an insoluble compound. Nature is busy meeting and destroying the influence of enemies of health and life. In this work help is needed, and the physician should be able to read the language of nature and assist her in her efforts to keep a rational and sane balance. On account of misunderstandings or lack of interpretation of systemic needs, the physician is often enlisted with the body's foes, and is tearing down rather than building up or defending the body.

Caustics are divided into **coagulating** and **liquefying.**

Coagulating caustics are those known as metallic salts, the various acids, etc. Nitrate of silver, nitric acid, nitrate of mercury, zinc chloride, and the actual cautery (white-hot) are a few that may be listed with these chemicals. These are so powerful that they kill the skin at the instant of contact.

Acids may be neutralized at once if plenty of water is handy; for water dissolves the acid and dilutes it into a harmless solution. The leading acids are: nitric, hydrochloric, sulphuric, and chromic.

Nitric acid produces a yellow eschar; sulphuric causes a black eschar.

Liquefying caustics are potash, soda, and ammonia.

The scars following the sloughing caused by caustics are often severe, causing contractions and disfigurements.

Toxin (Poison)

Any poisonous nitrogenous compound produced by animal or vegetable cells.

"Any poisonous substance--protein in nature--produced by animal or vegetable cells."--Gould's Medical Dictionary.

Toxins are those substances which, when taken into the body, or if developed within the body, are capable of so changing the fluids as to cause sickness or death.

There are two orders of toxins resulting from the fermentation of protein and protein compounds. One is physiological and the other pathological. Snake venom is a type of the first, and sepsin---putrefaction--is a type of the other.

Toxins that are developed physiologically, like the venom of the snake, are said to be for the purpose of defense. If we could know all about the subject, it is possible that the poison serves a physiological purpose in his snakeship's physical economy.

Man's interpretation of venom, odors, teeth, beaks, horns, hoofs, and claws has been from the standpoint of an eternal warfare for existence. Those attributes of animal life--physiological functioning--have been studied quite largely from the standpoint of weapons of offense and defense. If studied from an optimistic point of view, all those supposed defensive and offensive organs, and their functions, will be found to be indispensable aids to metabolism--digestion and assimilation--and to be physiological necessities.

When we keep steadily before the mind's eye that what we call bad is the reverse side of good, that unity is the key to universal order, and that the old and childish belief in two warring forces, namely, good and bad--God and Devil--is unworthy of present-day enlightenment, we are equipped mentally for analyzing chemical, physiological, and pathological processes rationally and certainly sanely.

There is no question but that autogenous toxins are first of all physiological necessities, and when forced to play the role of an enemy in physical economy, it is because it serves nature's purpose better. Hence optimism sees only good in all processes.

It may be asked: What of it, if the ending must be the same?

But the ending is not to be the same. A father chastises his son, not because he is an enemy of the boy, but because he is vitally interested in the son's welfare.

If God is good, then His chastening rod is not to defeat His purpose--to oppose cosmic necessity.

Pain is for good, for education, for development. No good can come from assuaging pain without removing cause; and certainly no good can come from negating--denying its existence, It is true that the opiate stops pain, but the patient dies afterward because the cause of the pain was not removed. It is true that removing the fibroid tumor cures (?) the patient of the tumor, but it does not remove the cause, and in from one to ten years afterward the patient dies of a pneumonia, kidney disease, or cancer. That the doctor is too limited in his reasoning to trace the connection between the cured (?) disease--the removed tumor--and the disease that proves fatal years afterward, does not militate at all against the truth that the two are one, neither does it change the working out of the unchangeable law of cause and effect.

To negate--to deny that there is pain--may banish nature's warning voice, but it does not alter the law of cause and effect; and if cause is not removed, the effect will certainly obey the laws of its nature; for law is God, and God is unchanging--not even the prayer of all mankind centered on one purpose will change one iota or tittle of law.

Pain and discomfort are reactions from undesirable influences. Remove the cause of the irritation, and the irritation and the discomfort of it disappear.

With an understanding of the inflexibleness of the laws of nature, in little as in great things, we should proceed with the subject of toxins with a mind cleared of some of the befogging beliefs of superstition and modern false reasoning.

The toxins that form within the organism are called endogenous poisons. They are called auto-intoxicants, and they set up autotoxemia when not eliminated properly.

These poisons alter the chemistry of the fluid medium--blood and other fluids--in which anatomical elements--tissues of the body--live and are nourished. It may be well to carry the idea that all the tissues of the body live in a sea of blood, as fish live in water, from which they gather nourishment.

At this point it may be well to say that health depends entirely upon the proper chemistry of the fluids of the body; and the chemistry depends upon the elements in the food, the mind, and the toxins developed or taken in. How is it possible otherwise for the various tissues of the body to select the elements needed for their upkeep? This being true, the importance of the part played by food in health and disease should be obvious to all giving any thought to the subject.

Toxins are divided into two groups; namely, **exogenous,** those formed in the alimentary canal from fermentation and decomposition following imperfect or faulty digestion. These toxins are attributed to germ secretions, but in all probability the ferment furnished by the germ is no more toxic than the ferments (ptyalin, pepsin, et al.) furnished by the digestive organs of the body.

The action of the germs is to set up fermentation (for the ever-present germ is a ferment) in all the foods taken into the alimentary canal beyond the digestive limit of the body's physiological ferments.

As a result of germ fermentation, toxins are formed, and their nature is in keeping with the chemic medium. If the fermentation is of vegetables or fruit, the toxins are **irritating,** stimulating, and enervating, but not so dangerous or destructive to organic life as **putrefaction,** which is a fermentation set up in nitrogenous matter--protein-bearing foods, but particularly the animal foods.

Endogenous toxins are autogenerated. They are the waste products of metabolism.

Metabolism means the power possessed by organized bodies of continually using up and renewing the tissues composing the body. In the process of building there must, of necessity, be a waste. This waste must be carried out of the body by the emunctory organs; but if, because of enervation, excretion does not take place, this waste product (toxin) is left in the body to poison it.

Exogenous toxins are those taken in with food and those formed outside of the body, and **endogenous,** those generated within the body.

When the body is enervated from any cause, or from many causes, excretion is always more or less inhibited, and as a result of accumulating the natural excretions (toxins) the fluids of the body are poisoned. The first symptom is a toxic stimulation--intoxication state; then comes a general soreness of the flesh, which is described as an aching from head to foot. A pronounced state causes one to feel very old, and unless relief comes in a few days, life loses all interest to the sufferer. An interested, hustling person will be transformed into a discouraged pessimist in a

few days.

Alimentary Poison.--Potash salts are necessary to the well-being of the body. It is said that dogs fed on meat freed from potash died in ten days--sooner than by starvation--showing that potash is necessary to prevent putrefaction.

Scurvy (acidosis), or ship disease, is due to a deficient supply of potash, furnished by fruit and vegetables, which, when oxidized in the process of digestion, renders the fluids of the body potentially alkaline.

To eat fresh or cured meat, eggs, fish, oatmeal, cookies, bread, rice, cake, puddings, coffee, tea, chocolate, etc., is to generate a slow acid poisoning.

Fruit and raw vegetables--salads--will correct any type of disease caused by acid poisoning.

Meat, potatoes, tomatoes, lettuce, cabbage, coffee, or tea, without fruit, will cause potash poisoning.

Albumin is a rank poison when injected into the blood; but when converted into peptones by the digestive secretions, it becomes one of the most important foods.

Where albumins (nitrogenous foods) are taken in excess, fermentation (putrefaction) takes place, and the absorption of this toxin causes enervation, high blood pressure, **arterial diseases,** heart diseases, catarrhal inflammations, and other ailments.

Beverages

Water, alcohol, coffee, tea, chocolate, and cocoa are common sources of toxin poisoning.

Water quite often contains minerals and organic matter in a state of putrefaction. Water with these elements in it is not so toxic as many professional men believe.

The elements--earth, air, water, and fire--are self-purifying; hence putrefaction taking place in water of sufficient protein toxic potency to render it dangerous to drink will be so offensive to the nerves of special sense that the one about to imbibe will turn away from it in disgust. Too much mineral in drinking water is not desirable, because it is left in the system to harden the tissues and prematurely age those who drink it.

Alcohol is toxic and inclined to bring on rheumatism of joints, gout, gastric and liver diseases, and in time neuritis and other nervous diseases. Why? Because all stimulants continued for any length of time bring on enervation. When the system is enervated, elimination is imperfect; then the toxins resulting from metabolism are retained in the system to poison. The deposits of these waste products in the muscles or the tissues of the body create such diseases as rheumatism.

The danger from fatal poisoning--from taking fatal doses of alcohol--is not so great as that resulting from the slow toxic poisoning--chronic poisoning--or alcoholism.

There is very little drunkenness today, compared with fifty to a hundred years ago, notwithstanding the fact that there is more alcohol consumed per capita. The reason for this is that alcohol is taken in the form of beer and wine, which are not so toxic as brandy and rum.

The continuous stimulation from the daily use of alcoholics causes enervation and imperfect elimination.

The use of alcoholics whips the appetite into taking an excess of animal proteid; and this is the reason why many users of alcohol have rheumatism and gout.

Absinthe contains nine different essences. All are toxic. There is very little of this poison

consumed now in this country. New Orleans has an absinthe house which ranks in age with her most ancient relics.

Coffee is a slow, insidious poison that encourages retention of excretions by its slow but sure enervation.

Coffee fools many into believing that it is an eliminant, because while they use it they have an action of their bowels daily. This is a false belief; for all the time coffee is used as a daily beverage there is a gradual enervation, with retention of the toxins or excretory products--waste from body--building. Coffee outranks alcohol in building endocarditis and sclerosis of blood vessels.

Ordinary reasoning should help anyone to understand that a drug that stimulates as coffee does, must in time cause much trouble by way of enervation, faulty elimination, and autotoxemia.

Tea stimulates, and in time enervates; following which comes retention of toxins in the system. Tea has a special toxic and sedative influence on the nervous system, and when used for a long time it causes neuralgia of an intractable nature.

Coffee and tea cause deposits in the grooves and openings in the bones through which nerves pass, causing in time neuritis or neuralgia that will not down until the habit of taking these table beverages is given up. These are the cases that surgeons undertake to cure by nerve-cutting or nerve-stretching.

Chocolate builds catarrh, and should not be used as a daily table beverage.

Cocoa is a stimulant and, like all stimulants, develops a habit. It brings on enervation and the usual consequences.

Lead.--Nearly all beverages--even water--contain lead. Water pipes, cisterns, reservoirs, etc., are built in such a way as to impart more or less lead to the water. All soft drinks charged with carbonic acid carry lead. Seltzer water and the lighter alcoholic beverages all carry more or less lead. Flour and bread often contain lead. Pewter, which is used to solder, contains lead. The pewter foil around chocolate, and the grinding machines used by butchers, impart more or less lead to the materials with which they come in contact. The diseases developed from lead toxin are what are known as lead colic, arteriosclerosis, kidney and other diseases.

Copper finds its way into the body in bread and wine. When copper vessels are used in preparing food and drink, copper can be found in wine, cider, and beer. It is said that condiments prepared with vinegar and pickles always contain copper.

In the quantities taken into the system from the sources named, copper is not thought to be greatly detrimental.

Arsenic is far more injurious than copper. It is to be found in wines. It is used as a preservative--to prevent fermentation in food. Since the pure food laws have been put into effect, this drug is not so extensively used in preserving food.

Salicylic acid is one of the most extensive poisons used as a preservative. Its use today is not so extensive as a few years ago.

Non-edible vegetables, such as **toadstools, sprouting potatoes,** and others, furnish an amount of poisoning every year,

Poisoning by animals occurs mainly in hot countries. In our country there are **snake-bite, bee-sting,** and poisoning by the eggs of various fishes.

Fish eggs provoke symptoms of cholera--vomiting and diarrhea--accompanied by skin irritation--erythema and urticaria.

Fish are said to be made toxic by living in water containing putrefactive matter.

Oysters are said to be poisonous when living close to the outlets of sewers.

The wholesomeness of healthy fish is questioned. Those who use much fish food are liable to develop skin and liver diseases. Probably, however, one is no more liable to develop disease from fish than from other food eaten beyond the power of the organism to utilize well.

All foods become toxic when indulged in beyond the real needs of the body.

The meat from **overworked animals,** those run down and killed, those that are slaughtered after **fatty degeneration** has well set in, is poisonous.

Stall-fed animals, that would die from disease in a short time if not butchered, are disease producing.

Blasted grains--wheat, rye, and corn--are poisonous to animals as well as to man. Pellagra comes from starch poisoning--so we are informed by those who have had experience in treating the disease.

Poisons in the Air.--People living close to smelters, slaughter houses, soap and glue factories, the outlets of sewers, etc., are injured more or less by poison gases.

Tobacco is a stimulant and sedative. Its stimulant effect is that of irritation. It is a rank heart irritant. During the first ten to twenty years of its use the heart is made to work overtime--often from twenty-five to forty per cent. Through years of use there becomes established more or less toleration. So great does this toleration appear to be that the use of the drug is looked upon by many as of no serious consequence.

The influence of the poison is to lower the individual's self-respect and dull his moral responsibility. It builds selfishness and prevents the evolution of higher efficiency.

At the beginning the effect of tobacco is that of a poison. it causes nausea, vomiting, and great depression of the nervous system. This being true, can anyone so far forget these facts as to say that tobacco is not a rank poison?

The reason why the system appears gradually to develop a toleration is because the irritating effects fail in time to cause the system to react against it as powerfully as at first; but this is no proof that it has lost its influence and is no longer an irritant--a poison. Indeed, the body continues to react, but it is in the form of fortifying against the influence of the poison. The heart and blood vessels are enlarged--these organs are thickened, hardened, and rendered less capable of performing their most delicate functions--namely, renewal of cell life and elimination. As a result, the walls of these organs become thick, hard, and lose their resiliency. This state, when established, is called hardening of arteries--arteriosclerosis, sclerosis, cancer, etc.

The chronic effects of tobacco on other organs of the body are that it causes enervation, and in many people emaciation.

"Tobacco heart" is recognized by the least observant when far advanced. The effect of tobacco on the eye is well known.

Many nervous "breakdowns" come from tobacco rather than from too much work.

Epilepsy, bronchitis, neuralgia, **rheumatism**, and many nervous disorders are brought on, directly or indirectly, by tobacco.

Nicotine is the active principle of tobacco. It is more deadly than arsenic, strychnin, or morphine. The odor will kill a bird.

Women and children are frequently invalided because husbands and fathers practice the filthy habit of smoking in the home.

When smoking is practiced in it daily, a home soon becomes saturated with smoke; after which it becomes a menace to the health of wife and children.

No man would willingly double his expense for tobacco if he knew this. Some might not worry about how uncomfortable wives are made by ill-smelling homes, but if they realized that a hundred dollars expended each year for sickness legitimately belonged to their tobacco bill, they probably would stop ruining their homes.

The use of one stimulant and narcotic calls for another. The smoker usually uses coffee, tea, or alcohol.

Diseased plants may produce digestive disturbances.

Plants infested with disease-producing germs are believed to be a source of much disease. Lettuce has been denounced by experts as a vegetable unfit to eat, because it is a germ-carrier. Personally I have not found this true of any vegetable, and, what is more, I know it is not true. Even if the vegetables that are eaten raw should carry germs, the germs stand no show against normal digestion. This I have been proving for years by prescribing the Tilden salad to every patient as a food to eat with every dinner.

Poison gases are generated in the bowels. The gas coming from putrescence should be washed out of the bowels by enemas, and eating should be suspended until lost digestive tone is restored.

Illuminating gas is very toxic. It contains carbonic oxide.

In cities where gas is manufactured there is more or less loss--waste--and the soil becomes saturated. The atmosphere of Paris is said to contain 1 part per 10,000 parts of carbonic oxide. Much more is believed to exist in houses into which, because of high temperature, the gas is drawn. This is added to by paintings and tapestry.

There is some little excuse for being poisoned by many of the items above pointed out; but what excuse can be given for the wholesale poisoning brought about by the use of tobacco?

Man deliberately poisons himself, but the layman can hardly be held responsible for doing so when we take into consideration that his medical adviser is offensively saturated by the weed.

So long as the world knows so little as to believe that a man who deliberately poisons his own body with tobacco is a safe medical adviser, and is justly a celebrated physician, just so long will rational healing be refused. Man will never come into a satisfying knowledge of anything until he wants to, and then he must put himself "en rapport" with the psychology that will bring it.

We cannot serve two masters. We must choose between the false and the true. And this decision is "up to" us every day and every hour in the day.

Tobacco is a poison that soon establishes a reign over the will of man. The mind is weakened in many respects. Memory for proper names is lost. Dyspepsia and heart disease ended the career of Mark Twain. His discomfort and heart disease were built by tobacco and coffee.

4. Animate Agents

History of Infection

Infection is divided into three stages, according to bacteriology; namely, animate agent, a fermentation, and intoxication. I would divide the history of toxemia--infection--into **Enervation and Autotoxemia.**

Enervation is brought on from one or many causes which use up nerve energy, both of a mental and of a physical character. Then, when enervation is established, functional efficiency is lost, and with this follows a "slump" in the production of physiological ferments, after which the omnipresent pathologic ferment--infectious agent--becomes "master of the show;" and if the good ship of health does not at once discard its jetsam and refuse to take on any flotsam, pathologic fermentation and decomposition will follow.

So long as the body is normal, and secreting a normal amount of physiological ferments, pathological ferments are made to dance attendance upon the body in the capacity of menial servants; and they will serve long and well in that capacity, if the master is sober and sane. But when licentiousness and sensuality force physical insolvency, then servants become masters; and whether this reversed order is ever righted depends entirely upon the amount of organic integrity left, and the skill used in suppressing the insurgents--bacteria--and reestablishing the home guard-enzymes.

This being a true statement of how disease is established, time and attention should be given to methods of keeping up the health standard, rather than spending all the time and attention in the study of bacteriology, when germs are at most only auxiliary agents in the development of health and disease.

Pasteur, after his researches in fermentation, took up the subject of disease. He assumed that disease was caused by fermentation; hence he searched for germs. The rank and file of the medical, as well as the non-drugging, profession filed in after their medical bellwether without question. The reason for so much unquestioning acceptance of the dicta of this great French germophobiac was that the profession was in chaos regarding cause, and it was ready to accept a savior of any kind without question. Today the germ theory fits well only those who take it without thought. Its popularity comes from numbers, not reason.

It will be well to keep in mind that Pasteur, Koch, and Metchnikoff were not practicing physicians; they were laboratory experts who--a priori--assumed that germs cause disease, and undertook to discover the specific germs that cause each specific disease, by experimenting on guinea pigs, chickens, and other animals; and, by making research in human and other excreta, they endeavored to discover the habits and customs of the flora and fauna of the intestinal canal.

In their explorations, experimentations, and deliberations, they found themselves sometimes on one side and sometimes on the other side of the question of whether or not germs were friendly to their host.

The material in the digestive tract, in bacterial form, is said to number one hundred and twenty-six billions for the daily human excreta. This certainly indicates that man has a powerful resistance, or none would reach the age of from sixty to a hundred years. By some observers it is said that guinea pigs have been successfully reared without germs, and that the polar bear and other animals of the arctic region have no bacteria; that even in the temperate regions there are animals whose alimentary tracts contain comparatively few bacteria. The parrot is one. Other observers have arrived at quite different conclusions.

Experiments have shown that, when chickens are fed on sterile food, they fail to develop, or are retarded in growth, and that they show normal growth only when fed food containing bacteria. It is said that Madame Metchnikoff arrived at the same conclusions in her experiments with tadpoles.

Pasteur's research work on the diseases of the silkworm was followed by a study of diseases of mammalia. He created the fundamental methods of bacteriology. It was in this field that Koch

achieved fame and was rewarded by his government, being awarded a title, a hundred thousand dollars, and a pension.

Koch discovered a cure for tuberculosis. In this field of discovery he has had many successful understudies, or imitators, of whom--neither last nor least--was Friedmann with his turtle serum.

That tuberculosis still thrives, except as it has been handicapped by the growing intelligence of the people and an improved sanitary science, is easy of observation to all but prejudiced eyes; yet, notwithstanding, this truth does not militate against the Koch, or bacteriological, theory of cause and cure. Once a fallacy is in the saddle, it rides, for a time, rough-shod over truth.

To utter a word of doubt or protest, that the theories of Pasteur, Koch, Metchnikoff, et al., are not the whole truth, consigns one, so stupidly ignorant, to total professional darkness--oblivion.

It should not be forgotten, in passing, that Koch abdicated his theory regarding bovine tuberculosis, but the profession out-Koched Koch and repudiated Koch's repudiation.

Reader, do not pass judgment on my protesting until you know all I have to say--until all the testimony is in! It is just barely possible that some of it may be evidence, and such haste on your part might not prove wise; for time--the court of last resort--may reverse your decision.

One of these laboratory experts has practiced medicine, thereby familiarizing himself with the peculiarities, habits, and customs, of both a mental and a physical character, of sick people. Theoretically they perhaps knew all about man, his mind and body; but to know--positively know--all knowledge must be lived. A doctor may have a lot of textbook and laboratory knowledge; but, unless he spends years in applying it, it is not his knowledge, and he only thinks he knows.

According to the laboratory expert's opinion, man is an automaton--a fixed entity--that has no power within himself to stay well or make himself sick. It is true that there is a perfunctory recognition that the body has within itself anti-bodies--a given amount of self-protection or immunization; but that activities, both mental and physical, have more than anything else to do with determining whether man shall be sick or well, is not recognized as the great field of causation; and, as to man's having within himself power to live in health--as to his having autoinimunizing power--being a living, breathing, activating knowledge--this is left out of the mental equation of all these eminent bacteriologists; hence the inexplicable failures that have accompanied every well-worked-out plan of cure on a bacteriological basis that has been advanced by them.

Perhaps I should not be personal; but, inasmuch as what I am about to say is of vital importance, I am justified in declaring that each one of the eminent gentlemen named above was a semi-invalid--and that, too, with his knowledge of germs. If germ infection was the cause of their ill-health, they certainly should have kept their bodies free enough from unfriendly organisms to have enjoyed health. A theory of cause and cure that will not give a reasonable amount of health to its possessor is not of great importance.

The conclusions arrived at by the bacteriological experts have been reached by approaching the subject of disease with the fixed hypothesis that there is but one cause of disease; namely, animate agents--that of germs; and then taking for granted that the cause--germs--is irresistible, unless headed off by immunizing the body by inoculating it with the virus of disease--germs. Then the logically obvious must follow; namely, if disease is headed off by immunization, health must be inevitable.

The absurdity of this one-sided search after the cause of disease should be apparent to any intelligent observing mind.

At this point a little reasoning should not be despised: There are a few people who enjoy

health and long life. Is it because they are not exposed to the omnipresent germ? They have not been made immune by virus or serum inoculation. This cannot be the reason. Then it must be because they have within themselves power to resist the influence of germs.

There are people who are well a part of the time, and a part of the time they are sick. Is it because they are exposed to germs a part of the time, and a part of the time they are not? This is not true. Then what causes the immunization a part of the time? They have no artificial immunization. If germs cause them to be sick a part of the time, why not all the time? Do germs cause disease a part of the time, and then a part of the time not? If so, are there subjects whom they never influence, and others whom they never immunize?

There are people who are, like Pasteur and Metchnikoff during their lifetime, in poor health all the time. Is it because they are infected and infested with germs more than other people? Surely this could not have been true of the laboratory experts! Who, knowing the cause of disease, would willingly suffer when a cure was at their hand?

If all that they taught about germs causing disease were true, surely a willingness to live as semi-invalids would be most inexplicable in the two great bacteriological experts.

In our own country, C. A. Herter, M.D.--once a very popular professor in Columbia University, and author of a book on bacterial infections of the digestive tract--died quite young. His perfected knowledge of germ influence in disease availed him nothing when he was called upon to save himself.

Of course, I do not believe that death can be done away with, but we should be able to have health for the most part while we do live, and certainly avoid premature death and waste of life.

Why do germs, in chronic invalids, fail to work out an immunization? Why is it that this class of invalids can be put in very good health when trained into health-producing habits--and this, too, when no attention whatever is paid to the germs that are supposed to produce the disease?

To illustrate my meaning: A few years ago a gentleman living in Tampico, Mexico, wrote me, saying that he understood I did not believe in drugs, and he wished to know if I would undertake his case. He had been suffering from malaria for five years, and every drug having a reputation as a cure for the disease had been tried and found wanting.

I gave him correspondence advice for one month. At the end of the month he said: "You have made good, and that, too, with a skeptical, doubting patient."

Two and a half years afterwards I heard from him, and he was still enjoying health, having had no return of the malaria.

The treatment I gave him was simply correcting all errors of eating and care of the body.

What caused the malarial fever in this case? The malaria germ? Or was it wrong life? Certainly both; but the question is: Which was the real cause? The malarial influence failed in five years to create an immunization; all "specific" drugs had failed. Treatment that allowed nature to return to the normal ended the malarial influence. If germs create immunization, why do we have chronic diseases? What causes chronic disease?

I have many cases of syphilis consulting me every year. According to medical authority, this disease is most positively "specific" in character, and should, according to the germ theory of disease, require a "specific" treatment; but in all cases I never resort to a more specific remedy than that related above in connection with malaria. Correct the habits, and feed properly--and all diseases will get well.

After years of experience in treating disease, I have found that health is the greatest and most reliable foe of disease.

The questions to decide are: Do germs per se cause disease? If germs cause disease, do they cause all diseases, or only a part of diseases? Which diseases are caused by germs, and which are not caused by germs? If there are people who are, and all their lives have been, in good health, without extrinsic or artificial immunization, what is the cause? If the cause is good health, then can the secret of good health be known; and if it can, may the secret be imparted to others who are not so fortunate? If good health immunized the organism to every normal disease-producing influence in man's environments, why cannot his normal immunization be increased to meet extraordinary disease-producing agents and influences? This can be done, and is being done at our "School for Teaching Health," to the satisfaction of many people from many parts of the world.

There are two groups of animate agents which are said to cause disease in man; namely, infectious and parasitic.

It has been thought that natural history could be taken as a basis for the study of animate agents as a cause of disease; and if infection is really produced by an infectious germ, then natural history must embrace all causes of disease. In other words, if infectious-microscopic germs and parasites are the cause of infection, then there is no excuse for dividing animate agents into parasites and infections; they can all come under the head of animate agents. Perhaps it would be well to divide parasites into exogenous and endogenous--those that are confined to the outside of the body and those that are on the inside--in the blood. A parasite that is on the body or in the bowels is still on the outside of the body.

If there are infectious animate agents, they should be divided into specific and non-specific; for, before we get through with the subject, we should see that there are germs which cause (using the word "cause" in a bacteriological sense) different diseases; and, on the other hand, different germs which cause the same disease; this, too, in diseases supposed to be clinically well defined.

As to specific germs, perhaps the gonococcus is one of the most pronounced types; yet it, too, fails to infect in those of pronounced resistance. This being true, what must constitute resistance?

As nerve energy appears to give power--as steam ,gives force to the engine, and as electrical energy gives power to move powerful machinery--so it is apparently necessary that nerve energy must be the force that enables man to resist environmental influences. But we see the physically strong giving way before influences that fail to prostrate others decidedly less strong. The question as to why this is, will not down.

The matter of feeding to keep up strength, so as to enable a patient to resist or throw off disease, is a professional fallacy that has cost, and is costing, more lives than perhaps all other fallacies combined, It is easily demonstrable that, without giving food and drugs, it is impossible to develop a "clinically well-defined" disease. Indeed, this epoch-making truth holds good in venereal diseases as in all others.

Any physician who, is not helplessly and hopelessly swallowed up by the whale of medical fallacy can in a very short time demonstrate, and prove to himself, the truth of all I say.

My theories and practice are not only simple, but they are logical; they are not only logical, but true. And the reason they are true is because they work. If they do not work, it is from a lack of knowledge in applying them. It is never necessary to fall back on that blanket excuse that has covered so much professional ignorance in the past; namely, "idiosyncrasy."

Malaria (malarial fever) is caused by a sporozoid; yet the disease may easily be cured by simply correcting the life of the patient--correcting the eating habits and care of the body generally. Then, when the disease is gone, if the patient continues to live right, he may stay in the malarial country, free from another attack. This being true, what really causes malarial fever?

Are those who continue to live in such countries, without becoming malarial, immune to the poison because of an idiosyncrasy; or are they carriers of the disease, having become immune to its influence? Can one person become immune and another not? The dilemma appears to be fully settled when it is understood that health--full health--is the only reliable opposition to disease; that everything which improves health builds immunity to all disease-building influences; that every influence injurious to health is an ally to disease,

While medical opinion is largely favorable to the idea that germs are disease-building, I should say that even those germs denominated infectious are not autonomous--individual--specific and self-acting, but by nature are convertible allies. When conditions are favorable to health, they add to the body's power of resistance; but when disease-producing influences--influences that lower the body's self-protecting energies--are in the ascendency, then they become allies to health's foes.

It appears reasonable that as germs are omnipresent, they, like the excretory products of the body, are allies for health, when limited to a health-standard percentage; but when that percentage is exceeded, these quondam friends become allies of disease-producing influences.

The treatment of disease, since germs have been recognized as the cause, parallels the treatment given when the profession was pruning itself on being conservative, yet wisely selective from the maze of theories advanced in the past hundred or more years. Perhaps it will be well to name a few theories that have been chaotically mixed in the medical mind previous to the germ theory:

Empiricism (experimental treatment), which is denounced as quacking, has always been handy for all grades of physicians to fall back on.

Organicism--organic disease.

Humoral pathology--all diseases come from derangement of the fluids of the body.

Symptomatology (treating symptoms)--a form of empiricism.

Phlebotomy (blood-letting)--one of the most popular theories previous to the germ theory.

Depleting system--blood-letting, calomel, and opium practice.

The various theories of inflammation.

Organotherapy--organ treatment; the treatment of diseases by the administration of animal organs, or extracts prepared from them. This treatment has existed from ancient times, the method as now practiced being of recent origin.

Hundreds of other theories might be cited, but what is the use? The popular treatment of disease, it matters not what has been the theory of cause, has always been the same; namely, ignoring the power of the body and mind to get well and stay well, when given a chance.

For the main part of all treatment, the medical man has believed it to be his duty to knock down and drag out. Indeed, he has appeared to believe that the more vandalism he practiced on the human body, the better for the victims of disease.

Just before my debut in the profession--in my father's day--the most popular remedy was blood-letting. When my day dawned, it was the physician's duty, according to the then dominant school, to purge, sweat, micturate, and salivate heroically.

Every treatment was heroically carried out. All the natural tendencies of the body to react and throw off disease were ignored, and a physician who would fold his arms and give nature a chance was a fiend, quack, a being to get rid of for the good of the people.

Even today the majority of physicians at the bedside will say of my suggestions--my heroic methods of let-alone treatment: "Such trifling, ineffectual methods may do in a case where there is nothing the matter, but in such cases as this (typhoid fever, pneumonia, appendicitis, or whatever the disease may be) it would be criminal to stand by and do nothing. What are physicians for? If their function is to do nothing, it is time to close medical schools." Indeed, I agree that, if the physician's function must be that of a disease-builder, and the function of the surgeon, two-thirds of the time, that of a vandal, it is time to close all medical schools.

Old methods are extensively carried out all over the world. Germs, serums, and vaccines are the slogans of medical men today; but many drugs are in constant use: quinine for malaria; mercury, iodine of potash, and "606"--the old salvarsan--and neo-salvarsan, and many times neo(new) salvarsan, the great twentieth-century remedy for syphilis which out-specifics all other specifics in "curing" syphilis; then opium and morphine are still working over-time for pain; and when the opiates are not used, the coaltar heart-paralyzers are used-to the death in many cases.

There is a great deal of perfunctory talk, on the part of medical men, about not believing in drugs, and of much believing in diet. But it is a trick of the trade; it is that old, professional, stock-in-trade buncombe that is often used to cover ignorance. If they could not prescribe drugs, and were required to make an effective diet prescription, they would be out of a job.

There is a lot of buncombe by way of professional talk in favor of diet and against drugs; but this is to meet the demand for physicians who understand diet--a demand that is fast running ahead of the supply. That is, the average doctor is compelled to prescribe a diet; and his prescription would be a joke, if it were not so stupid. There is a time and place for everything; but the burlesque acted by many physicians today, in pretending that they know how to diet the sick, is certainly too asinine even to create a smile.

That bacteriology is not satisfying the profession, there are evidences galore. And so long as common sense regarding the cause and cure of disease is to be ignored, all theories of cause and cure must be founded on shifting sand.

There are millions of money , and all the bluff that can be mustered by influence, behind the germ theory; consequently its death-struggles will be long and agonizing. But it must go. Of course, its fossilization stage will be long, and interesting to curio fiends and ancient respectability.

In what follows on the subject of germs, I shall endeavor to do justice to the germ theory. If I too frequently say that germs cause this, that, or the other disease, please understand that I am writing from the standpoint of an advocate.

What is the difference between parasitic and infectious agents, according to the accepted theory?

The parasite is supposed to be much easier on its host. It draws only what it needs for subsistence, and remains on the outside of the body; while the infectious agent invades the sanctity of the blood and fluids of the body, and spreads devastation and anarchy everywhere. It develops rapidly, and destroys organic functioning by exciting intense reactions.

When the parasite causes death, it is more accidental than otherwise. The intestinal worm causes death by finding its way into the lungs. The hydatid disease of the liver (a parasite belonging to the dog) is fatal. The parasites, when they kill, do so by causing tumors, which cause pressure or obstruction.

Both parasites and infection produce toxic substances; it is a question of more or less. The poison is that of intoxication. In parasites, intoxication is reduced to the smallest amount.

The definition of infectious disease is: Disease developed from toxins produced by parasites. The word "parasite" in this case is made to cover all animate agents.

Infection, defined, is a history of intoxication.

There are intoxicants which are not infectious agents. Alcohol, coffee, tea, tobacco, various drugs, and all legitimate foods, are stimulants; and stimulation is the first stage of intoxication. Thoughts stimulate the mind and body, and thoughts may be pushed to intoxication. To aid intoxicating habits to overcome resistance, we have all the domestic and social requirements--habits in daily life, in business and social life--the carrying-out of which uses up more nerve energy.

Intoxication means prostration. The body in a state of drunkenness--in a state of intoxication--is at first exalted until reaction comes; then it is prostrated--enervated. Understand, once for all, that there are many varieties and stages of drunkenness besides alcohol inebriety. The commonest drunkenness is food drunkenness--and it is not often recognized.

A body that is enervated is crippled in its functioning. Elimination is impaired, and this favors auto-intoxication; for the excretions are toxic, and when not carried out as fast as generated, they become a poison to the system.

Besides the intoxicants (stimulants) named, there is no question but that, when enervation is established, the process of digestion is imperfect; then pathologic fermentations take place; and this process generates toxins, which, when added to the daily or habitual supply, add to the enervating influence to such an extent that systemic protection--resistance--is lost. Then it is that bacterial invasion, with bacterial toxins, overwhelms the body, and the victim dies from an infectious type of disease.

Everything points to the fact that so long as the human body is normal, and not overtaxed by care and bad habits, parasites are either suppressed entirely or held down to inoffensive guests of the body. But when enervation is established, the body loses its immunizing power; then, and not before, do germs become the allies of bad habits in destroying health.

Pasteur demonstrated that germs were in the atmosphere, and that, falling into certain liquids, if they there found conditions favorable for their development, they caused fermentation. The great point that should never escape the mind's eye is: If germs find conditions favorable, they set up fermentation.

What are unfavorable conditions? Health! A normal type of health is capable of resisting even an abnormal type of fermentation, when health is not handicapped in some way. For example: In flesh wounds, if drainage is perfect, health defies septicemia. If uterine drainage is perfect, puerperal fever--septicemic fever--is defied. Large quantities of germs--putrescence--may be swallowed, and a normal digestion will defy them.

When putrescence is injected subcutaneously, beyond the immunizing power of the blood, the health is overcome, and the disease and death are enthroned.

When an injection of antitoxin, or even water, is made into the spine, it may kill from shock in a child that is enervated, and its system taxed at the time with an oversupply of food. The body is off guard, or preoccupied, so to speak, when taxed with a large meal, when mentally occupied, or when fear has possession. Under such conditions, a shock that ordinarily would be easily rallied from may prove fatal.

An irritable state and lack of poise are antidotal to resistance, and such subjects become easy victims of infection.

Any influence that consumes energy may become an ally of germs, if pushed to nerve exhaustion.

The human body becomes a victim of germs after resistance is broken down from any cause.

A Reasonable Explanation of Germ Action

Animate agents which have to do with the life and health of man may be divided into **Parasites** and **Microbes,** or **Bacteria.**

Parasites, in biology, are organisms that inhabit another organism and obtain nourishment from it. Microbes, or bacteria, are micro-organisms which should be thought of as yeast fungi, and as the inciters of fermentation, which are as necessary to man as his own unorganized ferments--his digestive secretions. These fungi, or germs, may be divided into as many genera and species as the microscope and the imagination of the bacteriologist may suggest. That the explorers of the microscopic world have some excuse for the infinite number of varieties already discovered, there is no question; for these infinitely small beings have the habit of taking on an individuality, or personality, in keeping with the chemic changes of the medium with which they are correlated. Instead of the bacteria setting up changes peculiar to themselves, they excite fermentation; and the resultant is the sum of the elements involved. These microbes become putrefactive germs when they carry their ferment to nitrogenous--protein--matter. The germ subject is wonderfully simplified when we know that the metamorphosis is in keeping with the chemistry, or the chemic changes taking place in the medium.

Ferments are divided into two classes--namely, unorganized, or enzymes, and organized, or bacteria, or microbes. The unorganized are produced by animal and vegetable life. Enzyme is a product of all living cells; without it there could be no tissue formation. Pepsin is a type of animal ferment, and the so-called vitamin is one of the refined products of metabolism.

When man's body is normal, the digestive secretions--the unorganized ferments--are quite sufficient protection against the metamorphosis of microbes into toxic germs in numbers great enough to do the body harm from the fermentation and decomposition which they may set up in the food intake.

When man's digestive and assimilative powers are reduced, and he fails to digest the food intake, the ever-present germs establish a pathological fermentation which hastens the disorganization and exit from the body of the superfluous food.

The monistic doctrine--the theory of the unity of all things--appears most rational, and should be satisfying to the most philosophic mind. When used medically, it clears the mind on the subject of cause and effect, wiping out many fallacies and superstitions

The negative and the positive, the good and the bad, health and disease, life and death, are two different states of one and the same thing. Of course, this is a theory that the child-mind cannot be expected to grasp instantly; for it requires a very great experience, and much reflection; it requires a priori--beforehand--knowledge, and a posteriori--from experience--knowledge.

In applying the monistic philosophy to digestion, a posteriori--according to experience--we know that digestion is carried on by ferments which are secreted by the body. In keeping with the great truth of the unity of all things, and the dual attributes of all things, a priori we reason that, if digestion is carried on by a ferment--a physiological ferment--indigestion must be the negative side of this phenomenon--it must be a pathological ferment. We must have indigestion if we have digestion; one is the reverse of the other, and one is as necessary as the other. If physiological digestion (fermentation) does not take place, then pathological fermentation (digestion) must; for action and reaction are going on all the time; nothing stands still.

Since Pasteur et al. discovered that there are microorganisms everywhere, which only await a favorable condition to set up fermentation, we reason, a priori, that this fermentation is the other half of physiological digestion or fermentation; and, in harmony with this monistic philosophy, this phenomenon--pathological fermentation--is necessary and physiologically conservative, rather than pathologically destructive.

Bacteriology assumes, a priori, that bacterial ferments cause disease; but all the cures based upon this assumption have failed, and all the testimony advanced in support of it has been more partisan than loyal to truth.

It is reasonable to assume that the ever-present bacteria, or germs of fermentation, are as necessary for physiological fermentation as they are necessary for pathlogical fermentation. Without the aid of these neutral germs of fermentation, it is doubtful whether the unorganized ferments--the digestive ferments of the body (ptyalin, pepsin, et al.)--would be capable of serving the great purpose of nutrition. I say "neutral," as they are found unchanged in nature. But they may be converted into allies or enemies--it all depends upon the chemic nature of the medium. It should always be borne in mind that yeast per se is non-toxic; toxicity is developed by the chemic changes which take place in disorganization. Food is disorganized when pathological digestion fits it for expulsion from the body.

These friends of man, against which Pasteur and Metchnikoff warred, and the influences of which in their own bodies they possibly were successful in controlling sufficiently to render them both semi-invalids, are in reality for man's good rather than his bane.

In this connection, perhaps it would be well to reflect, or to assume a priori, that when mind enters potentially into a compound in which the microbe, or ferment, and nitrogen, or protein, are associated, the character of the resultant must take the form of the mental concept. That is, the toxin that develops must correspond to the chemic change; but the form of the disease must be mentally directed. The disease may be a hydrophobia, a syphilis, or a tuberculosis. The location of the disease is perhaps chemically directed, but the type of symptoms may be directed by the mental concept.

To be more specific: A person is bitten by a supposedly mad dog. This fact starts a chain of morbid suggestions and expectations. Fear perverts digestion; pathological fermentation supplants physiological fermentation; the microbe, or neutral ferment, is made to take on a toxicity in keeping with the chemic agents involved; and all are given form by the mental suggestion, plus the added compound, protein-serum injection, known as the Pasteur serum. When the element of fear cannot be overcome, it is well to keep in mind the possibility that antitoxin serums may be reconverted into toxins and act contrary to expectation. Psychology must be considered.

The average medical treatment, or mistreatment, of supposed rabies is on the order of "a bull in a china shop."

The treatment is brutal, unscientific, and death-dealing in its application. The same is true of syphilis, and, to perhaps a less extent, of all other diseases.

What is the virus--admitting, for the sake of argument only, that there is a specific poison introduced into the human body by the dog's teeth? It must be a protein ferment, which is a pathological ferment. What is man's defense against such poisons? The neutralizing effect of hope, and the unorganized ferments. The normal blood can unhorse, so to speak, a great deal of poison, if the mind is free from fear. But fear kills.

The average physician is a fear-monger, if he is anything. He goes about like a roaring lion, seeking whom he may scare to death.

A normal man, devoid of fear, can develop antidote for poison. Those who are killed by snake bite have a paralyzing fear, which means surrender to the enemy. Keepers of snakes have no great trouble with bites until fear overtakes them.

Confidence in one's self-power is the secret of health and long life. This confidence, with the providence bestowed by a knowledge of the laws of health, is the most dependable immunizer known.

The influence of mind on fermentation is positive The mind may stimulate physiological fermentation, and it may stimulate pathological fermentation. In other words, the neutral germs are made by mind to ferment

physiologically or pathologically. The character of the toxin evolved must be in keeping with the chemical agents involved, but the Psychology of the disease is determined by the mental concept of what the disease must be.

When mind plays only an indifferent role, disease is commonplace.

It should be understood that anything in the alimentary canal (bowels) is still on the outside of the body. To nourish the body, food is taken into this canal, or digestive pouch, but, before it can be absorbed, it must be reduced to a fluid state by the various digestive secretions. When, from whatever cause, the food is not digested in a reasonable time, it must be disposed of--it must be thrown out--and the canal cleaned out. The cleaning is attended to by scavenger parasites.

The toxins resulting from the decomposition are unfit for absorption, and irritate the mucous membrane. The irritation causes the membrane to secrete mucous and serum. The mucous is tenacious and hangs on, coating over and protecting the mucous membrane. The office of the serum is to antidote and hasten the ferment germs and their toxins out of the bowels, and also to disinfect, or help the scavengers destroy, what remains of the transformed neutral germs and their ferment or toxin.

This is a necessary process, going on in the alimentary canal of man daily as long as he lives. If man breaks down his energy, and then persists in eating more than he can take care of by physiological digestion, the surplus must be disposed of by pathological digestion.

Physiological ferments are secreted by the body, and are necessary to prepare food for metabolism. The disposal of food takes place after it is absorbed, and this disposition is called metabolism.

Pathological ferments are generated by the neutral microbes when the latter are made to develop fermentation other than physiological. Their purpose is to dissolve the surplus food intake, and hurry it out of the body. This process is necessary for the life and health of man. When digestion is abused by a constant intake of food beyond digestive ability--beyond the power of physiological ferments--then the bacteria set up a pathological fermentation, which breaks down and disorganizes the surplus food, and forces it out of the alimentary canal by stimulating the expulsive power of the canal.

This work takes place on the outside of the body, in spite of the fact that it is in the bowels. A like work, only much more refined, is going on in the lungs in all cases of tuberculosis.

When digestion and absorption are carried on in the alimentary canal, beyond the needs of repair and building, the surplus must be disposed of. The duty of the lungs is to furnish the oxygen necessary to bum up this surplus. But this function is often overtaxed, and, to get rid of surplus nutritive material, the lungs are requisitioned by the central powers to do vicarious excretory work. In addition to performing their function of exchanging carbon dioxide for oxygen gas, they become excretory organs; and, as the bronchial tubes and air- cells of the lungs, like the bowels, are simply excavations into the body, and their closed cavities are on the outside of the body, germs have free access to them. When the lungs are forced to take up the task of excretion, to aid in freeing the body from its accumulation, a cough develops, which is necessary to rid the lungs of the accumulated matter. When there is no systemic infection, the cough and expectoration may be what is known as bronchitis; or perhaps bronchorrhea, asthma, etc.

When toxins, the result of putrefaction in the bowels, enter by way of the absorbents in the bowels, the lymphatic system arrests the toxin and renders it innocuous; but when the infection, or toxin absorption, is too great for the lymphatics to dispose of, nature undertakes to expel it by

way of the lungs. The neutral germs that join the process are metamorphosed into tubercle bacilli. They undertake to dispose of the accumulation by disorganizing it--causing a disorganization of the hyperplasia, or the protoplasmic deposits; in other words, a disorganization of the tubercles which have been forced to develop from the irritation of the toxins absorbed from the bowels. This disease is called pulmonary tuberculosis. The simple germs of fermentation become the germs of putrefaction. Putrefaction hastens the exit of accumulation by breaking down and liquefying it. The putrefactive germs, because of the chemical medium, metamorphose into T. B.'s.

Bacteriology, like theology, makes the bad more powerful than the good.

The old theology made the devil and sin greater than God and good; and the medical profession has always put disease far ahead of health. The devil, disease, is much more powerful than health; and I admit, when disease has modern, or ancient, medical science as an ally, the combination is more potent than health.

Bacteriology is a splendidly wrought fallacy. How long it will hold the center of the arena of human endeavor, as far as the cause, effect, and cure of disease are concerned, is hard to say. There are millions of dollars invested in exploiting bacteriology; and millions of dollars may keep a fallacy alive for ages. Besides, the fallacious system offers such splendid rewards during the lifetime of its devotees; and, neither last nor least, it gives immortality to those who .are worthy.

To have a germ named after its discoverer is far greater than to have a continent bear the name of its discoverer.

Bacteriological science is so grandly scientific that one who has mastered all its details is entitled to a niche in the Hall of Fame, despite the fact that he can never be a physician--can never know anything of value about the cure of disease-until he has forgotten all he has been taught.

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CHAPTER III

The Study Of Medicine

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The study of medicine is divided into four subjects, namely

I. Pathology: that part of medical science which studies disease.

A. Etiology: the investigation of morbific causes.

B. Pathogeny: an explanation of the mode of action of causes-how cause produces the development of disease.

C. Pathological Physiology: morbid reactions under disease-producing causes.

D. Pathological Anatomy: which reveals the structural change resulting from disease.

E. Symptomatology: which accounts for disturbances.

F. Nosology: which describes and classifies disease.

II. Diagnosis: which determines the place where a given disease belongs in Nosology.

III. Prognosis: which fortells the outcome of disease.

IV. Therapeutics: which endeavors to relieve, modify, and cure disease.

I. PATHOLOGY

According to medical science, pathology is the science of disease--that branch of medical science which treats of the modifications of function and structure of organs caused by disease. Disease defined is: inharmonious action of one or more of the various organs, owing to functional or structural change.

There is special pathology, which means analyzing disease. This is divided into internal or medical, and external or surgical, pathology. Then there is comparative pathology, which considers a study of diseases in man, animals, and vegetables; experimental pathology, and general pathology.

General pathology defines terms and fixes meanings; determines the laws of morbid phenomena, determines causes, defines symptoms, names diseases.

Pathology is a description of the body, and the organs which compose it, when they are laboring under the effects of abnormal, unusual, and perverting influences.

Physiology is the study of the body and its organs in that state known as health, and under influences that give health and strength.

Pathology, then, is that state of the body known as bad health, while physiology is that state of the body known as good health.

Disease is inharmony, and health is harmony. Both are different states of one and the same thing.

When we study pathology in connection with the influences that produce it, we learn in time to recognize real cause in its effect.

To study effectually the phenomenon pathology--disease--we must combine with it physiology--health--and etiology--cause.

To study pathology--to note change in function and structure--without a correct understanding of the cause of the change, leads nowhere. To study physiology-to study the secretions and excretions from men en masse, like a composite picture--will show an average--show about what an average individual should secrete and excrete under a given environment and a measured dietary. This is good as far as it goes, but no approximation can do more than give general knowledge of physiology and pathology. This generalization will give a like knowledge of dietetics, hygiene, and all branches of medical science.

Morbific effects will be found following certain morbific causes; but on closer investigation it will be found that there are exceptions to every cause--that there is no cause that always produces the same effect; hence pathology, physiology, their causes and effects, must be studied, not only in a general way, but in a special way, and the reason for exceptions must be as thoroughly understood as the rules.

Health and disease are related in that they are two phases of one state, and neither can be known without contrasting it with the other.

Living organisms are unstable. Their state must vary with the changes that take place in the environing influences.

The phenomena recognized as different acts of life are not dependent on some mysterious force outside of the body--some vital energy animating the body--but are simply actions and reactions produced by external agents.

For example, when external variations are slight, adjustments are readily made in those of a full measure of health, but not so readily adjusted in those with resistance broken down. Where the temperature falls forty to sixty degrees in a day or night, the most robust will suffer more or less from the adjustment, and the delicate may be killed.

Pathology given exclusive attention is a fruitless study. Health in all its phases must be studied, and cause and effect must be found in everything that affects the body.

The general study of pathology today too frequently starts with an established state of the blood or the organs of the body. The primary causes are ignored or not thought of. For example: Typhoid fever is thought of as cause, which leaves, when over, modifications which persist; being too slight to be recognized, they nevertheless continue their evolution. Ten to fifteen years later a heart, lung, liver, or kidney disease develops, which is ascribed to the changes wrought by the initial fever. A correct way to view these phenomena is to recognize the typhoid as an accidental but possible link in a morbific chain started in perverted nutrition, back perhaps in childhood, or back farther in a nutritional diathesis, that makes the development of a morbid chain of perverted nutrition, with possible links of typhoid, pneumonia, catarrhal inflammations, et al.

Crises.--Life is made up of crises. The individual establishes a standard of health peculiarly his own, which must vary from all other standards as greatly as his personality varies from others. The individual standard may be such as to favor the development of indigestion, catarrh, gout, rheumatic and glandular inflammations, tubercular developments, congestions, sluggish secretions and excretions, or inhibitions of various functions, both mental and physical, wherever the environmental or habit strain is greater than usual. The health standard may be

such--the standard of resistance may be opposed so strenuously by habits and unusual physical agencies--that the body gives down under the strain. This is a crisis. Appetite fails, discomfort or pain forces rest, and, as a result of physiological rest (fasting) and physical rest (rest from daily work and habits), a readjustment takes place, and an unusual standard is attained for a short time--the patient is "cured." This is what the profession and the people call a cure; and it is for the time being--until the customary habits and usual style of living have had time to establish the regular ante-crisis standard. This standard is maintained until an unusual enervation is brought on from accident or dissipation; then another crisis. These crises are the ordinary sicknesses of all communities--all catalogued diseases. Cold and hay-fever are simply forms of crises belonging to a chronic state of toxin poisoning characterized by catarrhal inflammations of mucous membranes. When the cold is gone, or the hay-fever fully relieved, it does not mean that the patient is cured. Indeed, he is as much diseased as before he suffered the attack (?)--the crisis--and he never will be cured until the habits of life that keep up toxin poisoning are corrected. If the intoxicating habits are continued, nature will undertake to cure by hardening the tissues--sclerosis. Arterio-sclerosis is one of nature's cures. Such a cure will not take place before old age, if not forced to.

A standard of health may be such as to be forced into frequent small crises, such as colds, frequent headaches, neuralgias, toothache, acute fevers, throat affections diarrheas, constipation, etc. Each of these attacks may be looked upon as a crisis. To recover from a crisis is not a cure; the tendency is back to the individual standard; hence all crises are self-limited, unless nature by maltreatment is prevented from reacting.

All so-called healing systems ride to glory on the backs of self-limited crises, and the self-deluded doctors, and their credulous clients, believe, when the crises are past. that a cure has been wrought, whereas the real truth is that the treatment may have delayed reaction. This is largely true where anything has been done except rest. A cure consists in changing the manner of living to such a rational standard that full resistance and a balanced metabolism are established.

One hundred per cent efficiency is seldom seen. No one with an established sensual habit is one hundred per cent efficient.

Tobacco, coffee, tea, cocoa, alcohol, drug habits of all kinds lower the standard of resistance and personal efficiency; and if the habitue starts life with less than one hundred per cent efficiency, his habit or habits will bring him into more pronounced inefficiency and more frequent crises.

Any habit of mind or body that uses energy faster than it is generated must establish a resistance and an efficiency below the normal standard. Then, if the normal standard is below the ideal one hundred per cent, it must be obvious to all thinking minds that those who belong to this class must have a very precarious hold on health, and must be of the class forced into a crisis at every unusual change of environmental influences. Babies will have the diseases peculiar to nursing and teething; older children will develop the so-called contagious diseases; while grownup people will have crises peculiar to, and in keeping with, their diatheses.

All of the above concerning crises is demonstrable. Indeed, so self-evident is it that it has taken a lot of selfish conceit and dogmatism to prevent these simple truths from becoming commonplace.

I suppose it is not quite human to expect those of a standardized school of healing to give utterance to discovered truth which, if accepted by the people, would rob them of the glory of being curers of disease. Indeed, nature, and nature only, cures; and, as for crises, they come and go, whether or not there is a doctor or healer within a thousand miles. For the good of most patients, it would be well if the schools of slightly varying phases of fallacious therapeutics were driven into the sea of oblivion.

If typhoid or any disease is managed correctly, the patient will recover, and if the habits of life are corrected and the patient continues to live right, there can be no sequel from the typhoid; but if the style of living followed before the fever be continued after it, other diseases will be developed; and if an organic change has been caused by the interpolated disease, then certainly the organs so affected is most liable to give down from years of toxic infection.

Disease, functional or organic, must be looked upon as interpolated affections. The real disease is in faulty nutrition, and is of daily development.

Intestinal intoxication, from bacterial fermentation due to overeating, improper eating, and eating potentially acid foods, and foods devoid of enzyme, is a constant source of toxin poisoning. This condition is added to by retained excretions, which will always take place when the organism is enervated. The amount of food intake may not be too great under correct conditions, but the subject's power to digest and assimilate is impaired by overwork, worry, venereal excess, alcoholics, tobacco, coffee, tea, and other stimulants.

Without impaired nutrition, which is initiated by toxins introduced from without, or developed in the body, diseases, acute or chronic, cannot develop.

Suppose we take heart disease. It may have developed with rheumatism, typhoid fever, or other diseases. The effects on the heart are identical. The new disorder--the heart disease--is not caused by the rheumatism, the fever, or any other disease, but evolves from the same cause that evolved the rheumatism or other diseases--namely, the toxemia.

To treat any disease correctly, its cause must be understood. To say that the heart was diseased by rheumatism is an etiological error. The heart was poisoned by the toxins that created the rheumatism, and the drugs and other treatment for rheumatism joined the, toxins to put the heart out of commission.

The leading authorities say that visceral diseases take their origin from some antecedent cause, but that the initial disease is not always easy to find. They declare that the disease may be dormant, or develop silently, for twenty or thirty years before manifesting. This is true and it is not true. A tuberculous diathesis favors the development of tuberculosis, and the gouty diathesis favors the development of gouty diseases; but the primary cause is the same--namely, chronic toxin poisoning. This state of the blood and other fluids of the body must exist before any of the organs can go into a state of degeneration.

If the subject is scrofulous, scorbutic, or has developed a state of acidosis, and the glandular system has once been septically infected from a syphilis, gonorrheal bubo, carbuncle, vaccination, or wound infection, the gland lesions will get well under proper treatment; but if the subject becomes careless in his habits, and builds back the chronic autotoxemia, it would be the natural thing for the glands to become diseased. When the glands are once infected, they are made sensitive and will respond to toxic influences more readily.

A. ETIOLOGY

Post-mortems are held for the purpose of discovering the cause of death, and the cause is found. It may be an organic change of the heart, liver, lungs, or some other organ. Suppose an abscess is found in the liver, spleen, pleura, or elsewhere; suppose apoplexy is found; without doubt a reasonable cause for death has been discovered. But what light has been shed on the real cause of disease?

None whatever. Post-mortern revelations are as silent on the subject of ancestry as they are on the cause or causes of disease.

To find an abscess of the liver or spleen may account for death, but the very important knowledge of what caused the abscess, or what caused the cause of the abscess, is not found. On knowledge of morbid processes that would help the living to shun a like fate, all post-mortems

are as silent as death--except in deaths from injury, and in those cases only the cause of death is found; the dead tell no tales regarding the cause or causes bringing about the accident.

How is anyone who has not studied the history of morbid processes to know that a slight injury to the neck of the womb twenty years ago is one cause of cancer today? Or that the habit of drinking hot coffee twenty years ago caused chronic inflammation of the stomach that ends today in cancer of the stomach?

After having gained the knowledge that injuries, such as related above, are the cause of a fatal disease twenty years or more afterward, it is rather confusing to be confronted with the truth that only a few of those who have suffered a like cause have also suffered a like effect. Hence there must be collateral causes which are not considered, and without which the true causes and effects leading to the final fatal effect remain speculative. The profession moves in a diagnostic circle of misapprehension, always coming back to the starting point with no more true knowledge of cause than at the start.

So very obscure are the real causes of disease that it is not strange that nearly all professional men willingly disregard anything pertaining to disease except the symptoms which palpably present.

1. Enviromnent in Its Relationship to Health and Disease

The two words "health" and "disease" are used daily, but few know anything, except in a general way, of what either means.

The general conception is that health is a fixed, ideal state or entity, and that disease is a fixed state or entity whose particular purpose it is to war on health.

In aboriginal man's conception, disease was an evil spirit. In the early days epilepsy was caused by the devil. According to the Bible, an epileptic was a person possessed of the devil, or of devils.

A doctor in Cincinnati has discovered that epilepsy is caused by a particular germ, which the doctor has named "bacillus epilepticus."* (* Since this was put in type the doctor has recanted.) This devil germ takes up his abode in the colon, and from this throne torments his victim.

The Bible doctors cast out the devil Epilepticus in the name of the Lord. The Cincinnati doctor advocates casting the throne or habitat of this devil bacillus out by a surgical operation, on the theory that by destroying his abode Mr. Devil will depart forever.

It takes about as much faith to accept the germ theory as the devil theory. Indeed, both are conceptions built out of hypotheses that have their foundation in the false theory that the universe is governed by two Deities--namely, God and Devil. The whole germ theory is a refined and modernized demonology.

Cell-Life

As soon as a cell is born it begins to die. Man's body is made up of cells, and his continuance in life depends entirely upon cell renewal and cell integrity.

The cell is in an ideal state only at the instant of completion; then it begins to wear out. Man's body during his fetal life is in as near a state of equilibrium as is possible; for the temperature of the mother's body is maintained at about ninety-nine degrees F., and his life is carried on by proxy, so to speak. When born, he is subjected sooner or later to all the influences of his environment.

Health is an abstract idea. It cannot be well defined, for it necessarily must vary from birth to the grave.

Living organisms never more than approach a state of equilibrium. Indeed, no man would accept life if he could be guaranteed equilibrium; for that would be a neutral state devoid of experience, consequently with no knowledge. He could not enjoy; he could not love; he could not hate; he could not eat; he could not lose his temper; he could not be happy; he could not have friends or enemies; all of which are necessary to his development.

All man's pleasures and displeasures--happiness and unhappiness--come from the varying of his environment. Through attention, thought, and reflection on these influences is he educated. Man too often goes through life giving no attention whatever to the influences, from a health standpoint, of these various shocks to his nervous system. Indeed, very few recognize the sense of pleasure as a shock, and that evil can come from it. Just a few of the people are beginning to realize that taking food into the system is a shock, notwithstanding the fact that it is a pleasure to take it into the system, and a necessity from a building and repairing point of view. When this subject receives the serious thought and consideration of laymen, as well as professional men, there will be more inquiry for knowledge of just how far stimulation can be carried without harm, and when people get sick they will know that they have been imprudent and gone beyond the point where health can be maintained in eating and caring for the body.

When man is born in the backwoods, and his mental and physical experiences are confined to a very limited environment, the number of pleasurable and disagreeable shocks which he experiences must be almost nil compared with what he would experience in the heart of population.

Everything else being equal, he should live longer in his secluded home; but such is not the experience of mankind. The limited experience--the limited shocks--in this restricted home fail to interest him, and he grows old young, and tires of life, and dies. We cannot live longer than we want to. Books and music help to fill the life and will prolong it.

The metropolitan man is shocked by so much of love and hate, and his experiences are so educational, that life has too much of interest for him to leave it. This does not apply to the sensualist--the man who lives for pleasure; for he becomes ennuied and dies from lack of interest. The man who lives for gain will live long if he continues to be interested in gain; but if he fails, and hope is gone, his health fails and death comes soon. Unfortunately, those who have the faculty for making money--becoming wealthy--are exceedingly unwise in placing it where it will do them the greatest good, or the greatest good to the greatest number.

The body is made stronger by the shock of exercise and work. Too much exercise pushes development beyond the normal. Most athletes are overdeveloped, and as a consequence die early.

Men, after they pass middle age, should have a certain amount of exercise; but those who live a sedentary life will not live as long if their exercise is pushed to a hardening of the muscles as they will if they exercise just enough to keep the muscles well shaped--keep the tissues from falling down. Old men never have muscles that stand up and are individual, such as the athlete prides himself upon. A man who is in a trade or business that requires continuous hard work will keep his muscles well up into old age, if he is regular about his work. If he works up to sixty years of age, keeping his muscles hard from his labor, and then retires, he will not live many years--not nearly so many as he would live if he should continue his work, perhaps not doing quite so much; yet, on account of his being accustomed to work, he will live very much longer if he keeps at his labor than he will if he stops and retires.

Most men of sedentary lives are underdeveloped; their organic life runs down, and many die early.

Over-mental development always means early death. This is especially true where the knowledge is not of a character to make one wise about his proper relation to his environment.

When a great physician dies too early because of lime deposit in his arteries, what is the reason? He has not had the proper conception of his relationship to his environment.

The riddle of health in its varying stages must be known before man can brace himself against the over- and under-effects of environmental shock.

We have seen that development means shock. The shock of too much nourishment, and of too much exercise, produces disease. Neither of these causes is disease-producing within itself. Food is necessary. The body cannot live long without the stimulation (shock) which it gets from food, and certainly it must have the building material that food furnishes. When food and exercise are given within the needs of the body, everything else being equal, the body may be said to be in a state of health.

When food and exercise are supplied beyond the needs of the system, or below the needs of the system, disease is said to prevail.

There is but one deduction from these facts, and that is that health and disease come from the same cause.

Perfect health does not exist. The state varies from one that is known as robust health to fatal disease. Yet both extremes are states of health.

How can there be an entity, disease, coming out of food, exercise, pleasure, work, or anything that affects man in his environment? The answer is: There cannot be. As stated before, life is made worth while because of the various influences affecting man.

Once it was thought that the force which animated living matter was an autogenerated vital energy, but now it is thought to be reactions produced by various agents.

About as good a definition for health as can be given, according to the foregoing, is: an equilibrium established between external stimulation and internal reaction.

The temperature of the body in health is about 37' C., or 98-1/2° F. If the temperature of the room or weather is about 60, and is kept at that point, the body becomes adjusted. If the temperature rises or falls slowly, reaction on the external medium will be gradual. Where the change is sudden, either plus or minus, it upsets the heat equilibrium and may cause much disorder, resulting in disease. What is the disease? Enervation and retention of excretion. This produces toxic poisoning.

Becoming adjusted to any sudden changes causes so much agitation that life may be endangered.

The cause of disease, or the cause of a departure from health, or health perverted, is not some mysterious entity; it comes from shocks imparted by environmental agents, which cause reactions; and the reactions are for the purpose of modifying the shocks and making them compatible with life's requirements.

2. Physical Agents

Air.--Air is not classed as a food; yet it is the most important food. We can live without the ordinary foods from thirty to forty days, and we can live without water for a few days, but we cannot live without air for more than a few minutes.

Air is the gaseous substance that envelops the earth and forms its atmosphere. It consists almost entirely of the gases oxygen and nitrogen, which are merely mixed and not chemically combined.

An ordinary-sized man is supposed to take through the lungs about two thousand cubic feet of

air each twenty-four hours. It is from the air that we secure our greatest supply of oxygen.

Air at sea-level has a pressure of about fourteen and three-fourths pounds to the square inch. It decreases about one-twentieth of a pound per square inch for every ninety feet of altitude. High altitudes cause a quickening of the pulse and breathing. Most people have an idea that there is much danger in going to a high altitude quickly. There is very little discomfort, and almost no danger, to persons in good health.

It is said that, whatever the altitude, the composition of the air is always the same; namely, 21 parts of oxygen, 78.06 of nitrogen, 0.94 of argon, and a trace of carbonic acid.

The only change in the composition of the air in high altitudes is an increase in ozone. Ozone is an allotropic (allotropism: the existence of an element in two or more distinct forms--distinct physical properties).and more active form of oxygen. The variations of the chemical composition of the air do not account for the evil effects experienced in high altitudes; hence the effects must be caused by temperature, pressure, and the action of the sun's rays, which strike more perpendicularly in high than in low altitudes. At an altitude of 4,500 to 5,000 feet the temperature will mark a difference of ten to twelve degrees Fahrenheit in the sun and in the shade. If the bulb of the thermometer be covered with black cotton, the difference will often reach sixty degrees Fahrenheit. This should warn. those in delicate health to prepare themselves with a proper amount of clothing when going into high altitudes. It should not be forgotten, however, that the cold of high altitudes is more tolerable than that of low altitudes, because the air is drier.

The sun, however, does not melt snow unless accompanied with warm air. Black or dark clothes retain the sun's heat and enable the traveler to keep warm in a temperature that would be very uncomfortable at sea level.

The absence of wind and humidity in high altitudes gives comfort, whereas in low altitudes, with a much higher temperature, those who are sick and of low resistance will suffer from the cold.

Altitude.--Snow does not melt in high altitudes, even when the sun's rays are quite warm, until the air becomes warm. Snow, or white clothing reflects the sun's rays; hence dark clothing should be worn in winter, and white or light-colored clothing in summer.

As an experiment: Place a dry leaf on a bank of snow where the sun is shining; in a little while it will be seen that the snow under the leaf is melting.

Absence of wind and humidity causes high altitudes to be comfortable places to live.

Mountain air is so dry that putrefaction does not occur to the same extent as at sea level. In high altitudes meat will dry and cure without salt. Desiccation is effected before decomposition can set in. At St. Bernard, in the Swiss Alps, the corpses of men and animals never decay. The dead are placed in morgues, where they are preserved indefinitely--a form of immortality.

The air is so rarefied in high altitudes that patients are made quite nervous because of the absence of noise. Sound does not carry, because the air is not dense enough to transmit it.

It is said that the absence of noise causes a feeling of sadness.

The effect of altitudes ranging from six to twelve thousand feet, on one seeking health, will be at first, while becoming acclimated, that of a feeling of warmth on the skin. The lips will redden, and the eyes will flush. For a while one will be troubled with insomnia; a slight palpitation; or, if the heart is weak, the palpitation may be severe. There will be a feeling of dyspnea (shortness of breath); dizziness; and sometimes headache. The urine is dark, and constipation is the rule; and, from the first, the appetite is increased.

In a short time the skin becomes a tan color. The lips, nose, and hair become so dry that salves and vaseline are used to secure relief from the dryness. Strength increases, and long walks, and even mountain-climbing, do not fatigue until overeating brings on the tired feeling peculiar to food poisoning.

There is mountain sickness, which is said to be unavoidable in altitudes of from twelve to fifteen thousand feet, but not equally in all countries--probably the result of overeating and fatigue. The exhilaration caused by the mountain atmosphere induces the traveler or sightseer to exercise to excess; this uses up so much nerve energy that imperfect digestion results, following which comes intestinal toxin infection; and that is what mountain fever is.

Mountain-climbers are not equally subject to mountain sickness. This, of course, is true of every section of the country. It is said that the lack of oxygen, the increased cold, and the fatigue have much to do with bringing on mountain sickness. Obviously harm must follow an increased appetite and a decrease in oxygen supply. A decrease of oxygen favors decomposition; this is one reason for auto-intoxication.

The symptoms of mountain sickness are a feeling of growing malaise; pains in the legs, especially the knees; the mouth fills with saliva; sickness of the stomach, followed by vomiting of food; and, in severe attacks, bilious and even blood vomiting. In the advanced stages of the disease, pain in the bowels and diarrhea set in.

According to Paul Bert: "The quantity of oxygen in the blood diminishes as the atmospheric pressure diminishes. If the rarefaction corresponds to pressure existing at 6,000 feet of altitude, the oxygen diminishes thirteen per cent; at 9,000 feet, twenty-one per cent; at 25,000 feet, fifty per cent." He thinks oxygen starvation causes death in these high altitudes, and experiments that he has carried out have proved that he is right.

By "becoming acclimated" is meant that the blood acquires an increased capacity for absorbing oxygen; which means an increase in the red corpuscles and an increase in the iron contents. This being true, patients suffering from anemia, and especially chlorosis, will find benefit in living in high altitudes. They will also suffer much in traveling in high altitudes.

This is according to the best medical authority. I will say in this connection, however, that such diseases are brought on from imprudent eating. My experience is that anemic and chlorotic patients eat foods that are devoid of oxygen, until they lose their power for carrying oxygen. Why should not this be true? Nature removes an organ no longer used. If oxygen is not taken into the system in large enough quantities to supply work for the red corpuscles, there will be a gradual diminution of these corpuscles to correspond with requirements. High altitudes force breathing; hence the demand for more blood corpuscles, and the supply.

To those who are anemic or chlorotic I will say: If resort to a high and dry altitude cannot be taken, do not be discouraged; stay at home and get well. Stop sugar-, candy-, and cake-eating; use sugar in foods very sparingly. Eat uncooked fruit, also salads made from fresh, crisp vegetables, or a slaw, every day; and teach yourself deep breathing.

An increased capacity for absorbing oxygen may be developed in low as well as high altitudes by getting rid of toxins in the blood. This can be done by correcting the eating: by lessening the amount of the so-called staples--meat, bread or cereals, pudding, pie, cake, etc.--and eating more fresh fruit and vegetable salads; and exercise should not be forgotten.

Pulmonary tuberculosis is a disease supposed to be best treated when sent to high and dry altitudes. This supposed benefit is not without its drawbacks. All lung cases with a high pulse-rate should seek as dry a climate as possible, but avoid altitudes more than a mile above sea level.

Almost irreparable harm is done to blood-making and nutrition before the tubercular bacillus

is discoverable in the lungs. Prevention of this disease must start in childhood, with those of the tubercular diathesis. After adenitis (lymphatic infection) has been developed in a tuberculous diathesis, it will require unusually good judgment on the part of the patient, and unusual medical skill on the part of the medical adviser, to bring the patient back to the normal. To stay normal with a diathesis and a record of one breakdown will require great good judgment--certainly more than a residence in a high altitude, etc.

I have learned from observation that those who are well advanced with pulmonary tuberculosis, and who have a high pulse-rate, die off very rapidly when brought to Denver.

If we are to believe in the eternal logic of the universe, we must believe that sound judgment is an accompaniment of a sound body. This being true, all tubercular subjects should be directed by the wisest minds; for their own is as prone to go wrong as the sparks are to fly upward.

Curing this disease means correcting the mind and body-it means right thinking and acting.

If it is a fact that more lung capacity is needed in high altitudes, is it wise to force diseased lungs to expand? Oxygen starvation is one of the symptoms of tuberculosis, due to imperfect lung action. The lungs of these subjects are not used to their full capacity, and, as the disease advances, breathing grows more shallow, because the lungs grow more sensitive to the air. Cold air irritates and causes coughing, and, to avoid coughing, the patient learns to breathe in a more shallow manner all the time; and, of course, the less oxygen taken in, the less food is digested, and the farther away from health the victim drifts.

Sleeping-porches and other devices for furnishing fresh air and a greater oxygen consumption have been a dominating fad since a few years ago, when it was the custom to have patients sit out-of-doors in the coldest weather--wrapped, of course, enough to keep warm.

Obviously both plans are rather more detrimental than good. The object is fine, for it is necessary to have as pure air as possible; but the good is, according to my way of thinking, more than offset by the irritating effect of the cold on the lungs. Reader, stop and think: These patients are in heated houses all day, and some of them in superheated houses. At night they breathe an atmosphere many degrees colder than it is throughout the day. The house temperature through the day is seventy degrees Fahrenheit, or more; while on the porch it ranges, in Denver, from thirty-two degrees above to ten degrees below zero. The range is from thirty-eight to eighty degrees. Can anyone with common sense believe that a weak, diseased lung will thrive subjected every twenty-four hours to such extremes of temperature?

If the above is true, the modem treatment of this disease could not possibly be much worse.

If houses are as clean as they should be; if bedding is as clean as bedding should always be, patients will do much better in a closed house--closed up for the entire night--and fire enough to keep the night temperature within ten or twenty degrees of the day temperature.

All of us (doctors and laymen) must go through the fresh air insanity. Converts to new thoughts, or old thoughts, are always nearsighted, enthusiastic, and even fanatical in their loyalty in following literally and not wisely such fads. The fresh air craze has surely killed its quota. Filthy houses have done their share. Now sensible people should split the difference and keep both foul and cold air out of their lungs. To encourage those who read this, I will say: The composition of the atmosphere is always the same,* and, like all organs, it is maintained at the same composition, and must remain so until destroyed; and along with its destruction must go all animal life. (*This does not mean that the air of proper composition cannot be made the vehicle of filth. Houses, bedding, clothing, and the body must be clean.)

It is all nonsense to talk about burning up or breathing out of the atmosphere all the oxygen. If houses are clean, no harm will come to the sick by closing doors and windows to prevent them from chilling their lungs and blood by breathing an atmosphere much colder than their bodies.

Harm from breathing cold air does not end with simply causing irritation; the patient's nerve energy is used up in resisting the cold. It takes nerve energy to resist cold; it takes nerve energy to digest food. This being true, should not sick people be kept in a warm atmosphere, and fed on food that will nourish the body at the least expenditure of energy in digestion?

The nervous system of a plithisical patient should not be severely taxed in resisting cold. It must be remembered that digestion cannot be carried on with a bodily temperature varying much from 99' F.

It is a mistake for sick people to live in an atmosphere so cold that wool or other heavy, impervious underwear is thought to be necessary to keep the body warm. Air is a tonic and stimulant to the skin, and, neither last nor least, it is a disinfectant. To keep the surface of the body sweet and clean, air must get to it, and it cannot when the body is swathed in tight-fitting woolen or other underwear. Open-woven cloth is better; no underwear at all is best.

It matters not how clean a housewife may be-if she does not air her closets and clothing, she cannot boast of her cleanliness. Men who ruin their homes with tobacco smoke, rendering them unfit for women and children to live in, certainly pay a lot for their pleasure. I have known of invalid wives who could get well if their homes could be freed from stale tobacco smoke. Invalid wives are expensive.

A part of humanity live in ill-smelling houses and clothing. Many men think they are excused for ill-smelling bodies because their work is dirty. This is not necessary. Grease, smoke, dust, and iron rust or filings will make the clothes, hands, and face dirty; but I deny that it is necessary for any man to emit an odor that is offensive.

Women who take advantage of dirty work as an excuse for making themselves a nuisance from malodor should be boycotted. It is no disgrace to do work that makes one's body and clothes dirty; but there never can be any excuse for filth, and the odor that accompanies it. People who are filthy are a menace to society and should be taken care of by the health authorities, in the same manner that all decomposition is cared for.

Air and dust, sometimes called dirt, are aseptic and antiseptic. Dust is fought against by housewives, and cities hold it down with the sprinkling cars. In this way one of nature's health-imparting agencies is made inefficient.

Winds and storms are necessary; they are nature's sanitary measures. Wind is necessary for lowlands and low altitudes. Canyons are frequently swept by windsthe reason given being that they act as chimneys for conveying hot air out of the plains: the hot air rises and the cold air goes to the bottom, creating currents. These winds are sanitary; they carry out of the canyons malodors, and antisepticize the accumulated decomposition.

Vegetation grows more luxuriantly, everything being equal, in a windy country than it does in a windless country. Trees grow more rapidly in Kansas because of its winds. Chicago is noted for large, fine-looking girls, and wind. The relationship is obvious.

Walls of wood and stone around private residences in cities are menacing to the health of the neighborhood.

Houses for stock and chickens should be nothing more than windbreaks--never airtight pens or houses. All that animals need are windbreaks; they do not need warm houses, notwithstanding the fact that such protection is often given as a matter of economy--the warmer the animal is kept, the less food is needed. But this is economy at the expense of health. Warm houses and tuberculosis are close friends, and are found among the human animals as well as the brute creation.

The more air we breathe, the better our digestions will be. Warm, close houses are not so menacing to health as people generally believe. The real health-destroyer in our houses is dirt

that is taking on septic change: dirty clothes, kept in closets that cannot be ventilated and are not cleaned; decaying food, and never thoroughly cleaned pantries and ice-chests; old beds that are dressed with nice, white pillows and spreads--veritable whited sepulchers; and then the habit of keeping an ill-smelling cesspool under the diaphragm, from eating beyond the digestive capacity.

Keep the home, in every comer and recess, sweet and clean; keep dirty clothing from accumulating; keep the body and mind clean; then, when cold weather comes, it will not be necessary to keep doors and windows open or to sleep out-of-doors. Keep clean and comfortable, and avoid shocking the lungs and nervous system by breathing air seventy to eighty degrees colder at night than at midday. When necessary to breathe cold air, do so in action--when walking, exercising, or at work. Do not sit out-of-doors wrapped up, or sleep out-of-doors.

In all things it is worth while to take a commonsense view; and in the care of the body, moderation--avoiding fanaticism, which is another name for ignorance--is the safer practice, and much more conducive to long life and success.

Heat.--Heat is not food; yet it is one of food's most important allies.

A temperature of the body of approximately ninety-eight degrees Fahrenheit is necessary to insure digestion and assimilation. A continuous temperature of one degree less than normal will lead to physical destruction sooner than a continuous temperature of one degree above normal.

Just what causes the increased temperature in fevers is an unsolved problem; and it is doubtful whether it ever will be solved. Every case of fever will have to be settled individually; for, as in all things connected with health and disease, there are no unitary causes. Every effect depends upon multiple causes.

The nervous system presides over organic functioning. When nerve energy is below normal, the functions of secretion and excretion are impaired. As secretions are necessary to digestion and assimilation, these functions are impaired, and, excretions being imperfect, the waste products are retained and act as inhibitors of functioning.

Following this state will be cold hands and feet. People are said to have poor circulation, which, indeed, is true; but poor circulation must have an explanation, for those two words are meaningless in themselves. Poor circulation means enervation; means that nerve energy is low; means that the nerves distributed to the blood vessels fail to impart tonicity to their muscular and fibrous coats, stimulating normal contraction.

Heart and blood-vessels in health act rhythmically--contract and relax--under the influence of nerve energy; and this causes what we know as circulation of the blood.

Nerve energy is necessary to keep up the blood circulation and the normal temperature of the body indicated by warm feet and hands.

Anything that uses up nerve energy brings on enervation and, as hinted before, impairment of the functions of secretion and excretion. The lungs fail to exchange carbonic-acid gas for oxygen gas. When there is imperfect exchange of gases in the lungs, digestion is impaired; for perfect digestion requires that oxygen be brought in by the lungs.

Nerve energy and heat are generated when the oxygen in the blood of the arteries acts upon the carbon in the veins; and when, from any cause, the supply of oxygen is low, heat is not generated, and cold hands and feet follow. The remedy must be to remove the first cause of enervation. What is it? Excessive eating, drinking, enjoying, working, or what not. The feeding must be in keeping with digestive limitations, not in keeping with the bodily needs. There is little science and less sense in advising an enervated patient to eat "lots of good, nourishing food." The chasm that exists between my dietetic system and every other system that I have

heard of is too great to be bridged with any possible compromise. I feed my patients in keeping with their digestive capacity, while all others endeavor to force feeding in keeping with apparent systemic needs, without respect or consideration for the patient's ability to digest and assimilate.

The foods that furnish heat are the carbohydrates. Sugar is the most rapid heat-producer, fat next, and starch next.

An oversupply of heat-producing foods, indulged in continually, will end in great enervation and whatever disease the individual has a predisposition to develop.

When sugar is eaten beyond the system's needs, it will not be acted upon. If all were used up and heat generated, life would be put out from hyperpyrexia, or overheating. The amount taken above the body's needs will go out of the body by way of the kidneys or bowels; not, however, without more or less injury to these organs of excretion. It is a mistake to believe that we may indulge ourselves beyond the system's needs, with any food or drink, with impunity. Indeed, the surplus is a tax on energy to get rid of it, and this tax divides the work of nutrition. Ideal nutrition cannot be had when its work is interfered with by the work of eliminating a lot of unnecessary material.

It should be bome in mind that the law of correlation of forces must govern in the matter of food and nutrition, the same as in dealing with natural law anywhere in the realm of knowledge and science.

Heat is being consumed when the body is in pain; when overclothed or overworked; and when mentally worried, depressed, or overjoyed.

Fever is not an indication of the generation of surplus heat. Indeed, quite the contrary is true; for the body is not generating so much as when normal. The reason for the excessive temperature is that nerve energy is impaired; elimination by the skin, lungs, and kidneys is suspended, and, as a result, the excretions are retained. One of the functions of the skin and lungs is to radiate heat. If, through food or other poisoning, the nerve energy supplied to these organs is cut off, heat is retained in the body. If the cause is infection from an injury, or pent-up decomposition in the bowels, the source of infection must be got rid of as soon as possible; then the temperature will run down. Physicians in general practice often see an increase of temperature from two or three to five and six degrees Fahrenheit following indigestion caused by overeating, and if the indiscretion is not repeated, the fever may subside in twelve to twenty-four hours.

After childbirth or abortion, if from any cause the uterine discharge becomes pent up, pain and fever will quickly follow. If understood, however, and the womb washed out, and drainage established, pain and increased temperature will be controlled at once, never to return, unless the cause is allowed to return.

Pain inhibits the physiological manufacture of heat, and if it did not stop radiation, the patient would probably die from refrigeration--from loss of all bodily heat. Hence fever may be looked upon as one of the most remarkably uniquely conservative acts in all the world of pathological conservatism.

Health and long life cannot be looked for by those who are careless and indifferent about keeping their extremities warm. Cold, clammy hands and feet indicate malnutrition, and must be cured by correcting the bad daily habits that build this symptom.

Until the extremities keep warm from restored circulation, following the correcting of the disease-producing habits, artificial heat must be used to keep the feet warm. Covering on the feet and legs to the knees should be double the weight of that over the body and shoulders; or a jug of hot water may be kept in the foot of the bed to use when necessary. Do not sleep with the

feet against the heater. Through the day, if sitting much, an electric pad should be used. Keep the feet warm, and prevent further decline in health.

Do not overclothe in an effort to keep warm. Lightweight, open-woven underwear, with heavy top clothing when going out, is the proper way to meet the cold. When riding in cold weather, the feet must be kept warm. Overeating and chilling spell pneumonia.

Heat of summer can be easily borne--in fact, enjoyed--if the eating is correct. Cut the heat-producing foods down to the minimum; meat, with all fat trimmed away, not oftener than once a day or three times a week; fruit and salads, with milk and cheese; bread once a day for those who are not overweight. Wear only the lightestweight, open-woven underwear.

People who persist in overeating make themselves very uncomfortable, and they are the people who meet with prostrations and sunstrokes.

Workmen who are subjected to great heat should leave starch, fats, and sugar, or any form of sweets, alone. Drink freely of pure water--positively no alcoholics; for lunch, ice cream and fruit. The ice cream is sweet and fat and evolves heat. its effects should be watched, and if the heat is harder to endure on days that the ice cream is used, it would be wise to stop it.

Ices may be used too often, and to the detriment of health. The injurious effects of all classes of foods are so little known by laymen, and even by physicians, that few are willing to believe that their favorite "bonnes bouches" cause the discomfort they experience. I see people daily suffering so greatly that they are driven to seek relief and cure; yet they are unwilling to part with the habit that causes their unhappiness. Indeed, it is almost impossible to convince them that ill can come from so simple a pleasure.

Iced drinks should be taken in great moderation. The cold drink habit is like all other habits--it grows on what it feeds. The more ice used, the stronger the demand. A drink of ice water taken an hour after a hearty meal often generates an insatiable thirst, which, if satisfied, will positively cause indigestion, and not infrequently start a derangement that may end in typhoid fever or some other acute malady; or a chronic irritation may be started that will end in ulcer or cancer of the stomach.

Extremely cold drinks and extremely hot drinks are equally injurious. The very sick should always be watched, and artificial heat used continually to keep the extremities warm.

Thousands and thousands have died who would have lived if that one little chore of keeping their feet warm had been attended to properly.

If it could be generally known and remembered that the function of heat-making is suspended during sickness, and that the very old, the very young, and those who are greatly run down are liable to freeze up--collapse--in the hottest weather, deaths from this cause might be prevented by seeing to it that they are kept comfortably warm.

Many cholera-infantum cases die every summer--July and August--because those who care for them believe the babies feel the heat as other people do, and no attention is given to keeping them warm. Death in such cases comes from chilling or freezing to death.

Dry heat is more endurable than moist heat. A humid atmosphere is very enervating.

Every summer nearly all cities of this country suffer deaths from heat strokes.

Sunstroke usually occurs among those who are dissipated. Sensuality perhaps covers the whole class. I do not believe any suffer from this disease who are not enervated from sensuality.

Those who work in overheated places and are food- or alcohol-poisoned are in line for heat prostrations.

Various disorders may persist after a recovery from heat stroke; namely, neuralgia, headache, and sometimes strange ideas or notions. These troubles, however, result as much from wrong daily life as from the previous sickness . Indeed, such cases may be cured of these relics of former sickness if the patients will follow a proper style of living.

Cold.--Cold climates are said to be more healthful than warm climates. I am not prepared to accept that statement without qualifications. Under correct sanitary control, I believe that warm countries are more conducive to long life than are cold countries; but under neglected and bad dietetic, hygienic, and sanitary conditions, cold countries are better. And, of all countries, those of high altitudes are best. Decomposition is the menace to health in warm countries; the people die of sepsis--blood poisoning--and hepatic derangements; whereas in cold countries health and life are menaced by overstimulation and its consequent enervation.

It is true that heat is enervating, but the bad habit of eating heat-producing foods in hot countries causes hot climates to be more unhealthful than is natural. Investigation will show that there are more people who grow old in warm countries. Cold is hard on old, and on very young, people.

Explorers of the polar regions state that they stood a temperature of from forty to fifty degrees Fahrenheit below zero, without suffering, when there was no wind. It is said that life may be maintained at from seventy to ninety-five degrees Fahrenheit below zero. Authors of this statement, however, counsel against exaggerating the importance of this fact. On an average, about seven hundred persons perish every year in Russia from cold.

All ages do not stand cold equally well. Adults resist the cold best. The old and young chill easily.

The enervated, or those with weakened nutrition, must keep warm.

Discouragement, overwork, starvation, or any influences that depress the mind as well as the body, render the individual unfit to stand exposure to cold. Any enervating habit removes resistance to cold. Drinking of alcoholics overcomes man's resistance. Brandy-drinking, as practiced in Russia, often causes serious suffering, and a few fall dead on being exposed to extreme cold after indulging.

There still persists a popular obstinacy or ignorant belief that alcoholics, or so-called stimulants, are an advantage to those who are exposed to cold, or subjected to fatiguing labor. The truth is exactly the opposite of this belief; for alcohol, in any form, enervates by removing the normal tonicity. Man in a full state of health has tone--a normal irritability or excitability--that enables him to act and react on his environment. A man in full vigor can control or react of strike back, but the impotent man has no control and cannot react or strike back. The rage of King Lear marks the acme of senile impotency. Indeed, anger means impotency; the greater the lack of self-control, the more impotency is marked.

Alcohol is not a stimulant nor a tonic; it is a drug that deadens sensation. Hence its first, last, and only effect is to paralyze. The reason why drinkers like it is because it deadens sensation. The more enervated the alcoholic habitue, the less responsible he is for his acts.

To send a drunkard or a drug fiend to the electric chair is certainly the acme of social stupidity. We have quit legally killing those whom we know to be insane; yet we are slow to recognize the drunk or the dope fiends as artificially and temporarily insane.

Fever often produces mental hallucinations, but these states of aberration are not so often due to fever as to drugs. Alcohol and opium have sent many patients through windows to their death. Suicides and homicides are oftener the acts of brains crazed with drugs than the result of viciousness. And society is so ignorantly stupid as to license drug and gin shops, and clothe physicians with authority to build lunatics for our courts to run into the penitentiaries, hang, or

electrocute.

Habits are easily formed. It is an easy matter to go from alcohol to morphine. These drugs do not act the same, yet both of them deaden sensation and are habit-forming, and both produce physical and mental impotency. It matters not in what quantities taken, they weaken resistance and render those who use them less and less efficient for their work.

There is nothing except food that gives man strength. And too much food--eating beyond the digestive capacity--will cause weakness. When food is taken beyond digestive capacity, and a habitual intestinal fermentation is established, the individual loses his power to keep warm. Victims of this state may put on the heaviest clothing--indeed, they usually wear heavy woolen underwear, often two suits, and the heaviest top clothing--yet the more clothing they put on, the more they may. Still there is no comfort for them; for the more clothing put on the body, beyond just enough to protect from wind and weather, the more such people suffer from cold. Heavy clothes break down resistance, and if the habit of wrong eating and heavy clothing is continued, the refrigeration of death will relieve the unfortunate victims of this health-destroying habit.

When a man is in full health, nothing can add to his strength. Emotional excitement may cause him to use all the power he has for the moment, but the result is enervation that will require more than the usual amount of rest to restore. The same is true of protection with clothing. The body in health has power to protect itself from the varying temperatures. It can adjust itself to all degrees of heat and cold, and needs no protection except from inclemency. And when these facts are ignored and artificial protection is indulged in, self-protection is lost, which results in disease.

Food and clothing beyond necessity, close houses, artificial heat, stimulants (?), and tonics (?), make a conglomeration of influences that spell d-i-s-e-a-s-e and early death.

The body should be protected from wind and weather, but not from contact with the air. The body must live in the air. Open-woven cotton or linen underwear, or a sleeveless and legless light-weight garment that stands for cleanliness rather than bodily protection, is all that is necessary; then the top clothing may be adjusted to be in keeping with the weather conditions.

This is quite the opposite of what is recommended by modem medical science. But it should be known that modem medical science is a wonderfully wroughtout system of palliation which in every particular "borrows from Peter to pay Paul;" breaks down health to relieve suffering; builds a fatal disease by relieving or palliating an innocent one.

In the matter of prescribing for those who are breaking themselves down--becoming so enervated that the chill of death is sending its messengers of warning--the really up-to-date doctor will prescribe heavy woolen underwear and more "good, nourishing food;" and, as auxiliaries, stimulants and tonics to quicken the circulation and give strength! Such trifling with health and life is a disgrace to our civilization. Patients applying for advice--for relief from such symptoms--should be educated into health habits; not turned off with short-lived palliatives that will become allied with the patient's bad habits to hasten his destruction.

Those who find themselves distressed by a weather temperature that does not appear to inconvenience those about them should get busy correcting bad eating, clothing, and housing habits.

Do these people need heat-producing foods? Most of them have broken themselves down by overindulgence in these very same foods. Will they be benefited by eating more of them? This is exactly what modem medical science declares; and the result is more breaking-down, more disease, and at last premature death.

Rest--physiological and physical--whole or partial withdrawal of food, and quiet in bed, with artificial heat, and food only when comfortable, will soon right such patients.

As soon as habitual decomposition in the bowels is overcome, these patients begin to warm up; feet and hands gradually grow warm; the mind and body grow more active; the outlook becomes brighter. Often this change not only restores physical and mental health, but it puts the victim on a solid financial basis. People poisoned with alcohol or drugs, or who are toxin-infected, stumble over opportunities every day; they see others succeeding by, perhaps, picking up the opportunities over which they themselves have stumbled.

Those who are cultivating cold feet must not be surprised to find themselves lagging behind in the affairs of life; and they will certainly grow more diseases from day to day.

Death is a coldness that knows no warming; and the unfortunate person who has cultivated cold hands and feet is started toward that final state.

The greater the intensity of cold, the more pronounced its effects on the parts exposed. At three or four degrees below zero, redness is excited; treble the amount will cause swelling; and six times that amount of cold will result in gangrene.

The first effect of cold is a feeling of fatigue and a desire to sleep. But if sleep be indulged in, there will be no awaking.

Light.--Light is necessary for health. Germ life is destroyed by it. Plants do not thrive any better than animals in the absence of light.

Light is a stimulant, and of course can do injury to those who overindulge in it. Those who chase fad cures, and who are not happy until everyone is in the ground too deep for resurrection, will, while taking the sun-bath cure, blister their bodies and torture themselves in every way, that the sun's rays may be used. When this so-called cure ceases to be disagreeable, they will decide that the remedy has lost its effect, and away they go searching for a new cure that will be disagreeable enough to be curative. A cure with them is valued according to the extent of its disagreeableness. The cure idea with such people has not evolved away from exorcism--disease and cure still being a system of demonism. With the profession the demon has dwindled to a microscopic germ.

Clothes keep the light away from the body, and, because of this, man suffers more or less from light starvation. When such subjects are persuaded by a monomaniac healer to expose their delicate bodies to the direct rays of the sun, they will be very uncomfortable.

When people become accustomed to living in Colorado, and have cultivated the sunshine habit, they are not satisfied to make their homes in a country where the sunlight is shut out by clouds and rain. Light builds optimism, while cloudiness or shade causes more or less pessimism.

Light increases the amount of carbonic acid thrown off. It is said that when the body is brought into the light with the eyes shaded, carbonic acid rises twelve per cent; then, if the eyes are bared and the body covered, the carbonic acid rises to fourteen per cent; when eyes and body are exposed simultaneously, this acid rises to thirty-six per cent, exceeding the combined separate exposures by ten per cent. This increase indicates more combustion; and, in fact, there is a slight elevation of temperature. In children it ranges from one-tenth to one-half degree Centigrade.

The sun's rays, either direct or reflected, will cause a skin irritation--erythema--accompanied by an elevation of the epidermis, with serous liquid; that is, the skin blisters and causes great discomfort. When the sun's rays are reflected from water, the action on the skin in one day is very pronounced.

Pellagra is supposed by a few to be caused by the sun's rays; by others, to be caused by consuming spoiled maize--corn. It has not been my privilege to see more than one or two cases of pellagra; but, judging from what writers say about it, it is probably caused by excessive

starch-eating; or it may be the combined effect of starch, sweet (molasses), and the sun's rays and hot weather. This disease, and hookworm, should be eradicated by correcting the personal habits of those afflicted with them. It is a mistake to look for a unitary cause for these diseases; for, as with all others, there are many causes, and just what causes them in one individual may not be the cause in another. impaired nutrition is the fundamental cause.

Darkened houses are proverbially unwholesome houses. All houses should be built in such a manner as to secure as much light as possible. When light is furnished, air is sure to be, and provision for both these elements makes it almost impossible to overheat.

Blue rays have been used to restore hair; Roentgen, or X-rays, and violet rays are used to treat cancer; and all the rays of the spectrum have been used as remedies for diseases. But these remedies soon fall into disuse because of lack of merit. A few enthusiasts--specialists on skin diseases, or cancer specialists--have lost their lives from administering the X-ray; others have lost fingers, hands, and arms. I have seen cancer patients fearfully burned by the use of the X-ray--and that, too, without corresponding benefit.

The ability of radium to disorganize tissue has caused it to be used and recommended. All these remedies, including the plaster cure made from escharotics, appeal to patients as well as to doctors. Why not? If these remedies can cause the disease to drop out, "root and all," what can possibly do more? Commercialism is just now exploiting radium; but, like all cures based on a false theory of disease, it must fail.

The professional mind seldom thinks farther than to the radical removal of the disease-which is seldom, if ever, anything more than removing effects. That the cause may hark back to a faulty nutrition, and that this fault may be caused by one or more of a thousand-and-one enervating causes, is not thought of; or, if it is, no consideration is given it. It is easier to think palliation and work palliatives.

It is doubtful if anyone will develop a cancer who lives in a properly lighted, aired, and heated home, and who takes reasonable care of his body and mind, and keeps intensely interested in life.

Shut out the light and air from the body with thick, closely woven, close-fitting, and overheating underwear; live in a house in keeping; then have a dietary to correspond, and this will create a habitat in which any disease is liable to spring up and thrive.

A bright light held before the eyes and gazed upon is liable to bring on a state known as artificial slumber or hypnosis. The name of "Braidism" is given to this phenomenon because a man by the name of Braidy discovered it.

The influence of light and shade on the nervous system must be very great, and it should be better understood. Let us hope that it will be.

I have seen young children thrown into convulsions by allowing a bright light to glare into their faces when they were nervous and feverish.

Care should be exercised with babies to prevent shocking them by allowing strong lights to flash into their eyes.

The moving picture shows, attended frequently and over a long period of time, will create nervous derangements. No doubt many are being injured in this way. Those with functional, as well as organic, diseases are having their symptoms aggravated by frequent attendance at these shows; but they have not suspected the cause. One or two hours at a picture show will use up as much nerve energy as a whole day at the usual vocation. The combined effect of eye- and ear-strain--the picture and the music--is very strenuous and nerve-exhausting.

Sound.--The nervous system of those who live in large towns and cities is put to great stress.

We are fast approaching a time when the noise nuisance will have to be legislated out of existence, the same as other nuisances that have been squelched.

The automobile need not be a nuisance, but it certainly is. The majority of people who drive their machines act as though they had a special commission to make as much noise, split as much air, and kick up as much dust as possible.

Since the automobile and motorcycle have come to stay, there has sprung up a type of people who really believe that their other name is pandemonium. Unless they are kicking up enough noise to wreck the "nerve" of a political lobbyist, they will not be able to "split the ears" of His Majesty, the Prince of Perdition, when they go to him; which they will, for they certainly will be out of place at a "rest" resort. The average chauffeur plays with the cut-off as the average motorman on the street car plays with his bell.

The street car is made up of the quintessence of noise, and the motorman has become so noise-crazed that he clangs his bell--not because he is approaching a crossing; not because he has a slow coach in front of him, but because he is playing an accompaniment to his thoughts. He thinks noise, hence he plays noise.

The car itself is a gamester of noise "par excellence.'? But health declares it a disgrace to civilization. Not the slightest attention has ever been given to constructing a silent-running car; it is put together so that every part becomes a rival of every other part in creating din. Then, when this roar-monger is manned by a real bellringer, hell is certainly turned loose when this peace- and quiet-destroyer is sent over a street every thirty to sixty seconds. There is positively no excuse for inflicting such punishment on humanity. Surprise is expressed at the number of people committing suicide and going insane every year. Unless commercialism is controlled in its selfishness, it will fill the world with mad-houses and penitentiaries.

Fill a street with modern cars, and a lot of automobiles with their cut-offs opened and conks conking, and we certainly have a state of uproar that must cause degeneration of the nervous system of all human beings subjected to it.

Why should we wonder at the increase of insanity and crime, when we add to the din the thousand-and-one other nerve-destroying habits of social and business life?

Every lover of music and art should protest without ceasing against the growing tendency to convert this beautiful world into a hideous nightmare of inharmony. When it is admitted that "silence is more musical than any song," why should the mongers of noise be allowed to rule?

Is there anyone so simple-minded as to need to be told that such a bedlam as exists in every large town and city is subversive of ethics, art, and religion? The beautiful, sonorous, and euphonious sounds are suppressed by the uproar, and the prospective mothers of the coming generation are forced into developing a distorted nervous system to impart to their children.

We must certainly expect to reap as we sow. Can any but the fool believe that we can sow inharmony and reap harmony--sow pandemonium and reap Utopias?

Disagreeable sounds, smells, sights, tastes, and feelings are so intimately united and blended with commercialism that there is little hope of overcoming them. With this it is the same as with disease-producing beliefs and so-called cures. The present style of curing and immunizing is so much a part of Rockefeller's millions, and other millions, that there is no hope of any considerable reform. The masses move along tied to the yoke of mammon; the poor, sick fools denounce the system that they declare usurps and exploits them; yet in every other way they uphold it with ballot and voice.

The noise system is a cheap-John scheme. It gets up cars as cheaply as possible--which means that they must be noisy. It charges as much as the law will allow. The patrons are shaken and jolted as only a springless and bumperless car or wagon can shake or jolt; and then their finer

senses are shocked, through the auditory nerves, by the noise that almost prevents thinking. All this wears out the patron; it injures him as a citizen; his health is impaired. The health, morality, estheticism, and artistic development of the people of any city may largely be measured by its cleanliness and absence of noise. A public utility that is grossly selfish, and tears the people down to lift itself, is certainly penny-wise and pound-foolish.

When people are nervous, they lack in judgment--they do not make the progress in trades, professions, arts, music, and business that they should. A city made up of noise-crazed people will not make progress in a substantial way. Why? Because noise-crazed people are nervous selfish, disloyal, and unable to see that to gratify themselves to the detriment of the city's best interests is to cut their own economic throats. This is exactly what every street-car company is doing when its economy lowers the moral, health, and sanity standard of its patrons.

Make a city clean and quiet-or as nearly noiseless as possible. Every utility should be run in the interests of its patrons, on the principle that people well served are happy, healthy, and prosperous, and possess drawing power. They attract other people to their city. Such a city grows; its property advances; and, according to the law of "like attracts like," a prosperous community attracts prosperity.

All physicians who know that sickness is brought on, wittingly or unwittingly, from practicing many bad habits, and from unwholesome environments, by wearing out the nervous system with a lot of unnecessary noise, or by any influence that uses up nerve energy, know that rest is one of the most important elements in any therapeutic plan-rest of body and mind. This means that the body must not labor; that the mind must not labor; and that the nerves of special sense-namely, sight, sound, taste, smell, and touch--must rest from labor.

Everything may be done for a broken-down individual except securing quiet--absence from noise; and if this requirement alone is neglected, restoration to health will not take place. Nervous people must secure rest from noise, because nothing is so uncompromisingly destructive to the nervous system as noise.

It is the duty of parents to control children. When several get together, they are inclined to push their funmaking to excess, and from small noises they go to larger and larger, until they become hysterical. If this is permitted day after day, the decidedly nervous temperament will lose more or less power over coordination, and this will lead to chorea, or St. Vitus' dance, or other nervous diseases.

Light, very restricted eating, and quiet in bed, with visits from children interdicted, is the proper treatment. Such patients must be kept in bed until every sign of irritability and muscle-twitching has subsided.

After nervous children recover, a limit must be set to the amount of play indulged in; and excitement of all kinds must be avoided. The diet of such children must be simple: toasted non-yeast bread, butter, and milk for two meals each day; and fruit, cottage cheese, and milk for one meal. Quiet and rest is the principal remedy.

Not many know that music has other qualities besides the power to "soothe the savage breast;" or perhaps I would better say that most people think that only good can come from music. Inharmony disturbs rhythm, and anything that interferes with rhythm strikes at the base of development and interferes with growth--nutrition.

Everything capable of producing an effect may be said to have at least four influences; namely: a good, natural, or wholesome influence; then an excessive, defective, and perverted influence. This is true of music. I know of people who are made very miserable by music--it might be said that they are badly influenced by it. Then there are strong, healthy people who are driven almost mad by poor or defective musical execution, but who thrive in an atmosphere of harmony.

All people are not attuned to the same key; or it may be possible that it is easier to adjust the nervous system to the different tones than to fall into harmony with varying time.

Sensitive children drive themselves into nervous prostration by the inharmony they produce when compelled to spend long hours in practice.

It may be that only inharmony (noise called music) is to blame for the nervousness I have seen in music teachers and their pupils; but I know that many suffer much from music, or the noise of practice, or butchered harmony. Of course, there are other influences which must be considered besides the noise of musical instruments. They are food, mental, and physical bad habits that help noise build nervousness and break nervous people down.

School children are overworked. School, music, and social duties wear some of those who are food-poisoned to nerve exhaustion.

When enervation is pronounced, as we often see in mothers of undisciplined children, such mothers must be taken away from home environments to be cured of their diseases. There is always something unusual--something out of the ordinary--the matter with mothers who cannot get well in the environment of home and children; for the mother-love converts din--what uninterested people would call bedlam--into sweet music. The ear-splitting shouts coming from one of her future great men she interprets as orders by the captain of the guards; another, whose voice dominates all others, is her Beecher or Spurgeon; still another is a captain of industry who will control all the iron industries of the country. So intensely is her mind fixed on the future of her children that their noises are material out of which she builds their future, and the success that she has in placing each one at the head of his specialty medicines every pain she has. Where this is not true, an accident at one of her confinements has caused septic poisoning, which has reduced the oxygen-carrying power of the blood fifty per cent, causing oxygen starvation; and her brain is so illnourished that her self-protecting imagination fails to convert din into sweet music, and she languishes and dies unless removed and carefully nursed back to the normal.

If our noises are grinding a grist that feathers our nests, the success antidotes to a degree their evil influences on the nervous system.

When a din becomes the vehicle in which to ride to success, it becomes for the time being a tonic, even if it builds insanity when reverses come.

Sound may be health-building and it may be mind-destroying; it all depends on our relationship to it. It comes under the old rule: What is one man's food is another man's poison.

Electricity is a mode of motion. It is said to be interchangeable with light, heat, cold, and sound. The power of a waterfall, and mechanical energy generally, may be converted into electricity, and it may be generated by transforming chemical energy also.

Life may be looked upon as a mode of motion; or, if you please, transformed light, heat, or electricity.

Matter and motion appear to be the cause and effect, and the effect and cause, of everything. It is a mistake to look upon matter and motion as two entities. Matter is. In one of its states, when at rest, it is static--in a condition of absence of motion; when active, it is in a dynamic state--in a state of motion. Motion is inconceivable as an entity; it must be the expression of something--and something is mentally conceived as matter. There are no such things as matter and motion, health and disease, strength and weakness, knowledge and ignorance, etc.

There is matter, and it may be in a static or dynamic state; there is health, and it may be in a good or bad state; there is force or strength, and it may be in a strong or weak state.

In the last analysis there is something, and we call that something matter. The various manifestations-the various shocks and reactions that we experience--are caused by the different

states of matter of which we ourselves are a part.

The primary or elementary states of matter we denominate light, heat, cold, sound, life, etc. Why light, life, or any other state of matter presents may be explained in many correct ways, but a kindergarten explanation may be such as I have sometimes used, namely: The elements of matter may be brought together in such a way that the summa summarum (sum-total) expression is that of light. A little change in the arrangements of atomic structure gives out heat, and another change gives out sound; and so the changes may be made, each giving out a sum-total expression, one of which we call life, and still another, more subtile than all the rest, we call mind. And all these states of matter we like to think of as entities'. but they are notthey are different states of matter.

Animal life cannot be suspended longer than a few minutes at a time, with any hope of resuming its manifestation. Hence it is possible that the elements of the body may be so compounded as to develop the different states we call light, heat, cold, sound, electricity; and, in doing so, air, food, and water are converted into life.

It is almost, if not quite, proved that the energy presiding over, or governing form, is electrical energy. Probably all formative energy is electrical, and possibly the question of sex is a question of a given number of electrons in the atoms comprising embryonic cells.

The ultimate atom, or unit of matter, according to present scientific developments, is conceded to be the electron, which is declared to be a literal atom of negative electricity.

We have become so used to thinking of the various states of matter as entities that it becomes almost impossible to express ourselves in any other form. If I lapse into referring to the different states as individual, I crave the reader's pardon and his indulgence in substituting in his mind the word "state" where I possibly may express myself as referring to "entity."

If in what follows I appear to individualize, entitize electricity, I do not mean it. Electricity, the same as every natural force, is a state of matter.

"Like electricities tend to repel one another," and, according to Lord Kelvin, the atom is held together by a core of positive electricity, which is known as an "ion." The problem of atomic architecture is to reconcile the common attraction of the ion for all the electrons with the mutual repulsion of the electrons themselves, so as to produce a stable structure.

By the aid of mathematical theory, checked by actual experience with magnetized needles--to represent electrons--floating freely in water, under the influence of a centrally placed electromagnet, Professor Thompson has been able to unravel the architecture of the atom.

The atoms of the different "elements" vary only in the number and arrangement of their electrons; every electron, wherever observed, being absolutely identical with every other.

Electrons are found to be arranged in concentric rings within the atom, and the presence of a certain number of them in each ring is necessary for holding any given number in place outside of them. The stability of the atom, therefore, depends on the number and arrangement of the electrons it contains.

Such a thing as an absolutely stable atom--a fixed, never-changing atom--is inconceivable.

Professor J. H. Thompson, of Cambridge, explains how atoms of one element, by losing their outer ring of electrons may be transformed into those of another. This also explains or suggests a law of natural selection among atomic species.

Of the many atoms that have attempted to gain a place for themselves during the countless past eons, there are some eighty that have survived.

This theory is consistent with evolution, and it is to be hoped that it will be proved out in all departments of learning.

We have seen, according to the latest accepted theories, that atoms are in reality atomic electric batteries--that each atom is an arrangement of electrons, or negative atoms of electricity with central core, or ion, of positive electricity.

To prevent perplexity, I will say that, from present knowledge, there are no literal atoms except electrons; all other so-called atoms are compound structures, made up of positive and negative electricity.

Electrical energy is hardly ever used as such, and only after it is transformed into other forms of energy; namely, mechanical, heat, chemical, and light.

Electricity as a remedy for the cure of disease is one of the fads of modern therapeutics. Outside of the benefit derived from suggestion, and the harm caused by so-called therapeutists in their endeavor to cure the sick, there is nothing in the remedy as understood and used today. The market is full of electric belts, garters, amulets, rings, hair-restorers, oxonizers, and all sorts of monstrosities in the shape of instruments and appliances, too numerous to mention. Outside of the suggestion of cure, or what the patient believes will take place after their use, they are not worth a fig a carload.

The profession uses the galvanic and faradic currents; also the X-ray, high-frequency, and static electricity. Very little good comes from any of these. A foreign body and broken bones may be diagnosed by the X-ray, and as a means for diagnosis this form of electricity has come to stay. For the generation of mechanical power, electricity is used. Vibratory instruments for giving mechanical massage are beneficial; but electricity is used only as a generator of the power. X-ray and other light-producing agents are used for the effect of the light--for the stimulation and tonic action. The X-ray can and does kill the tissues, and causes sloughing. Cancer has been, and is yet, treated with electric light. Results are unsatisfactory and doubtful. The radium treatment causes sloughing of tissue. All the new fangled remedies are not a whit better than the old-fashioned escharotic drugs that have been used in the manufacture of the well-known cancer plasters; some of which are "trained to eat out only the cancerous tissue. root and all"!

Electricity, as electricity, cannot be utilized by the human organism. How is it possible to use a state of matter? Life, light, heat, cold, sound, electricity, are states of matter. How can these states be used as food or remedy? Perhaps only as electrons, found in atomic and cellular lifein organized form. Is electricity utilizable? Possibly as electrons--units of matter--but not the force with which these units are torn from organized matter. The force is what is called electricity--not the units of matter carried with the force. The debris gathered in a cyclone is not the cyclone; the force or energy set in motion is the cyclone. The idea of imparting electrical energy to the human body lacking in energy is one of many common errors.

An enervated subject cannot be forced to receive energy. This is attempted by many physicians when they undertake to force food on those who are run down and enervated from lack of digestive power. Nature will not stand for forcing measures. There is no place for heroic treatment. Every vital process has safeguards thrown about it by nature, and those guards cannot be ignored or torn down with impunity.

In enervation, organic functioning is impaired. This means that the organism is deficient in power to take from the blood such matters as are necessary for repair or for the performance of its normal functioning. The organism, once reduced to this state, will remain so, unless the necessary rest can be procured. It is not mere building material that is needed; it is not stimulation that is needed; for enervation is the sequel of overstimulation. Rest is the remedy; and, as rest is secured, electrical energy will be supplied by food, air, water, light, and heat. This subtile energy cannot be forced on the organism in the gross manner offered by the bull-in-the-china-shop methods of modern medical therapeutics; an enervated state cannot be cured other

than by physiological rest--fasting--and physical rest; not exercise, work, stimulation, and starvation. Electric therapeutics amounts to but little more than chemical or mechanical irritation. Locally applied, it may do as much good as a mustard plaster-act as a counter-irritant.

Giving iron to those who are anemic or dysemic, and lime to those who need lime, is on the same order. The rule is that very few are dysemic because their food is deficient in the elements needed. The cause of deficiency is lost selective and appropriative power, and the more of the inorganic elements offered the system by way of drugs, as remedies or food, the more the dysemia develops, until the unfortunate victim is forced from functional to organic derangement, and on to premature death. This is not necessarily a rapid development. Such patients are seeking in vain for cures for from ten to twenty-five years. If they start at from twenty-five to thirty, and require twenty-five years to wear out, trying palliatives and false cures, they certainly die early enough. Besides, efficiency has been wasted in physical and mental impairment caused by disease and so-called cures.

If present scientific developments augur well, it will not be long before we shall know positively that electricity, or electrical energy, or more surely the electron, is the alpha and omega of all things; and, from a health standpoint, a knowledge of bow to conserve, utilize, and generate this energy will be the "summum bonum" of a successful therapeutics.

The most we know today of how to supply electric energy is to have the enervated--the impotent-rest. In a state of rest this energy appears capable of accumulating; and we know from daily observation that unrest, activity, and overstimulation cause its dissipation.

The farmer knows that rest restores energy and potency to land that has lost its fertility from use. But he does not know that ground granite or feldspar will restore its productiveness, and that in all probability the fertilizer "par excellence" contained in it is the static electricity that has entered into its formation and is liberated when the rock is made into bread.

I have proved out on electricity as a remedy the same as I proved out on the regular materia medica.

I once used the galvanic current in treating fibroid tumors, and believed that the electricity caused absorption. But I have learned, after years of experience, that the only really effective remedy is the correcting of bad habits which break down resistance, after which, physiological equilibrium is lost, and this allows cell growth to be perverted.

Lost resistance means lack of energy--lack of life force; and, according to the few hints thrown out regarding the electric architecture of the atoms, when enervation is pronounced, there is probably a dissipation of electricity--electrons--and a consequent change in the structure of the atoms that build the cells. As a result, we see tumors and growths of different kinds, and hardening of tissue--arteriosclerosis--stone formation, etc. If this is a true explanation of the cause, the logical remedy would be to furnish the system with electricity; but to turn. the battery and flood the body with a great current of electricity would be about as appropriate or logical as to tie a rock around the neck of a thirsty man and throw him into a river to relieve his need of water.

Nature never supplies wants in such a blustering way. The rock is built by feeding it with an impalpable supply. If this is true of rock-building, what must be the subtleness of tissue growth, and how slight the change required to convert normal tissue into abnormal-healthy flesh into cancerous!

Instead of flooding the surface of the body with a current of electricity--which the use of a battery means--the therapeutist must know how to cause the body to secure its electricity from the air, light, and food.

The average work done by physicians and surgeons in their application of remedies is what

one would expect of a house painter put to work to paint a portrait. There is a lack of delicacy. It is true that there are many skillful and delicate operations performed; there are also skilled matadors and butchers who perform skilled operations. We should not hold the idea that expert skill in operating is sufficient excuse for operating. I say, with no fear of successful contradiction, that the majority of operations performed have no excuse for being done except that they are done skillfully. In treating patients with electricity, they must be placed in a state favorable to receiving the inflow as offered by nature. All that is necessary, usually, is to learn in what way this energy is being dissipated; then stop the waste. Indeed, this is the simple formula for supplying the human body with all its needs.

3. Chemical Agents

Caustics

Caustics are chemical agents which produce disease through their power to destroy tissue.

As followers of my medical philosophy will use no drugs, they will not be interested in drugs, either of high or low degree.

The action of a caustic is that of causing necrosis or gangrene of the flesh that comes in contact with it. After the flesh is killed, the process of sloughing takes place. This process means that under the dead tissue the living is carrying on the work of separating the living tissue from the dead. The dead undergoes suppuration--disintegration--dissolves, and runs away as pus. Enough serum of the blood is carried to the borderland of the injury to neutralize and wash away the poison of putrefaction.

The normal chemical state of the fluids of the body is alkaline, while that of decaying tissues is acid. To prevent the acid--the septic--fluid of decaying tissue from being absorbed or taken into the body, where it would set up septicemia--blood poisoning--the living tissue that is in proximity to the sloughing tissue is infiltrated--saturated--to overflowing with the alkaline serum of the blood. This accounts for the great amount of fluid and pus seen in all suppurating processes. Pus is laudable when alkaline. Pure vaccine--if there is any--is dried laudable pus, and is inert.

If a wound is closed and the discharge has no outlet, the pus becomes ichoroid--septic--poisonous, sets up blood poisoning when forced absorption takes place, and death follows from blood poisoning. Septicemia is the professional term for pus poisoning.

It is said that the skin resists the action of caustics by throwing out a secretion which furnishes chemical elements that join the caustic elements to make an insoluble compound. Nature is busy meeting and destroying the influence of enemies of health and life. In this work help is needed, and the physician should be able to read the language of nature and assist her in her efforts to keep a rational and sane balance. On account of misunderstandings or lack of interpretation of systemic needs, the physician is often enlisted with the body's foes, and is tearing down rather than building up or defending the body.

Caustics are divided into **coagulating** and **liquefying.**

Coagulating caustics are those known as metallic salts, the various acids, etc. Nitrate of silver, nitric acid, nitrate of mercury, zinc chloride, and the actual cautery (white-hot) are a few that may be listed with these chemicals. These are so powerful that they kill the skin at the instant of contact.

Acids may be neutralized at once if plenty of water is handy; for water dissolves the acid and dilutes it into a harmless solution. The leading acids are: nitric, hydrochloric, sulphuric, and chromic.

Nitric acid produces a yellow eschar; sulphuric causes a black eschar.

Liquefying caustics are potash, soda, and ammonia.

The scars following the sloughing caused by caustics are often severe, causing contractions and disfigurements.

Toxin (Poison)

Any poisonous nitrogenous compound produced by animal or vegetable cells.

"Any poisonous substance--protein in nature--produced by animal or vegetable cells."--Gould's Medical Dictionary.

Toxins are those substances which, when taken into the body, or if developed within the body, are capable of so changing the fluids as to cause sickness or death.

There are two orders of toxins resulting from the fermentation of protein and protein compounds. One is physiological and the other pathological. Snake venom is a type of the first, and sepsin---putrefaction--is a type of the other.

Toxins that are developed physiologically, like the venom of the snake, are said to be for the purpose of defense. If we could know all about the subject, it is possible that the poison serves a physiological purpose in his snakeship's physical economy.

Man's interpretation of venom, odors, teeth, beaks, horns, hoofs, and claws has been from the standpoint of an eternal warfare for existence. Those attributes of animal life--physiological functioning--have been studied quite largely from the standpoint of weapons of offense and defense. If studied from an optimistic point of view, all those supposed defensive and offensive organs, and their functions, will be found to be indispensable aids to metabolism--digestion and assimilation--and to be physiological necessities.

When we keep steadily before the mind's eye that what we call bad is the reverse side of good, that unity is the key to universal order, and that the old and childish belief in two warring forces, namely, good and bad--God and Devil--is unworthy of present-day enlightenment, we are equipped mentally for analyzing chemical, physiological, and pathological processes rationally and certainly sanely.

There is no question but that autogenous toxins are first of all physiological necessities, and when forced to play the role of an enemy in physical economy, it is because it serves nature's purpose better. Hence optimism sees only good in all processes.

It may be asked: What of it, if the ending must be the same?

But the ending is not to be the same. A father chastises his son, not because he is an enemy of the boy, but because he is vitally interested in the son's welfare.

If God is good, then His chastening rod is not to defeat His purpose--to oppose cosmic necessity.

Pain is for good, for education, for development. No good can come from assuaging pain without removing cause; and certainly no good can come from negating--denying its existence, It is true that the opiate stops pain, but the patient dies afterward because the cause of the pain was not removed. It is true that removing the fibroid tumor cures (?) the patient of the tumor, but it does not remove the cause, and in from one to ten years afterward the patient dies of a pneumonia, kidney disease, or cancer. That the doctor is too limited in his reasoning to trace the connection between the cured (?) disease--the removed tumor--and the disease that proves fatal years afterward, does not militate at all against the truth that the two are one, neither does it change the working out of the unchangeable law of cause and effect.

To negate--to deny that there is pain--may banish nature's warning voice, but it does not alter the law of cause and effect; and if cause is not removed, the effect will certainly obey the laws of its nature; for law is God, and God is unchanging--not even the prayer of all mankind centered on one purpose will change one iota or tittle of law.

Pain and discomfort are reactions from undesirable influences. Remove the cause of the irritation, and the irritation and the discomfort of it disappear.

With an understanding of the inflexibleness of the laws of nature, in little as in great things, we should proceed with the subject of toxins with a mind cleared of some of the befogging beliefs of superstition and modern false reasoning.

The toxins that form within the organism are called endogenous poisons. They are called auto-intoxicants, and they set up autotoxemia when not eliminated properly.

These poisons alter the chemistry of the fluid medium--blood and other fluids--in which anatomical elements--tissues of the body--live and are nourished. It may be well to carry the idea that all the tissues of the body live in a sea of blood, as fish live in water, from which they gather nourishment.

At this point it may be well to say that health depends entirely upon the proper chemistry of the fluids of the body; and the chemistry depends upon the elements in the food, the mind, and the toxins developed or taken in. How is it possible otherwise for the various tissues of the body to select the elements needed for their upkeep? This being true, the importance of the part played by food in health and disease should be obvious to all giving any thought to the subject.

Toxins are divided into two groups; namely, **exogenous,** those formed in the alimentary canal from fermentation and decomposition following imperfect or faulty digestion. These toxins are attributed to germ secretions, but in all probability the ferment furnished by the germ is no more toxic than the ferments (ptyalin, pepsin, et al.) furnished by the digestive organs of the body.

The action of the germs is to set up fermentation (for the ever-present germ is a ferment) in all the foods taken into the alimentary canal beyond the digestive limit of the body's physiological ferments.

As a result of germ fermentation, toxins are formed, and their nature is in keeping with the chemic medium. If the fermentation is of vegetables or fruit, the toxins are **irritating,** stimulating, and enervating, but not so dangerous or destructive to organic life as **putrefaction,** which is a fermentation set up in nitrogenous matter--protein-bearing foods, but particularly the animal foods.

Endogenous toxins are autogenerated. They are the waste products of metabolism.

Metabolism means the power possessed by organized bodies of continually using up and renewing the tissues composing the body. In the process of building there must, of necessity, be a waste. This waste must be carried out of the body by the emunctory organs; but if, because of enervation, excretion does not take place, this waste product (toxin) is left in the body to poison it.

Exogenous toxins are those taken in with food and those formed outside of the body, and **endogenous,** those generated within the body.

When the body is enervated from any cause, or from many causes, excretion is always more or less inhibited, and as a result of accumulating the natural excretions (toxins) the fluids of the body are poisoned. The first symptom is a toxic stimulation--intoxication state; then comes a general soreness of the flesh, which is described as an aching from head to foot. A pronounced state causes one to feel very old, and unless relief comes in a few days, life loses all interest to the sufferer. An interested, hustling person will be transformed into a discouraged pessimist in a

few days.

Alimentary Poison.--Potash salts are necessary to the well-being of the body. It is said that dogs fed on meat freed from potash died in ten days--sooner than by starvation--showing that potash is necessary to prevent putrefaction.

Scurvy (acidosis), or ship disease, is due to a deficient supply of potash, furnished by fruit and vegetables, which, when oxidized in the process of digestion, renders the fluids of the body potentially alkaline.

To eat fresh or cured meat, eggs, fish, oatmeal, cookies, bread, rice, cake, puddings, coffee, tea, chocolate, etc., is to generate a slow acid poisoning.

Fruit and raw vegetables--salads--will correct any type of disease caused by acid poisoning.

Meat, potatoes, tomatoes, lettuce, cabbage, coffee, or tea, without fruit, will cause potash poisoning.

Albumin is a rank poison when injected into the blood; but when converted into peptones by the digestive secretions, it becomes one of the most important foods.

Where albumins (nitrogenous foods) are taken in excess, fermentation (putrefaction) takes place, and the absorption of this toxin causes enervation, high blood pressure, **arterial diseases,** heart diseases, catarrhal inflammations, and other ailments.

Beverages

Water, alcohol, coffee, tea, chocolate, and cocoa are common sources of toxin poisoning.

Water quite often contains minerals and organic matter in a state of putrefaction. Water with these elements in it is not so toxic as many professional men believe.

The elements--earth, air, water, and fire--are self-purifying; hence putrefaction taking place in water of sufficient protein toxic potency to render it dangerous to drink will be so offensive to the nerves of special sense that the one about to imbibe will turn away from it in disgust. Too much mineral in drinking water is not desirable, because it is left in the system to harden the tissues and prematurely age those who drink it.

Alcohol is toxic and inclined to bring on rheumatism of joints, gout, gastric and liver diseases, and in time neuritis and other nervous diseases. Why? Because all stimulants continued for any length of time bring on enervation. When the system is enervated, elimination is imperfect; then the toxins resulting from metabolism are retained in the system to poison. The deposits of these waste products in the muscles or the tissues of the body create such diseases as rheumatism.

The danger from fatal poisoning--from taking fatal doses of alcohol--is not so great as that resulting from the slow toxic poisoning--chronic poisoning--or alcoholism.

There is very little drunkenness today, compared with fifty to a hundred years ago, notwithstanding the fact that there is more alcohol consumed per capita. The reason for this is that alcohol is taken in the form of beer and wine, which are not so toxic as brandy and rum.

The continuous stimulation from the daily use of alcoholics causes enervation and imperfect elimination.

The use of alcoholics whips the appetite into taking an excess of animal proteid; and this is the reason why many users of alcohol have rheumatism and gout.

Absinthe contains nine different essences. All are toxic. There is very little of this poison

consumed now in this country. New Orleans has an absinthe house which ranks in age with her most ancient relics.

Coffee is a slow, insidious poison that encourages retention of excretions by its slow but sure enervation.

Coffee fools many into believing that it is an eliminant, because while they use it they have an action of their bowels daily. This is a false belief; for all the time coffee is used as a daily beverage there is a gradual enervation, with retention of the toxins or excretory products--waste from body--building. Coffee outranks alcohol in building endocarditis and sclerosis of blood vessels.

Ordinary reasoning should help anyone to understand that a drug that stimulates as coffee does, must in time cause much trouble by way of enervation, faulty elimination, and autotoxemia.

Tea stimulates, and in time enervates; following which comes retention of toxins in the system. Tea has a special toxic and sedative influence on the nervous system, and when used for a long time it causes neuralgia of an intractable nature.

Coffee and tea cause deposits in the grooves and openings in the bones through which nerves pass, causing in time neuritis or neuralgia that will not down until the habit of taking these table beverages is given up. These are the cases that surgeons undertake to cure by nerve-cutting or nerve-stretching.

Chocolate builds catarrh, and should not be used as a daily table beverage.

Cocoa is a stimulant and, like all stimulants, develops a habit. It brings on enervation and the usual consequences.

Lead.--Nearly all beverages--even water--contain lead. Water pipes, cisterns, reservoirs, etc., are built in such a way as to impart more or less lead to the water. All soft drinks charged with carbonic acid carry lead. Seltzer water and the lighter alcoholic beverages all carry more or less lead. Flour and bread often contain lead. Pewter, which is used to solder, contains lead. The pewter foil around chocolate, and the grinding machines used by butchers, impart more or less lead to the materials with which they come in contact. The diseases developed from lead toxin are what are known as lead colic, arteriosclerosis, kidney and other diseases.

Copper finds its way into the body in bread and wine. When copper vessels are used in preparing food and drink, copper can be found in wine, cider, and beer. It is said that condiments prepared with vinegar and pickles always contain copper.

In the quantities taken into the system from the sources named, copper is not thought to be greatly detrimental.

Arsenic is far more injurious than copper. It is to be found in wines. It is used as a preservative--to prevent fermentation in food. Since the pure food laws have been put into effect, this drug is not so extensively used in preserving food.

Salicylic acid is one of the most extensive poisons used as a preservative. Its use today is not so extensive as a few years ago.

Non-edible vegetables, such as **toadstools, sprouting potatoes,** and others, furnish an amount of poisoning every year,

Poisoning by animals occurs mainly in hot countries. In our country there are **snake-bite, bee-sting,** and poisoning by the eggs of various fishes.

Fish eggs provoke symptoms of cholera--vomiting and diarrhea--accompanied by skin irritation--erythema and urticaria.

Fish are said to be made toxic by living in water containing putrefactive matter.

Oysters are said to be poisonous when living close to the outlets of sewers.

The wholesomeness of healthy fish is questioned. Those who use much fish food are liable to develop skin and liver diseases. Probably, however, one is no more liable to develop disease from fish than from other food eaten beyond the power of the organism to utilize well.

All foods become toxic when indulged in beyond the real needs of the body.

The meat from **overworked animals,** those run down and killed, those that are slaughtered after **fatty degeneration** has well set in, is poisonous.

Stall-fed animals, that would die from disease in a short time if not butchered, are disease producing.

Blasted grains--wheat, rye, and corn--are poisonous to animals as well as to man. Pellagra comes from starch poisoning--so we are informed by those who have had experience in treating the disease.

Poisons in the Air.--People living close to smelters, slaughter houses, soap and glue factories, the outlets of sewers, etc., are injured more or less by poison gases.

Tobacco is a stimulant and sedative. Its stimulant effect is that of irritation. It is a rank heart irritant. During the first ten to twenty years of its use the heart is made to work overtime--often from twenty-five to forty per cent. Through years of use there becomes established more or less toleration. So great does this toleration appear to be that the use of the drug is looked upon by many as of no serious consequence.

The influence of the poison is to lower the individual's self-respect and dull his moral responsibility. It builds selfishness and prevents the evolution of higher efficiency.

At the beginning the effect of tobacco is that of a poison. it causes nausea, vomiting, and great depression of the nervous system. This being true, can anyone so far forget these facts as to say that tobacco is not a rank poison?

The reason why the system appears gradually to develop a toleration is because the irritating effects fail in time to cause the system to react against it as powerfully as at first; but this is no proof that it has lost its influence and is no longer an irritant--a poison. Indeed, the body continues to react, but it is in the form of fortifying against the influence of the poison. The heart and blood vessels are enlarged--these organs are thickened, hardened, and rendered less capable of performing their most delicate functions--namely, renewal of cell life and elimination. As a result, the walls of these organs become thick, hard, and lose their resiliency. This state, when established, is called hardening of arteries--arteriosclerosis, sclerosis, cancer, etc.

The chronic effects of tobacco on other organs of the body are that it causes enervation, and in many people emaciation.

"Tobacco heart" is recognized by the least observant when far advanced. The effect of tobacco on the eye is well known.

Many nervous "breakdowns" come from tobacco rather than from too much work.

Epilepsy, bronchitis, neuralgia, **rheumatism**, and many nervous disorders are brought on, directly or indirectly, by tobacco.

Nicotine is the active principle of tobacco. It is more deadly than arsenic, strychnin, or morphine. The odor will kill a bird.

Women and children are frequently invalided because husbands and fathers practice the filthy habit of smoking in the home.

When smoking is practiced in it daily, a home soon becomes saturated with smoke; after which it becomes a menace to the health of wife and children.

No man would willingly double his expense for tobacco if he knew this. Some might not worry about how uncomfortable wives are made by ill-smelling homes, but if they realized that a hundred dollars expended each year for sickness legitimately belonged to their tobacco bill, they probably would stop ruining their homes.

The use of one stimulant and narcotic calls for another. The smoker usually uses coffee, tea, or alcohol.

Diseased plants may produce digestive disturbances.

Plants infested with disease-producing germs are believed to be a source of much disease. Lettuce has been denounced by experts as a vegetable unfit to eat, because it is a germ-carrier. Personally I have not found this true of any vegetable, and, what is more, I know it is not true. Even if the vegetables that are eaten raw should carry germs, the germs stand no show against normal digestion. This I have been proving for years by prescribing the Tilden salad to every patient as a food to eat with every dinner.

Poison gases are generated in the bowels. The gas coming from putrescence should be washed out of the bowels by enemas, and eating should be suspended until lost digestive tone is restored.

Illuminating gas is very toxic. It contains carbonic oxide.

In cities where gas is manufactured there is more or less loss--waste--and the soil becomes saturated. The atmosphere of Paris is said to contain 1 part per 10,000 parts of carbonic oxide. Much more is believed to exist in houses into which, because of high temperature, the gas is drawn. This is added to by paintings and tapestry.

There is some little excuse for being poisoned by many of the items above pointed out; but what excuse can be given for the wholesale poisoning brought about by the use of tobacco?

Man deliberately poisons himself, but the layman can hardly be held responsible for doing so when we take into consideration that his medical adviser is offensively saturated by the weed.

So long as the world knows so little as to believe that a man who deliberately poisons his own body with tobacco is a safe medical adviser, and is justly a celebrated physician, just so long will rational healing be refused. Man will never come into a satisfying knowledge of anything until he wants to, and then he must put himself "en rapport" with the psychology that will bring it.

We cannot serve two masters. We must choose between the false and the true. And this decision is "up to" us every day and every hour in the day.

Tobacco is a poison that soon establishes a reign over the will of man. The mind is weakened in many respects. Memory for proper names is lost. Dyspepsia and heart disease ended the career of Mark Twain. His discomfort and heart disease were built by tobacco and coffee.

4. Animate Agents

History of Infection

Infection is divided into three stages, according to bacteriology; namely, animate agent, a fermentation, and intoxication. I would divide the history of toxemia--infection--into **Enervation and Autotoxemia.**

Enervation is brought on from one or many causes which use up nerve energy, both of a mental and of a physical character. Then, when enervation is established, functional efficiency is lost, and with this follows a "slump" in the production of physiological ferments, after which the omnipresent pathologic ferment--infectious agent--becomes "master of the show;" and if the good ship of health does not at once discard its jetsam and refuse to take on any flotsam, pathologic fermentation and decomposition will follow.

So long as the body is normal, and secreting a normal amount of physiological ferments, pathological ferments are made to dance attendance upon the body in the capacity of menial servants; and they will serve long and well in that capacity, if the master is sober and sane. But when licentiousness and sensuality force physical insolvency, then servants become masters; and whether this reversed order is ever righted depends entirely upon the amount of organic integrity left, and the skill used in suppressing the insurgents--bacteria--and reestablishing the home guard-enzymes.

This being a true statement of how disease is established, time and attention should be given to methods of keeping up the health standard, rather than spending all the time and attention in the study of bacteriology, when germs are at most only auxiliary agents in the development of health and disease.

Pasteur, after his researches in fermentation, took up the subject of disease. He assumed that disease was caused by fermentation; hence he searched for germs. The rank and file of the medical, as well as the non-drugging, profession filed in after their medical bellwether without question. The reason for so much unquestioning acceptance of the dicta of this great French germophobiac was that the profession was in chaos regarding cause, and it was ready to accept a savior of any kind without question. Today the germ theory fits well only those who take it without thought. Its popularity comes from numbers, not reason.

It will be well to keep in mind that Pasteur, Koch, and Metchnikoff were not practicing physicians; they were laboratory experts who--a priori--assumed that germs cause disease, and undertook to discover the specific germs that cause each specific disease, by experimenting on guinea pigs, chickens, and other animals; and, by making research in human and other excreta, they endeavored to discover the habits and customs of the flora and fauna of the intestinal canal.

In their explorations, experimentations, and deliberations, they found themselves sometimes on one side and sometimes on the other side of the question of whether or not germs were friendly to their host.

The material in the digestive tract, in bacterial form, is said to number one hundred and twenty-six billions for the daily human excreta. This certainly indicates that man has a powerful resistance, or none would reach the age of from sixty to a hundred years. By some observers it is said that guinea pigs have been successfully reared without germs, and that the polar bear and other animals of the arctic region have no bacteria; that even in the temperate regions there are animals whose alimentary tracts contain comparatively few bacteria. The parrot is one. Other observers have arrived at quite different conclusions.

Experiments have shown that, when chickens are fed on sterile food, they fail to develop, or are retarded in growth, and that they show normal growth only when fed food containing bacteria. It is said that Madame Metchnikoff arrived at the same conclusions in her experiments with tadpoles.

Pasteur's research work on the diseases of the silkworm was followed by a study of diseases of mammalia. He created the fundamental methods of bacteriology. It was in this field that Koch

achieved fame and was rewarded by his government, being awarded a title, a hundred thousand dollars, and a pension.

Koch discovered a cure for tuberculosis. In this field of discovery he has had many successful understudies, or imitators, of whom--neither last nor least--was Friedmann with his turtle serum.

That tuberculosis still thrives, except as it has been handicapped by the growing intelligence of the people and an improved sanitary science, is easy of observation to all but prejudiced eyes; yet, notwithstanding, this truth does not militate against the Koch, or bacteriological, theory of cause and cure. Once a fallacy is in the saddle, it rides, for a time, rough-shod over truth.

To utter a word of doubt or protest, that the theories of Pasteur, Koch, Metchnikoff, et al., are not the whole truth, consigns one, so stupidly ignorant, to total professional darkness--oblivion.

It should not be forgotten, in passing, that Koch abdicated his theory regarding bovine tuberculosis, but the profession out-Koched Koch and repudiated Koch's repudiation.

Reader, do not pass judgment on my protesting until you know all I have to say--until all the testimony is in! It is just barely possible that some of it may be evidence, and such haste on your part might not prove wise; for time--the court of last resort--may reverse your decision.

One of these laboratory experts has practiced medicine, thereby familiarizing himself with the peculiarities, habits, and customs, of both a mental and a physical character, of sick people. Theoretically they perhaps knew all about man, his mind and body; but to know--positively know--all knowledge must be lived. A doctor may have a lot of textbook and laboratory knowledge; but, unless he spends years in applying it, it is not his knowledge, and he only thinks he knows.

According to the laboratory expert's opinion, man is an automaton--a fixed entity--that has no power within himself to stay well or make himself sick. It is true that there is a perfunctory recognition that the body has within itself anti-bodies--a given amount of self-protection or immunization; but that activities, both mental and physical, have more than anything else to do with determining whether man shall be sick or well, is not recognized as the great field of causation; and, as to man's having within himself power to live in health--as to his having autoinimunizing power--being a living, breathing, activating knowledge--this is left out of the mental equation of all these eminent bacteriologists; hence the inexplicable failures that have accompanied every well-worked-out plan of cure on a bacteriological basis that has been advanced by them.

Perhaps I should not be personal; but, inasmuch as what I am about to say is of vital importance, I am justified in declaring that each one of the eminent gentlemen named above was a semi-invalid--and that, too, with his knowledge of germs. If germ infection was the cause of their ill-health, they certainly should have kept their bodies free enough from unfriendly organisms to have enjoyed health. A theory of cause and cure that will not give a reasonable amount of health to its possessor is not of great importance.

The conclusions arrived at by the bacteriological experts have been reached by approaching the subject of disease with the fixed hypothesis that there is but one cause of disease; namely, animate agents--that of germs; and then taking for granted that the cause--germs--is irresistible, unless headed off by immunizing the body by inoculating it with the virus of disease--germs. Then the logically obvious must follow; namely, if disease is headed off by immunization, health must be inevitable.

The absurdity of this one-sided search after the cause of disease should be apparent to any intelligent observing mind.

At this point a little reasoning should not be despised: There are a few people who enjoy

health and long life. Is it because they are not exposed to the omnipresent germ? They have not been made immune by virus or serum inoculation. This cannot be the reason. Then it must be because they have within themselves power to resist the influence of germs.

There are people who are well a part of the time, and a part of the time they are sick. Is it because they are exposed to germs a part of the time, and a part of the time they are not? This is not true. Then what causes the immunization a part of the time? They have no artificial immunization. If germs cause them to be sick a part of the time, why not all the time? Do germs cause disease a part of the time, and then a part of the time not? If so, are there subjects whom they never influence, and others whom they never immunize?

There are people who are, like Pasteur and Metchnikoff during their lifetime, in poor health all the time. Is it because they are infected and infested with germs more than other people? Surely this could not have been true of the laboratory experts! Who, knowing the cause of disease, would willingly suffer when a cure was at their hand?

If all that they taught about germs causing disease were true, surely a willingness to live as semi-invalids would be most inexplicable in the two great bacteriological experts.

In our own country, C. A. Herter, M.D.--once a very popular professor in Columbia University, and author of a book on bacterial infections of the digestive tract--died quite young. His perfected knowledge of germ influence in disease availed him nothing when he was called upon to save himself.

Of course, I do not believe that death can be done away with, but we should be able to have health for the most part while we do live, and certainly avoid premature death and waste of life.

Why do germs, in chronic invalids, fail to work out an immunization? Why is it that this class of invalids can be put in very good health when trained into health-producing habits--and this, too, when no attention whatever is paid to the germs that are supposed to produce the disease?

To illustrate my meaning: A few years ago a gentleman living in Tampico, Mexico, wrote me, saying that he understood I did not believe in drugs, and he wished to know if I would undertake his case. He had been suffering from malaria for five years, and every drug having a reputation as a cure for the disease had been tried and found wanting.

I gave him correspondence advice for one month. At the end of the month he said: "You have made good, and that, too, with a skeptical, doubting patient."

Two and a half years afterwards I heard from him, and he was still enjoying health, having had no return of the malaria.

The treatment I gave him was simply correcting all errors of eating and care of the body.

What caused the malarial fever in this case? The malaria germ? Or was it wrong life? Certainly both; but the question is: Which was the real cause? The malarial influence failed in five years to create an immunization; all "specific" drugs had failed. Treatment that allowed nature to return to the normal ended the malarial influence. If germs create immunization, why do we have chronic diseases? What causes chronic disease?

I have many cases of syphilis consulting me every year. According to medical authority, this disease is most positively "specific" in character, and should, according to the germ theory of disease, require a "specific" treatment; but in all cases I never resort to a more specific remedy than that related above in connection with malaria. Correct the habits, and feed properly--and all diseases will get well.

After years of experience in treating disease, I have found that health is the greatest and most reliable foe of disease.

The questions to decide are: Do germs per se cause disease? If germs cause disease, do they cause all diseases, or only a part of diseases? Which diseases are caused by germs, and which are not caused by germs? If there are people who are, and all their lives have been, in good health, without extrinsic or artificial immunization, what is the cause? If the cause is good health, then can the secret of good health be known; and if it can, may the secret be imparted to others who are not so fortunate? If good health immunized the organism to every normal disease-producing influence in man's environments, why cannot his normal immunization be increased to meet extraordinary disease-producing agents and influences? This can be done, and is being done at our "School for Teaching Health," to the satisfaction of many people from many parts of the world.

There are two groups of animate agents which are said to cause disease in man; namely, infectious and parasitic.

It has been thought that natural history could be taken as a basis for the study of animate agents as a cause of disease; and if infection is really produced by an infectious germ, then natural history must embrace all causes of disease. In other words, if infectious-microscopic germs and parasites are the cause of infection, then there is no excuse for dividing animate agents into parasites and infections; they can all come under the head of animate agents. Perhaps it would be well to divide parasites into exogenous and endogenous--those that are confined to the outside of the body and those that are on the inside--in the blood. A parasite that is on the body or in the bowels is still on the outside of the body.

If there are infectious animate agents, they should be divided into specific and non-specific; for, before we get through with the subject, we should see that there are germs which cause (using the word "cause" in a bacteriological sense) different diseases; and, on the other hand, different germs which cause the same disease; this, too, in diseases supposed to be clinically well defined.

As to specific germs, perhaps the gonococcus is one of the most pronounced types; yet it, too, fails to infect in those of pronounced resistance. This being true, what must constitute resistance?

As nerve energy appears to give power--as steam ,gives force to the engine, and as electrical energy gives power to move powerful machinery--so it is apparently necessary that nerve energy must be the force that enables man to resist environmental influences. But we see the physically strong giving way before influences that fail to prostrate others decidedly less strong. The question as to why this is, will not down.

The matter of feeding to keep up strength, so as to enable a patient to resist or throw off disease, is a professional fallacy that has cost, and is costing, more lives than perhaps all other fallacies combined, It is easily demonstrable that, without giving food and drugs, it is impossible to develop a "clinically well-defined" disease. Indeed, this epoch-making truth holds good in venereal diseases as in all others.

Any physician who, is not helplessly and hopelessly swallowed up by the whale of medical fallacy can in a very short time demonstrate, and prove to himself, the truth of all I say.

My theories and practice are not only simple, but they are logical; they are not only logical, but true. And the reason they are true is because they work. If they do not work, it is from a lack of knowledge in applying them. It is never necessary to fall back on that blanket excuse that has covered so much professional ignorance in the past; namely, "idiosyncrasy."

Malaria (malarial fever) is caused by a sporozoid; yet the disease may easily be cured by simply correcting the life of the patient--correcting the eating habits and care of the body generally. Then, when the disease is gone, if the patient continues to live right, he may stay in the malarial country, free from another attack. This being true, what really causes malarial fever?

Are those who continue to live in such countries, without becoming malarial, immune to the poison because of an idiosyncrasy; or are they carriers of the disease, having become immune to its influence? Can one person become immune and another not? The dilemma appears to be fully settled when it is understood that health--full health--is the only reliable opposition to disease; that everything which improves health builds immunity to all disease-building influences; that every influence injurious to health is an ally to disease,

While medical opinion is largely favorable to the idea that germs are disease-building, I should say that even those germs denominated infectious are not autonomous--individual--specific and self-acting, but by nature are convertible allies. When conditions are favorable to health, they add to the body's power of resistance; but when disease-producing influences--influences that lower the body's self-protecting energies--are in the ascendency, then they become allies to health's foes.

It appears reasonable that as germs are omnipresent, they, like the excretory products of the body, are allies for health, when limited to a health-standard percentage; but when that percentage is exceeded, these quondam friends become allies of disease-producing influences.

The treatment of disease, since germs have been recognized as the cause, parallels the treatment given when the profession was pruning itself on being conservative, yet wisely selective from the maze of theories advanced in the past hundred or more years. Perhaps it will be well to name a few theories that have been chaotically mixed in the medical mind previous to the germ theory:

Empiricism (experimental treatment), which is denounced as quacking, has always been handy for all grades of physicians to fall back on.

Organicism--organic disease.

Humoral pathology--all diseases come from derangement of the fluids of the body.

Symptomatology (treating symptoms)--a form of empiricism.

Phlebotomy (blood-letting)--one of the most popular theories previous to the germ theory.

Depleting system--blood-letting, calomel, and opium practice.

The various theories of inflammation.

Organotherapy--organ treatment; the treatment of diseases by the administration of animal organs, or extracts prepared from them. This treatment has existed from ancient times, the method as now practiced being of recent origin.

Hundreds of other theories might be cited, but what is the use? The popular treatment of disease, it matters not what has been the theory of cause, has always been the same; namely, ignoring the power of the body and mind to get well and stay well, when given a chance.

For the main part of all treatment, the medical man has believed it to be his duty to knock down and drag out. Indeed, he has appeared to believe that the more vandalism he practiced on the human body, the better for the victims of disease.

Just before my debut in the profession--in my father's day--the most popular remedy was blood-letting. When my day dawned, it was the physician's duty, according to the then dominant school, to purge, sweat, micturate, and salivate heroically.

Every treatment was heroically carried out. All the natural tendencies of the body to react and throw off disease were ignored, and a physician who would fold his arms and give nature a chance was a fiend, quack, a being to get rid of for the good of the people.

Even today the majority of physicians at the bedside will say of my suggestions--my heroic methods of let-alone treatment: "Such trifling, ineffectual methods may do in a case where there is nothing the matter, but in such cases as this (typhoid fever, pneumonia, appendicitis, or whatever the disease may be) it would be criminal to stand by and do nothing. What are physicians for? If their function is to do nothing, it is time to close medical schools." Indeed, I agree that, if the physician's function must be that of a disease-builder, and the function of the surgeon, two-thirds of the time, that of a vandal, it is time to close all medical schools.

Old methods are extensively carried out all over the world. Germs, serums, and vaccines are the slogans of medical men today; but many drugs are in constant use: quinine for malaria; mercury, iodine of potash, and "606"--the old salvarsan--and neo-salvarsan, and many times neo(new) salvarsan, the great twentieth-century remedy for syphilis which out-specifics all other specifics in "curing" syphilis; then opium and morphine are still working over-time for pain; and when the opiates are not used, the coaltar heart-paralyzers are used-to the death in many cases.

There is a great deal of perfunctory talk, on the part of medical men, about not believing in drugs, and of much believing in diet. But it is a trick of the trade; it is that old, professional, stock-in-trade buncombe that is often used to cover ignorance. If they could not prescribe drugs, and were required to make an effective diet prescription, they would be out of a job.

There is a lot of buncombe by way of professional talk in favor of diet and against drugs; but this is to meet the demand for physicians who understand diet--a demand that is fast running ahead of the supply. That is, the average doctor is compelled to prescribe a diet; and his prescription would be a joke, if it were not so stupid. There is a time and place for everything; but the burlesque acted by many physicians today, in pretending that they know how to diet the sick, is certainly too asinine even to create a smile.

That bacteriology is not satisfying the profession, there are evidences galore. And so long as common sense regarding the cause and cure of disease is to be ignored, all theories of cause and cure must be founded on shifting sand.

There are millions of money , and all the bluff that can be mustered by influence, behind the germ theory; consequently its death-struggles will be long and agonizing. But it must go. Of course, its fossilization stage will be long, and interesting to curio fiends and ancient respectability.

In what follows on the subject of germs, I shall endeavor to do justice to the germ theory. If I too frequently say that germs cause this, that, or the other disease, please understand that I am writing from the standpoint of an advocate.

What is the difference between parasitic and infectious agents, according to the accepted theory?

The parasite is supposed to be much easier on its host. It draws only what it needs for subsistence, and remains on the outside of the body; while the infectious agent invades the sanctity of the blood and fluids of the body, and spreads devastation and anarchy everywhere. It develops rapidly, and destroys organic functioning by exciting intense reactions.

When the parasite causes death, it is more accidental than otherwise. The intestinal worm causes death by finding its way into the lungs. The hydatid disease of the liver (a parasite belonging to the dog) is fatal. The parasites, when they kill, do so by causing tumors, which cause pressure or obstruction.

Both parasites and infection produce toxic substances; it is a question of more or less. The poison is that of intoxication. In parasites, intoxication is reduced to the smallest amount.

The definition of infectious disease is: Disease developed from toxins produced by parasites. The word "parasite" in this case is made to cover all animate agents.

Infection, defined, is a history of intoxication.

There are intoxicants which are not infectious agents. Alcohol, coffee, tea, tobacco, various drugs, and all legitimate foods, are stimulants; and stimulation is the first stage of intoxication. Thoughts stimulate the mind and body, and thoughts may be pushed to intoxication. To aid intoxicating habits to overcome resistance, we have all the domestic and social requirements--habits in daily life, in business and social life--the carrying-out of which uses up more nerve energy.

Intoxication means prostration. The body in a state of drunkenness--in a state of intoxication--is at first exalted until reaction comes; then it is prostrated--enervated. Understand, once for all, that there are many varieties and stages of drunkenness besides alcohol inebriety. The commonest drunkenness is food drunkenness--and it is not often recognized.

A body that is enervated is crippled in its functioning. Elimination is impaired, and this favors auto-intoxication; for the excretions are toxic, and when not carried out as fast as generated, they become a poison to the system.

Besides the intoxicants (stimulants) named, there is no question but that, when enervation is established, the process of digestion is imperfect; then pathologic fermentations take place; and this process generates toxins, which, when added to the daily or habitual supply, add to the enervating influence to such an extent that systemic protection--resistance--is lost. Then it is that bacterial invasion, with bacterial toxins, overwhelms the body, and the victim dies from an infectious type of disease.

Everything points to the fact that so long as the human body is normal, and not overtaxed by care and bad habits, parasites are either suppressed entirely or held down to inoffensive guests of the body. But when enervation is established, the body loses its immunizing power; then, and not before, do germs become the allies of bad habits in destroying health.

Pasteur demonstrated that germs were in the atmosphere, and that, falling into certain liquids, if they there found conditions favorable for their development, they caused fermentation. The great point that should never escape the mind's eye is: If germs find conditions favorable, they set up fermentation.

What are unfavorable conditions? Health! A normal type of health is capable of resisting even an abnormal type of fermentation, when health is not handicapped in some way. For example: In flesh wounds, if drainage is perfect, health defies septicemia. If uterine drainage is perfect, puerperal fever--septicemic fever--is defied. Large quantities of germs--putrescence--may be swallowed, and a normal digestion will defy them.

When putrescence is injected subcutaneously, beyond the immunizing power of the blood, the health is overcome, and the disease and death are enthroned.

When an injection of antitoxin, or even water, is made into the spine, it may kill from shock in a child that is enervated, and its system taxed at the time with an oversupply of food. The body is off guard, or preoccupied, so to speak, when taxed with a large meal, when mentally occupied, or when fear has possession. Under such conditions, a shock that ordinarily would be easily rallied from may prove fatal.

An irritable state and lack of poise are antidotal to resistance, and such subjects become easy victims of infection.

Any influence that consumes energy may become an ally of germs, if pushed to nerve exhaustion.

The human body becomes a victim of germs after resistance is broken down from any cause.

A Reasonable Explanation of Germ Action

Animate agents which have to do with the life and health of man may be divided into **Parasites** and **Microbes,** or **Bacteria.**

Parasites, in biology, are organisms that inhabit another organism and obtain nourishment from it. Microbes, or bacteria, are micro-organisms which should be thought of as yeast fungi, and as the inciters of fermentation, which are as necessary to man as his own unorganized ferments--his digestive secretions. These fungi, or germs, may be divided into as many genera and species as the microscope and the imagination of the bacteriologist may suggest. That the explorers of the microscopic world have some excuse for the infinite number of varieties already discovered, there is no question; for these infinitely small beings have the habit of taking on an individuality, or personality, in keeping with the chemic changes of the medium with which they are correlated. Instead of the bacteria setting up changes peculiar to themselves, they excite fermentation; and the resultant is the sum of the elements involved. These microbes become putrefactive germs when they carry their ferment to nitrogenous--protein--matter. The germ subject is wonderfully simplified when we know that the metamorphosis is in keeping with the chemistry, or the chemic changes taking place in the medium.

Ferments are divided into two classes--namely, unorganized, or enzymes, and organized, or bacteria, or microbes. The unorganized are produced by animal and vegetable life. Enzyme is a product of all living cells; without it there could be no tissue formation. Pepsin is a type of animal ferment, and the so-called vitamin is one of the refined products of metabolism.

When man's body is normal, the digestive secretions--the unorganized ferments--are quite sufficient protection against the metamorphosis of microbes into toxic germs in numbers great enough to do the body harm from the fermentation and decomposition which they may set up in the food intake.

When man's digestive and assimilative powers are reduced, and he fails to digest the food intake, the ever-present germs establish a pathological fermentation which hastens the disorganization and exit from the body of the superfluous food.

The monistic doctrine--the theory of the unity of all things--appears most rational, and should be satisfying to the most philosophic mind. When used medically, it clears the mind on the subject of cause and effect, wiping out many fallacies and superstitions

The negative and the positive, the good and the bad, health and disease, life and death, are two different states of one and the same thing. Of course, this is a theory that the child-mind cannot be expected to grasp instantly; for it requires a very great experience, and much reflection; it requires a priori--beforehand--knowledge, and a posteriori--from experience--knowledge.

In applying the monistic philosophy to digestion, a posteriori--according to experience--we know that digestion is carried on by ferments which are secreted by the body. In keeping with the great truth of the unity of all things, and the dual attributes of all things, a priori we reason that, if digestion is carried on by a ferment--a physiological ferment--indigestion must be the negative side of this phenomenon--it must be a pathological ferment. We must have indigestion if we have digestion; one is the reverse of the other, and one is as necessary as the other. If physiological digestion (fermentation) does not take place, then pathological fermentation (digestion) must; for action and reaction are going on all the time; nothing stands still.

Since Pasteur et al. discovered that there are microorganisms everywhere, which only await a favorable condition to set up fermentation, we reason, a priori, that this fermentation is the other half of physiological digestion or fermentation; and, in harmony with this monistic philosophy, this phenomenon--pathological fermentation--is necessary and physiologically conservative, rather than pathologically destructive.

Bacteriology assumes, a priori, that bacterial ferments cause disease; but all the cures based upon this assumption have failed, and all the testimony advanced in support of it has been more partisan than loyal to truth.

It is reasonable to assume that the ever-present bacteria, or germs of fermentation, are as necessary for physiological fermentation as they are necessary for pathlogical fermentation. Without the aid of these neutral germs of fermentation, it is doubtful whether the unorganized ferments--the digestive ferments of the body (ptyalin, pepsin, et al.)--would be capable of serving the great purpose of nutrition. I say "neutral," as they are found unchanged in nature. But they may be converted into allies or enemies--it all depends upon the chemic nature of the medium. It should always be borne in mind that yeast per se is non-toxic; toxicity is developed by the chemic changes which take place in disorganization. Food is disorganized when pathological digestion fits it for expulsion from the body.

These friends of man, against which Pasteur and Metchnikoff warred, and the influences of which in their own bodies they possibly were successful in controlling sufficiently to render them both semi-invalids, are in reality for man's good rather than his bane.

In this connection, perhaps it would be well to reflect, or to assume a priori, that when mind enters potentially into a compound in which the microbe, or ferment, and nitrogen, or protein, are associated, the character of the resultant must take the form of the mental concept. That is, the toxin that develops must correspond to the chemic change; but the form of the disease must be mentally directed. The disease may be a hydrophobia, a syphilis, or a tuberculosis. The location of the disease is perhaps chemically directed, but the type of symptoms may be directed by the mental concept.

To be more specific: A person is bitten by a supposedly mad dog. This fact starts a chain of morbid suggestions and expectations. Fear perverts digestion; pathological fermentation supplants physiological fermentation; the microbe, or neutral ferment, is made to take on a toxicity in keeping with the chemic agents involved; and all are given form by the mental suggestion, plus the added compound, protein-serum injection, known as the Pasteur serum. When the element of fear cannot be overcome, it is well to keep in mind the possibility that antitoxin serums may be reconverted into toxins and act contrary to expectation. Psychology must be considered.

The average medical treatment, or mistreatment, of supposed rabies is on the order of "a bull in a china shop."

The treatment is brutal, unscientific, and death-dealing in its application. The same is true of syphilis, and, to perhaps a less extent, of all other diseases.

What is the virus--admitting, for the sake of argument only, that there is a specific poison introduced into the human body by the dog's teeth? It must be a protein ferment, which is a pathological ferment. What is man's defense against such poisons? The neutralizing effect of hope, and the unorganized ferments. The normal blood can unhorse, so to speak, a great deal of poison, if the mind is free from fear. But fear kills.

The average physician is a fear-monger, if he is anything. He goes about like a roaring lion, seeking whom he may scare to death.

A normal man, devoid of fear, can develop antidote for poison. Those who are killed by snake bite have a paralyzing fear, which means surrender to the enemy. Keepers of snakes have no great trouble with bites until fear overtakes them.

Confidence in one's self-power is the secret of health and long life. This confidence, with the providence bestowed by a knowledge of the laws of health, is the most dependable immunizer known.

The influence of mind on fermentation is positive The mind may stimulate physiological fermentation, and it may stimulate pathological fermentation. In other words, the neutral germs are made by mind to ferment

physiologically or pathologically. The character of the toxin evolved must be in keeping with the chemical agents involved, but the Psychology of the disease is determined by the mental concept of what the disease must be.

When mind plays only an indifferent role, disease is commonplace.

It should be understood that anything in the alimentary canal (bowels) is still on the outside of the body. To nourish the body, food is taken into this canal, or digestive pouch, but, before it can be absorbed, it must be reduced to a fluid state by the various digestive secretions. When, from whatever cause, the food is not digested in a reasonable time, it must be disposed of--it must be thrown out--and the canal cleaned out. The cleaning is attended to by scavenger parasites.

The toxins resulting from the decomposition are unfit for absorption, and irritate the mucous membrane. The irritation causes the membrane to secrete mucous and serum. The mucous is tenacious and hangs on, coating over and protecting the mucous membrane. The office of the serum is to antidote and hasten the ferment germs and their toxins out of the bowels, and also to disinfect, or help the scavengers destroy, what remains of the transformed neutral germs and their ferment or toxin.

This is a necessary process, going on in the alimentary canal of man daily as long as he lives. If man breaks down his energy, and then persists in eating more than he can take care of by physiological digestion, the surplus must be disposed of by pathological digestion.

Physiological ferments are secreted by the body, and are necessary to prepare food for metabolism. The disposal of food takes place after it is absorbed, and this disposition is called metabolism.

Pathological ferments are generated by the neutral microbes when the latter are made to develop fermentation other than physiological. Their purpose is to dissolve the surplus food intake, and hurry it out of the body. This process is necessary for the life and health of man. When digestion is abused by a constant intake of food beyond digestive ability--beyond the power of physiological ferments--then the bacteria set up a pathological fermentation, which breaks down and disorganizes the surplus food, and forces it out of the alimentary canal by stimulating the expulsive power of the canal.

This work takes place on the outside of the body, in spite of the fact that it is in the bowels. A like work, only much more refined, is going on in the lungs in all cases of tuberculosis.

When digestion and absorption are carried on in the alimentary canal, beyond the needs of repair and building, the surplus must be disposed of. The duty of the lungs is to furnish the oxygen necessary to bum up this surplus. But this function is often overtaxed, and, to get rid of surplus nutritive material, the lungs are requisitioned by the central powers to do vicarious excretory work. In addition to performing their function of exchanging carbon dioxide for oxygen gas, they become excretory organs; and, as the bronchial tubes and air- cells of the lungs, like the bowels, are simply excavations into the body, and their closed cavities are on the outside of the body, germs have free access to them. When the lungs are forced to take up the task of excretion, to aid in freeing the body from its accumulation, a cough develops, which is necessary to rid the lungs of the accumulated matter. When there is no systemic infection, the cough and expectoration may be what is known as bronchitis; or perhaps bronchorrhea, asthma, etc.

When toxins, the result of putrefaction in the bowels, enter by way of the absorbents in the bowels, the lymphatic system arrests the toxin and renders it innocuous; but when the infection, or toxin absorption, is too great for the lymphatics to dispose of, nature undertakes to expel it by

way of the lungs. The neutral germs that join the process are metamorphosed into tubercle bacilli. They undertake to dispose of the accumulation by disorganizing it--causing a disorganization of the hyperplasia, or the protoplasmic deposits; in other words, a disorganization of the tubercles which have been forced to develop from the irritation of the toxins absorbed from the bowels. This disease is called pulmonary tuberculosis. The simple germs of fermentation become the germs of putrefaction. Putrefaction hastens the exit of accumulation by breaking down and liquefying it. The putrefactive germs, because of the chemical medium, metamorphose into T. B.'s.

Bacteriology, like theology, makes the bad more powerful than the good.

The old theology made the devil and sin greater than God and good; and the medical profession has always put disease far ahead of health. The devil, disease, is much more powerful than health; and I admit, when disease has modern, or ancient, medical science as an ally, the combination is more potent than health.

Bacteriology is a splendidly wrought fallacy. How long it will hold the center of the arena of human endeavor, as far as the cause, effect, and cure of disease are concerned, is hard to say. There are millions of dollars invested in exploiting bacteriology; and millions of dollars may keep a fallacy alive for ages. Besides, the fallacious system offers such splendid rewards during the lifetime of its devotees; and, neither last nor least, it gives immortality to those who .are worthy.

To have a germ named after its discoverer is far greater than to have a continent bear the name of its discoverer.

Bacteriological science is so grandly scientific that one who has mastered all its details is entitled to a niche in the Hall of Fame, despite the fact that he can never be a physician--can never know anything of value about the cure of disease-until he has forgotten all he has been taught.

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CHAPTER III

The Study Of Medicine

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The study of medicine is divided into four subjects, namely

I. Pathology: that part of medical science which studies disease.

A. Etiology: the investigation of morbific causes.

B. Pathogeny: an explanation of the mode of action of causes-how cause produces the development of disease.

C. Pathological Physiology: morbid reactions under disease-producing causes.

D. Pathological Anatomy: which reveals the structural change resulting from disease.

E. Symptomatology: which accounts for disturbances.

F. Nosology: which describes and classifies disease.

II. Diagnosis: which determines the place where a given disease belongs in Nosology.

III. Prognosis: which fortells the outcome of disease.

IV. Therapeutics: which endeavors to relieve, modify, and cure disease.

I. PATHOLOGY

According to medical science, pathology is the science of disease--that branch of medical science which treats of the modifications of function and structure of organs caused by disease. Disease defined is: inharmonious action of one or more of the various organs, owing to functional or structural change.

There is special pathology, which means analyzing disease. This is divided into internal or medical, and external or surgical, pathology. Then there is comparative pathology, which considers a study of diseases in man, animals, and vegetables; experimental pathology, and general pathology.

General pathology defines terms and fixes meanings; determines the laws of morbid phenomena, determines causes, defines symptoms, names diseases.

Pathology is a description of the body, and the organs which compose it, when they are laboring under the effects of abnormal, unusual, and perverting influences.

Physiology is the study of the body and its organs in that state known as health, and under influences that give health and strength.

Pathology, then, is that state of the body known as bad health, while physiology is that state of the body known as good health.

Disease is inharmony, and health is harmony. Both are different states of one and the same thing.

When we study pathology in connection with the influences that produce it, we learn in time to recognize real cause in its effect.

To study effectually the phenomenon pathology--disease--we must combine with it physiology--health--and etiology--cause.

To study pathology--to note change in function and structure--without a correct understanding of the cause of the change, leads nowhere. To study physiology-to study the secretions and excretions from men en masse, like a composite picture--will show an average--show about what an average individual should secrete and excrete under a given environment and a measured dietary. This is good as far as it goes, but no approximation can do more than give general knowledge of physiology and pathology. This generalization will give a like knowledge of dietetics, hygiene, and all branches of medical science.

Morbific effects will be found following certain morbific causes; but on closer investigation it will be found that there are exceptions to every cause--that there is no cause that always produces the same effect; hence pathology, physiology, their causes and effects, must be studied, not only in a general way, but in a special way, and the reason for exceptions must be as thoroughly understood as the rules.

Health and disease are related in that they are two phases of one state, and neither can be known without contrasting it with the other.

Living organisms are unstable. Their state must vary with the changes that take place in the environing influences.

The phenomena recognized as different acts of life are not dependent on some mysterious force outside of the body--some vital energy animating the body--but are simply actions and reactions produced by external agents.

For example, when external variations are slight, adjustments are readily made in those of a full measure of health, but not so readily adjusted in those with resistance broken down. Where the temperature falls forty to sixty degrees in a day or night, the most robust will suffer more or less from the adjustment, and the delicate may be killed.

Pathology given exclusive attention is a fruitless study. Health in all its phases must be studied, and cause and effect must be found in everything that affects the body.

The general study of pathology today too frequently starts with an established state of the blood or the organs of the body. The primary causes are ignored or not thought of. For example: Typhoid fever is thought of as cause, which leaves, when over, modifications which persist; being too slight to be recognized, they nevertheless continue their evolution. Ten to fifteen years later a heart, lung, liver, or kidney disease develops, which is ascribed to the changes wrought by the initial fever. A correct way to view these phenomena is to recognize the typhoid as an accidental but possible link in a morbific chain started in perverted nutrition, back perhaps in childhood, or back farther in a nutritional diathesis, that makes the development of a morbid chain of perverted nutrition, with possible links of typhoid, pneumonia, catarrhal inflammations, et al.

Crises.--Life is made up of crises. The individual establishes a standard of health peculiarly his own, which must vary from all other standards as greatly as his personality varies from others. The individual standard may be such as to favor the development of indigestion, catarrh, gout, rheumatic and glandular inflammations, tubercular developments, congestions, sluggish secretions and excretions, or inhibitions of various functions, both mental and physical, wherever the environmental or habit strain is greater than usual. The health standard may be

such--the standard of resistance may be opposed so strenuously by habits and unusual physical agencies--that the body gives down under the strain. This is a crisis. Appetite fails, discomfort or pain forces rest, and, as a result of physiological rest (fasting) and physical rest (rest from daily work and habits), a readjustment takes place, and an unusual standard is attained for a short time--the patient is "cured." This is what the profession and the people call a cure; and it is for the time being--until the customary habits and usual style of living have had time to establish the regular ante-crisis standard. This standard is maintained until an unusual enervation is brought on from accident or dissipation; then another crisis. These crises are the ordinary sicknesses of all communities--all catalogued diseases. Cold and hay-fever are simply forms of crises belonging to a chronic state of toxin poisoning characterized by catarrhal inflammations of mucous membranes. When the cold is gone, or the hay-fever fully relieved, it does not mean that the patient is cured. Indeed, he is as much diseased as before he suffered the attack (?)--the crisis--and he never will be cured until the habits of life that keep up toxin poisoning are corrected. If the intoxicating habits are continued, nature will undertake to cure by hardening the tissues--sclerosis. Arterio-sclerosis is one of nature's cures. Such a cure will not take place before old age, if not forced to.

A standard of health may be such as to be forced into frequent small crises, such as colds, frequent headaches, neuralgias, toothache, acute fevers, throat affections diarrheas, constipation, etc. Each of these attacks may be looked upon as a crisis. To recover from a crisis is not a cure; the tendency is back to the individual standard; hence all crises are self-limited, unless nature by maltreatment is prevented from reacting.

All so-called healing systems ride to glory on the backs of self-limited crises, and the self-deluded doctors, and their credulous clients, believe, when the crises are past. that a cure has been wrought, whereas the real truth is that the treatment may have delayed reaction. This is largely true where anything has been done except rest. A cure consists in changing the manner of living to such a rational standard that full resistance and a balanced metabolism are established.

One hundred per cent efficiency is seldom seen. No one with an established sensual habit is one hundred per cent efficient.

Tobacco, coffee, tea, cocoa, alcohol, drug habits of all kinds lower the standard of resistance and personal efficiency; and if the habitue starts life with less than one hundred per cent efficiency, his habit or habits will bring him into more pronounced inefficiency and more frequent crises.

Any habit of mind or body that uses energy faster than it is generated must establish a resistance and an efficiency below the normal standard. Then, if the normal standard is below the ideal one hundred per cent, it must be obvious to all thinking minds that those who belong to this class must have a very precarious hold on health, and must be of the class forced into a crisis at every unusual change of environmental influences. Babies will have the diseases peculiar to nursing and teething; older children will develop the so-called contagious diseases; while grownup people will have crises peculiar to, and in keeping with, their diatheses.

All of the above concerning crises is demonstrable. Indeed, so self-evident is it that it has taken a lot of selfish conceit and dogmatism to prevent these simple truths from becoming commonplace.

I suppose it is not quite human to expect those of a standardized school of healing to give utterance to discovered truth which, if accepted by the people, would rob them of the glory of being curers of disease. Indeed, nature, and nature only, cures; and, as for crises, they come and go, whether or not there is a doctor or healer within a thousand miles. For the good of most patients, it would be well if the schools of slightly varying phases of fallacious therapeutics were driven into the sea of oblivion.

If typhoid or any disease is managed correctly, the patient will recover, and if the habits of life are corrected and the patient continues to live right, there can be no sequel from the typhoid; but if the style of living followed before the fever be continued after it, other diseases will be developed; and if an organic change has been caused by the interpolated disease, then certainly the organs so affected is most liable to give down from years of toxic infection.

Disease, functional or organic, must be looked upon as interpolated affections. The real disease is in faulty nutrition, and is of daily development.

Intestinal intoxication, from bacterial fermentation due to overeating, improper eating, and eating potentially acid foods, and foods devoid of enzyme, is a constant source of toxin poisoning. This condition is added to by retained excretions, which will always take place when the organism is enervated. The amount of food intake may not be too great under correct conditions, but the subject's power to digest and assimilate is impaired by overwork, worry, venereal excess, alcoholics, tobacco, coffee, tea, and other stimulants.

Without impaired nutrition, which is initiated by toxins introduced from without, or developed in the body, diseases, acute or chronic, cannot develop.

Suppose we take heart disease. It may have developed with rheumatism, typhoid fever, or other diseases. The effects on the heart are identical. The new disorder--the heart disease--is not caused by the rheumatism, the fever, or any other disease, but evolves from the same cause that evolved the rheumatism or other diseases--namely, the toxemia.

To treat any disease correctly, its cause must be understood. To say that the heart was diseased by rheumatism is an etiological error. The heart was poisoned by the toxins that created the rheumatism, and the drugs and other treatment for rheumatism joined the, toxins to put the heart out of commission.

The leading authorities say that visceral diseases take their origin from some antecedent cause, but that the initial disease is not always easy to find. They declare that the disease may be dormant, or develop silently, for twenty or thirty years before manifesting. This is true and it is not true. A tuberculous diathesis favors the development of tuberculosis, and the gouty diathesis favors the development of gouty diseases; but the primary cause is the same--namely, chronic toxin poisoning. This state of the blood and other fluids of the body must exist before any of the organs can go into a state of degeneration.

If the subject is scrofulous, scorbutic, or has developed a state of acidosis, and the glandular system has once been septically infected from a syphilis, gonorrheal bubo, carbuncle, vaccination, or wound infection, the gland lesions will get well under proper treatment; but if the subject becomes careless in his habits, and builds back the chronic autotoxemia, it would be the natural thing for the glands to become diseased. When the glands are once infected, they are made sensitive and will respond to toxic influences more readily.

A. ETIOLOGY

Post-mortems are held for the purpose of discovering the cause of death, and the cause is found. It may be an organic change of the heart, liver, lungs, or some other organ. Suppose an abscess is found in the liver, spleen, pleura, or elsewhere; suppose apoplexy is found; without doubt a reasonable cause for death has been discovered. But what light has been shed on the real cause of disease?

None whatever. Post-mortern revelations are as silent on the subject of ancestry as they are on the cause or causes of disease.

To find an abscess of the liver or spleen may account for death, but the very important knowledge of what caused the abscess, or what caused the cause of the abscess, is not found. On knowledge of morbid processes that would help the living to shun a like fate, all post-mortems

are as silent as death--except in deaths from injury, and in those cases only the cause of death is found; the dead tell no tales regarding the cause or causes bringing about the accident.

How is anyone who has not studied the history of morbid processes to know that a slight injury to the neck of the womb twenty years ago is one cause of cancer today? Or that the habit of drinking hot coffee twenty years ago caused chronic inflammation of the stomach that ends today in cancer of the stomach?

After having gained the knowledge that injuries, such as related above, are the cause of a fatal disease twenty years or more afterward, it is rather confusing to be confronted with the truth that only a few of those who have suffered a like cause have also suffered a like effect. Hence there must be collateral causes which are not considered, and without which the true causes and effects leading to the final fatal effect remain speculative. The profession moves in a diagnostic circle of misapprehension, always coming back to the starting point with no more true knowledge of cause than at the start.

So very obscure are the real causes of disease that it is not strange that nearly all professional men willingly disregard anything pertaining to disease except the symptoms which palpably present.

1. Enviromnent in Its Relationship to Health and Disease

The two words "health" and "disease" are used daily, but few know anything, except in a general way, of what either means.

The general conception is that health is a fixed, ideal state or entity, and that disease is a fixed state or entity whose particular purpose it is to war on health.

In aboriginal man's conception, disease was an evil spirit. In the early days epilepsy was caused by the devil. According to the Bible, an epileptic was a person possessed of the devil, or of devils.

A doctor in Cincinnati has discovered that epilepsy is caused by a particular germ, which the doctor has named "bacillus epilepticus."* (* Since this was put in type the doctor has recanted.) This devil germ takes up his abode in the colon, and from this throne torments his victim.

The Bible doctors cast out the devil Epilepticus in the name of the Lord. The Cincinnati doctor advocates casting the throne or habitat of this devil bacillus out by a surgical operation, on the theory that by destroying his abode Mr. Devil will depart forever.

It takes about as much faith to accept the germ theory as the devil theory. Indeed, both are conceptions built out of hypotheses that have their foundation in the false theory that the universe is governed by two Deities--namely, God and Devil. The whole germ theory is a refined and modernized demonology.

Cell-Life

As soon as a cell is born it begins to die. Man's body is made up of cells, and his continuance in life depends entirely upon cell renewal and cell integrity.

The cell is in an ideal state only at the instant of completion; then it begins to wear out. Man's body during his fetal life is in as near a state of equilibrium as is possible; for the temperature of the mother's body is maintained at about ninety-nine degrees F., and his life is carried on by proxy, so to speak. When born, he is subjected sooner or later to all the influences of his environment.

Health is an abstract idea. It cannot be well defined, for it necessarily must vary from birth to the grave.

Living organisms never more than approach a state of equilibrium. Indeed, no man would accept life if he could be guaranteed equilibrium; for that would be a neutral state devoid of experience, consequently with no knowledge. He could not enjoy; he could not love; he could not hate; he could not eat; he could not lose his temper; he could not be happy; he could not have friends or enemies; all of which are necessary to his development.

All man's pleasures and displeasures--happiness and unhappiness--come from the varying of his environment. Through attention, thought, and reflection on these influences is he educated. Man too often goes through life giving no attention whatever to the influences, from a health standpoint, of these various shocks to his nervous system. Indeed, very few recognize the sense of pleasure as a shock, and that evil can come from it. Just a few of the people are beginning to realize that taking food into the system is a shock, notwithstanding the fact that it is a pleasure to take it into the system, and a necessity from a building and repairing point of view. When this subject receives the serious thought and consideration of laymen, as well as professional men, there will be more inquiry for knowledge of just how far stimulation can be carried without harm, and when people get sick they will know that they have been imprudent and gone beyond the point where health can be maintained in eating and caring for the body.

When man is born in the backwoods, and his mental and physical experiences are confined to a very limited environment, the number of pleasurable and disagreeable shocks which he experiences must be almost nil compared with what he would experience in the heart of population.

Everything else being equal, he should live longer in his secluded home; but such is not the experience of mankind. The limited experience--the limited shocks--in this restricted home fail to interest him, and he grows old young, and tires of life, and dies. We cannot live longer than we want to. Books and music help to fill the life and will prolong it.

The metropolitan man is shocked by so much of love and hate, and his experiences are so educational, that life has too much of interest for him to leave it. This does not apply to the sensualist--the man who lives for pleasure; for he becomes ennuied and dies from lack of interest. The man who lives for gain will live long if he continues to be interested in gain; but if he fails, and hope is gone, his health fails and death comes soon. Unfortunately, those who have the faculty for making money--becoming wealthy--are exceedingly unwise in placing it where it will do them the greatest good, or the greatest good to the greatest number.

The body is made stronger by the shock of exercise and work. Too much exercise pushes development beyond the normal. Most athletes are overdeveloped, and as a consequence die early.

Men, after they pass middle age, should have a certain amount of exercise; but those who live a sedentary life will not live as long if their exercise is pushed to a hardening of the muscles as they will if they exercise just enough to keep the muscles well shaped--keep the tissues from falling down. Old men never have muscles that stand up and are individual, such as the athlete prides himself upon. A man who is in a trade or business that requires continuous hard work will keep his muscles well up into old age, if he is regular about his work. If he works up to sixty years of age, keeping his muscles hard from his labor, and then retires, he will not live many years--not nearly so many as he would live if he should continue his work, perhaps not doing quite so much; yet, on account of his being accustomed to work, he will live very much longer if he keeps at his labor than he will if he stops and retires.

Most men of sedentary lives are underdeveloped; their organic life runs down, and many die early.

Over-mental development always means early death. This is especially true where the knowledge is not of a character to make one wise about his proper relation to his environment.

When a great physician dies too early because of lime deposit in his arteries, what is the reason? He has not had the proper conception of his relationship to his environment.

The riddle of health in its varying stages must be known before man can brace himself against the over- and under-effects of environmental shock.

We have seen that development means shock. The shock of too much nourishment, and of too much exercise, produces disease. Neither of these causes is disease-producing within itself. Food is necessary. The body cannot live long without the stimulation (shock) which it gets from food, and certainly it must have the building material that food furnishes. When food and exercise are given within the needs of the body, everything else being equal, the body may be said to be in a state of health.

When food and exercise are supplied beyond the needs of the system, or below the needs of the system, disease is said to prevail.

There is but one deduction from these facts, and that is that health and disease come from the same cause.

Perfect health does not exist. The state varies from one that is known as robust health to fatal disease. Yet both extremes are states of health.

How can there be an entity, disease, coming out of food, exercise, pleasure, work, or anything that affects man in his environment? The answer is: There cannot be. As stated before, life is made worth while because of the various influences affecting man.

Once it was thought that the force which animated living matter was an autogenerated vital energy, but now it is thought to be reactions produced by various agents.

About as good a definition for health as can be given, according to the foregoing, is: an equilibrium established between external stimulation and internal reaction.

The temperature of the body in health is about 37' C., or 98-1/2° F. If the temperature of the room or weather is about 60, and is kept at that point, the body becomes adjusted. If the temperature rises or falls slowly, reaction on the external medium will be gradual. Where the change is sudden, either plus or minus, it upsets the heat equilibrium and may cause much disorder, resulting in disease. What is the disease? Enervation and retention of excretion. This produces toxic poisoning.

Becoming adjusted to any sudden changes causes so much agitation that life may be endangered.

The cause of disease, or the cause of a departure from health, or health perverted, is not some mysterious entity; it comes from shocks imparted by environmental agents, which cause reactions; and the reactions are for the purpose of modifying the shocks and making them compatible with life's requirements.

2. Physical Agents

Air.--Air is not classed as a food; yet it is the most important food. We can live without the ordinary foods from thirty to forty days, and we can live without water for a few days, but we cannot live without air for more than a few minutes.

Air is the gaseous substance that envelops the earth and forms its atmosphere. It consists almost entirely of the gases oxygen and nitrogen, which are merely mixed and not chemically combined.

An ordinary-sized man is supposed to take through the lungs about two thousand cubic feet of

air each twenty-four hours. It is from the air that we secure our greatest supply of oxygen.

Air at sea-level has a pressure of about fourteen and three-fourths pounds to the square inch. It decreases about one-twentieth of a pound per square inch for every ninety feet of altitude. High altitudes cause a quickening of the pulse and breathing. Most people have an idea that there is much danger in going to a high altitude quickly. There is very little discomfort, and almost no danger, to persons in good health.

It is said that, whatever the altitude, the composition of the air is always the same; namely, 21 parts of oxygen, 78.06 of nitrogen, 0.94 of argon, and a trace of carbonic acid.

The only change in the composition of the air in high altitudes is an increase in ozone. Ozone is an allotropic (allotropism: the existence of an element in two or more distinct forms--distinct physical properties).and more active form of oxygen. The variations of the chemical composition of the air do not account for the evil effects experienced in high altitudes; hence the effects must be caused by temperature, pressure, and the action of the sun's rays, which strike more perpendicularly in high than in low altitudes. At an altitude of 4,500 to 5,000 feet the temperature will mark a difference of ten to twelve degrees Fahrenheit in the sun and in the shade. If the bulb of the thermometer be covered with black cotton, the difference will often reach sixty degrees Fahrenheit. This should warn. those in delicate health to prepare themselves with a proper amount of clothing when going into high altitudes. It should not be forgotten, however, that the cold of high altitudes is more tolerable than that of low altitudes, because the air is drier.

The sun, however, does not melt snow unless accompanied with warm air. Black or dark clothes retain the sun's heat and enable the traveler to keep warm in a temperature that would be very uncomfortable at sea level.

The absence of wind and humidity in high altitudes gives comfort, whereas in low altitudes, with a much higher temperature, those who are sick and of low resistance will suffer from the cold.

Altitude.--Snow does not melt in high altitudes, even when the sun's rays are quite warm, until the air becomes warm. Snow, or white clothing reflects the sun's rays; hence dark clothing should be worn in winter, and white or light-colored clothing in summer.

As an experiment: Place a dry leaf on a bank of snow where the sun is shining; in a little while it will be seen that the snow under the leaf is melting.

Absence of wind and humidity causes high altitudes to be comfortable places to live.

Mountain air is so dry that putrefaction does not occur to the same extent as at sea level. In high altitudes meat will dry and cure without salt. Desiccation is effected before decomposition can set in. At St. Bernard, in the Swiss Alps, the corpses of men and animals never decay. The dead are placed in morgues, where they are preserved indefinitely--a form of immortality.

The air is so rarefied in high altitudes that patients are made quite nervous because of the absence of noise. Sound does not carry, because the air is not dense enough to transmit it.

It is said that the absence of noise causes a feeling of sadness.

The effect of altitudes ranging from six to twelve thousand feet, on one seeking health, will be at first, while becoming acclimated, that of a feeling of warmth on the skin. The lips will redden, and the eyes will flush. For a while one will be troubled with insomnia; a slight palpitation; or, if the heart is weak, the palpitation may be severe. There will be a feeling of dyspnea (shortness of breath); dizziness; and sometimes headache. The urine is dark, and constipation is the rule; and, from the first, the appetite is increased.

In a short time the skin becomes a tan color. The lips, nose, and hair become so dry that salves and vaseline are used to secure relief from the dryness. Strength increases, and long walks, and even mountain-climbing, do not fatigue until overeating brings on the tired feeling peculiar to food poisoning.

There is mountain sickness, which is said to be unavoidable in altitudes of from twelve to fifteen thousand feet, but not equally in all countries--probably the result of overeating and fatigue. The exhilaration caused by the mountain atmosphere induces the traveler or sightseer to exercise to excess; this uses up so much nerve energy that imperfect digestion results, following which comes intestinal toxin infection; and that is what mountain fever is.

Mountain-climbers are not equally subject to mountain sickness. This, of course, is true of every section of the country. It is said that the lack of oxygen, the increased cold, and the fatigue have much to do with bringing on mountain sickness. Obviously harm must follow an increased appetite and a decrease in oxygen supply. A decrease of oxygen favors decomposition; this is one reason for auto-intoxication.

The symptoms of mountain sickness are a feeling of growing malaise; pains in the legs, especially the knees; the mouth fills with saliva; sickness of the stomach, followed by vomiting of food; and, in severe attacks, bilious and even blood vomiting. In the advanced stages of the disease, pain in the bowels and diarrhea set in.

According to Paul Bert: "The quantity of oxygen in the blood diminishes as the atmospheric pressure diminishes. If the rarefaction corresponds to pressure existing at 6,000 feet of altitude, the oxygen diminishes thirteen per cent; at 9,000 feet, twenty-one per cent; at 25,000 feet, fifty per cent." He thinks oxygen starvation causes death in these high altitudes, and experiments that he has carried out have proved that he is right.

By "becoming acclimated" is meant that the blood acquires an increased capacity for absorbing oxygen; which means an increase in the red corpuscles and an increase in the iron contents. This being true, patients suffering from anemia, and especially chlorosis, will find benefit in living in high altitudes. They will also suffer much in traveling in high altitudes.

This is according to the best medical authority. I will say in this connection, however, that such diseases are brought on from imprudent eating. My experience is that anemic and chlorotic patients eat foods that are devoid of oxygen, until they lose their power for carrying oxygen. Why should not this be true? Nature removes an organ no longer used. If oxygen is not taken into the system in large enough quantities to supply work for the red corpuscles, there will be a gradual diminution of these corpuscles to correspond with requirements. High altitudes force breathing; hence the demand for more blood corpuscles, and the supply.

To those who are anemic or chlorotic I will say: If resort to a high and dry altitude cannot be taken, do not be discouraged; stay at home and get well. Stop sugar-, candy-, and cake-eating; use sugar in foods very sparingly. Eat uncooked fruit, also salads made from fresh, crisp vegetables, or a slaw, every day; and teach yourself deep breathing.

An increased capacity for absorbing oxygen may be developed in low as well as high altitudes by getting rid of toxins in the blood. This can be done by correcting the eating: by lessening the amount of the so-called staples--meat, bread or cereals, pudding, pie, cake, etc.--and eating more fresh fruit and vegetable salads; and exercise should not be forgotten.

Pulmonary tuberculosis is a disease supposed to be best treated when sent to high and dry altitudes. This supposed benefit is not without its drawbacks. All lung cases with a high pulse-rate should seek as dry a climate as possible, but avoid altitudes more than a mile above sea level.

Almost irreparable harm is done to blood-making and nutrition before the tubercular bacillus

is discoverable in the lungs. Prevention of this disease must start in childhood, with those of the tubercular diathesis. After adenitis (lymphatic infection) has been developed in a tuberculous diathesis, it will require unusually good judgment on the part of the patient, and unusual medical skill on the part of the medical adviser, to bring the patient back to the normal. To stay normal with a diathesis and a record of one breakdown will require great good judgment--certainly more than a residence in a high altitude, etc.

I have learned from observation that those who are well advanced with pulmonary tuberculosis, and who have a high pulse-rate, die off very rapidly when brought to Denver.

If we are to believe in the eternal logic of the universe, we must believe that sound judgment is an accompaniment of a sound body. This being true, all tubercular subjects should be directed by the wisest minds; for their own is as prone to go wrong as the sparks are to fly upward.

Curing this disease means correcting the mind and body-it means right thinking and acting.

If it is a fact that more lung capacity is needed in high altitudes, is it wise to force diseased lungs to expand? Oxygen starvation is one of the symptoms of tuberculosis, due to imperfect lung action. The lungs of these subjects are not used to their full capacity, and, as the disease advances, breathing grows more shallow, because the lungs grow more sensitive to the air. Cold air irritates and causes coughing, and, to avoid coughing, the patient learns to breathe in a more shallow manner all the time; and, of course, the less oxygen taken in, the less food is digested, and the farther away from health the victim drifts.

Sleeping-porches and other devices for furnishing fresh air and a greater oxygen consumption have been a dominating fad since a few years ago, when it was the custom to have patients sit out-of-doors in the coldest weather--wrapped, of course, enough to keep warm.

Obviously both plans are rather more detrimental than good. The object is fine, for it is necessary to have as pure air as possible; but the good is, according to my way of thinking, more than offset by the irritating effect of the cold on the lungs. Reader, stop and think: These patients are in heated houses all day, and some of them in superheated houses. At night they breathe an atmosphere many degrees colder than it is throughout the day. The house temperature through the day is seventy degrees Fahrenheit, or more; while on the porch it ranges, in Denver, from thirty-two degrees above to ten degrees below zero. The range is from thirty-eight to eighty degrees. Can anyone with common sense believe that a weak, diseased lung will thrive subjected every twenty-four hours to such extremes of temperature?

If the above is true, the modem treatment of this disease could not possibly be much worse.

If houses are as clean as they should be; if bedding is as clean as bedding should always be, patients will do much better in a closed house--closed up for the entire night--and fire enough to keep the night temperature within ten or twenty degrees of the day temperature.

All of us (doctors and laymen) must go through the fresh air insanity. Converts to new thoughts, or old thoughts, are always nearsighted, enthusiastic, and even fanatical in their loyalty in following literally and not wisely such fads. The fresh air craze has surely killed its quota. Filthy houses have done their share. Now sensible people should split the difference and keep both foul and cold air out of their lungs. To encourage those who read this, I will say: The composition of the atmosphere is always the same,* and, like all organs, it is maintained at the same composition, and must remain so until destroyed; and along with its destruction must go all animal life. (*This does not mean that the air of proper composition cannot be made the vehicle of filth. Houses, bedding, clothing, and the body must be clean.)

It is all nonsense to talk about burning up or breathing out of the atmosphere all the oxygen. If houses are clean, no harm will come to the sick by closing doors and windows to prevent them from chilling their lungs and blood by breathing an atmosphere much colder than their bodies.

Harm from breathing cold air does not end with simply causing irritation; the patient's nerve energy is used up in resisting the cold. It takes nerve energy to resist cold; it takes nerve energy to digest food. This being true, should not sick people be kept in a warm atmosphere, and fed on food that will nourish the body at the least expenditure of energy in digestion?

The nervous system of a plithisical patient should not be severely taxed in resisting cold. It must be remembered that digestion cannot be carried on with a bodily temperature varying much from 99' F.

It is a mistake for sick people to live in an atmosphere so cold that wool or other heavy, impervious underwear is thought to be necessary to keep the body warm. Air is a tonic and stimulant to the skin, and, neither last nor least, it is a disinfectant. To keep the surface of the body sweet and clean, air must get to it, and it cannot when the body is swathed in tight-fitting woolen or other underwear. Open-woven cloth is better; no underwear at all is best.

It matters not how clean a housewife may be-if she does not air her closets and clothing, she cannot boast of her cleanliness. Men who ruin their homes with tobacco smoke, rendering them unfit for women and children to live in, certainly pay a lot for their pleasure. I have known of invalid wives who could get well if their homes could be freed from stale tobacco smoke. Invalid wives are expensive.

A part of humanity live in ill-smelling houses and clothing. Many men think they are excused for ill-smelling bodies because their work is dirty. This is not necessary. Grease, smoke, dust, and iron rust or filings will make the clothes, hands, and face dirty; but I deny that it is necessary for any man to emit an odor that is offensive.

Women who take advantage of dirty work as an excuse for making themselves a nuisance from malodor should be boycotted. It is no disgrace to do work that makes one's body and clothes dirty; but there never can be any excuse for filth, and the odor that accompanies it. People who are filthy are a menace to society and should be taken care of by the health authorities, in the same manner that all decomposition is cared for.

Air and dust, sometimes called dirt, are aseptic and antiseptic. Dust is fought against by housewives, and cities hold it down with the sprinkling cars. In this way one of nature's health-imparting agencies is made inefficient.

Winds and storms are necessary; they are nature's sanitary measures. Wind is necessary for lowlands and low altitudes. Canyons are frequently swept by windsthe reason given being that they act as chimneys for conveying hot air out of the plains: the hot air rises and the cold air goes to the bottom, creating currents. These winds are sanitary; they carry out of the canyons malodors, and antisepticize the accumulated decomposition.

Vegetation grows more luxuriantly, everything being equal, in a windy country than it does in a windless country. Trees grow more rapidly in Kansas because of its winds. Chicago is noted for large, fine-looking girls, and wind. The relationship is obvious.

Walls of wood and stone around private residences in cities are menacing to the health of the neighborhood.

Houses for stock and chickens should be nothing more than windbreaks--never airtight pens or houses. All that animals need are windbreaks; they do not need warm houses, notwithstanding the fact that such protection is often given as a matter of economy--the warmer the animal is kept, the less food is needed. But this is economy at the expense of health. Warm houses and tuberculosis are close friends, and are found among the human animals as well as the brute creation.

The more air we breathe, the better our digestions will be. Warm, close houses are not so menacing to health as people generally believe. The real health-destroyer in our houses is dirt

that is taking on septic change: dirty clothes, kept in closets that cannot be ventilated and are not cleaned; decaying food, and never thoroughly cleaned pantries and ice-chests; old beds that are dressed with nice, white pillows and spreads--veritable whited sepulchers; and then the habit of keeping an ill-smelling cesspool under the diaphragm, from eating beyond the digestive capacity.

Keep the home, in every comer and recess, sweet and clean; keep dirty clothing from accumulating; keep the body and mind clean; then, when cold weather comes, it will not be necessary to keep doors and windows open or to sleep out-of-doors. Keep clean and comfortable, and avoid shocking the lungs and nervous system by breathing air seventy to eighty degrees colder at night than at midday. When necessary to breathe cold air, do so in action--when walking, exercising, or at work. Do not sit out-of-doors wrapped up, or sleep out-of-doors.

In all things it is worth while to take a commonsense view; and in the care of the body, moderation--avoiding fanaticism, which is another name for ignorance--is the safer practice, and much more conducive to long life and success.

Heat.--Heat is not food; yet it is one of food's most important allies.

A temperature of the body of approximately ninety-eight degrees Fahrenheit is necessary to insure digestion and assimilation. A continuous temperature of one degree less than normal will lead to physical destruction sooner than a continuous temperature of one degree above normal.

Just what causes the increased temperature in fevers is an unsolved problem; and it is doubtful whether it ever will be solved. Every case of fever will have to be settled individually; for, as in all things connected with health and disease, there are no unitary causes. Every effect depends upon multiple causes.

The nervous system presides over organic functioning. When nerve energy is below normal, the functions of secretion and excretion are impaired. As secretions are necessary to digestion and assimilation, these functions are impaired, and, excretions being imperfect, the waste products are retained and act as inhibitors of functioning.

Following this state will be cold hands and feet. People are said to have poor circulation, which, indeed, is true; but poor circulation must have an explanation, for those two words are meaningless in themselves. Poor circulation means enervation; means that nerve energy is low; means that the nerves distributed to the blood vessels fail to impart tonicity to their muscular and fibrous coats, stimulating normal contraction.

Heart and blood-vessels in health act rhythmically--contract and relax--under the influence of nerve energy; and this causes what we know as circulation of the blood.

Nerve energy is necessary to keep up the blood circulation and the normal temperature of the body indicated by warm feet and hands.

Anything that uses up nerve energy brings on enervation and, as hinted before, impairment of the functions of secretion and excretion. The lungs fail to exchange carbonic-acid gas for oxygen gas. When there is imperfect exchange of gases in the lungs, digestion is impaired; for perfect digestion requires that oxygen be brought in by the lungs.

Nerve energy and heat are generated when the oxygen in the blood of the arteries acts upon the carbon in the veins; and when, from any cause, the supply of oxygen is low, heat is not generated, and cold hands and feet follow. The remedy must be to remove the first cause of enervation. What is it? Excessive eating, drinking, enjoying, working, or what not. The feeding must be in keeping with digestive limitations, not in keeping with the bodily needs. There is little science and less sense in advising an enervated patient to eat "lots of good, nourishing food." The chasm that exists between my dietetic system and every other system that I have

heard of is too great to be bridged with any possible compromise. I feed my patients in keeping with their digestive capacity, while all others endeavor to force feeding in keeping with apparent systemic needs, without respect or consideration for the patient's ability to digest and assimilate.

The foods that furnish heat are the carbohydrates. Sugar is the most rapid heat-producer, fat next, and starch next.

An oversupply of heat-producing foods, indulged in continually, will end in great enervation and whatever disease the individual has a predisposition to develop.

When sugar is eaten beyond the system's needs, it will not be acted upon. If all were used up and heat generated, life would be put out from hyperpyrexia, or overheating. The amount taken above the body's needs will go out of the body by way of the kidneys or bowels; not, however, without more or less injury to these organs of excretion. It is a mistake to believe that we may indulge ourselves beyond the system's needs, with any food or drink, with impunity. Indeed, the surplus is a tax on energy to get rid of it, and this tax divides the work of nutrition. Ideal nutrition cannot be had when its work is interfered with by the work of eliminating a lot of unnecessary material.

It should be bome in mind that the law of correlation of forces must govern in the matter of food and nutrition, the same as in dealing with natural law anywhere in the realm of knowledge and science.

Heat is being consumed when the body is in pain; when overclothed or overworked; and when mentally worried, depressed, or overjoyed.

Fever is not an indication of the generation of surplus heat. Indeed, quite the contrary is true; for the body is not generating so much as when normal. The reason for the excessive temperature is that nerve energy is impaired; elimination by the skin, lungs, and kidneys is suspended, and, as a result, the excretions are retained. One of the functions of the skin and lungs is to radiate heat. If, through food or other poisoning, the nerve energy supplied to these organs is cut off, heat is retained in the body. If the cause is infection from an injury, or pent-up decomposition in the bowels, the source of infection must be got rid of as soon as possible; then the temperature will run down. Physicians in general practice often see an increase of temperature from two or three to five and six degrees Fahrenheit following indigestion caused by overeating, and if the indiscretion is not repeated, the fever may subside in twelve to twenty-four hours.

After childbirth or abortion, if from any cause the uterine discharge becomes pent up, pain and fever will quickly follow. If understood, however, and the womb washed out, and drainage established, pain and increased temperature will be controlled at once, never to return, unless the cause is allowed to return.

Pain inhibits the physiological manufacture of heat, and if it did not stop radiation, the patient would probably die from refrigeration--from loss of all bodily heat. Hence fever may be looked upon as one of the most remarkably uniquely conservative acts in all the world of pathological conservatism.

Health and long life cannot be looked for by those who are careless and indifferent about keeping their extremities warm. Cold, clammy hands and feet indicate malnutrition, and must be cured by correcting the bad daily habits that build this symptom.

Until the extremities keep warm from restored circulation, following the correcting of the disease-producing habits, artificial heat must be used to keep the feet warm. Covering on the feet and legs to the knees should be double the weight of that over the body and shoulders; or a jug of hot water may be kept in the foot of the bed to use when necessary. Do not sleep with the

feet against the heater. Through the day, if sitting much, an electric pad should be used. Keep the feet warm, and prevent further decline in health.

Do not overclothe in an effort to keep warm. Lightweight, open-woven underwear, with heavy top clothing when going out, is the proper way to meet the cold. When riding in cold weather, the feet must be kept warm. Overeating and chilling spell pneumonia.

Heat of summer can be easily borne--in fact, enjoyed--if the eating is correct. Cut the heat-producing foods down to the minimum; meat, with all fat trimmed away, not oftener than once a day or three times a week; fruit and salads, with milk and cheese; bread once a day for those who are not overweight. Wear only the lightestweight, open-woven underwear.

People who persist in overeating make themselves very uncomfortable, and they are the people who meet with prostrations and sunstrokes.

Workmen who are subjected to great heat should leave starch, fats, and sugar, or any form of sweets, alone. Drink freely of pure water--positively no alcoholics; for lunch, ice cream and fruit. The ice cream is sweet and fat and evolves heat. its effects should be watched, and if the heat is harder to endure on days that the ice cream is used, it would be wise to stop it.

Ices may be used too often, and to the detriment of health. The injurious effects of all classes of foods are so little known by laymen, and even by physicians, that few are willing to believe that their favorite "bonnes bouches" cause the discomfort they experience. I see people daily suffering so greatly that they are driven to seek relief and cure; yet they are unwilling to part with the habit that causes their unhappiness. Indeed, it is almost impossible to convince them that ill can come from so simple a pleasure.

Iced drinks should be taken in great moderation. The cold drink habit is like all other habits--it grows on what it feeds. The more ice used, the stronger the demand. A drink of ice water taken an hour after a hearty meal often generates an insatiable thirst, which, if satisfied, will positively cause indigestion, and not infrequently start a derangement that may end in typhoid fever or some other acute malady; or a chronic irritation may be started that will end in ulcer or cancer of the stomach.

Extremely cold drinks and extremely hot drinks are equally injurious. The very sick should always be watched, and artificial heat used continually to keep the extremities warm.

Thousands and thousands have died who would have lived if that one little chore of keeping their feet warm had been attended to properly.

If it could be generally known and remembered that the function of heat-making is suspended during sickness, and that the very old, the very young, and those who are greatly run down are liable to freeze up--collapse--in the hottest weather, deaths from this cause might be prevented by seeing to it that they are kept comfortably warm.

Many cholera-infantum cases die every summer--July and August--because those who care for them believe the babies feel the heat as other people do, and no attention is given to keeping them warm. Death in such cases comes from chilling or freezing to death.

Dry heat is more endurable than moist heat. A humid atmosphere is very enervating.

Every summer nearly all cities of this country suffer deaths from heat strokes.

Sunstroke usually occurs among those who are dissipated. Sensuality perhaps covers the whole class. I do not believe any suffer from this disease who are not enervated from sensuality.

Those who work in overheated places and are food- or alcohol-poisoned are in line for heat prostrations.

Various disorders may persist after a recovery from heat stroke; namely, neuralgia, headache, and sometimes strange ideas or notions. These troubles, however, result as much from wrong daily life as from the previous sickness . Indeed, such cases may be cured of these relics of former sickness if the patients will follow a proper style of living.

Cold.--Cold climates are said to be more healthful than warm climates. I am not prepared to accept that statement without qualifications. Under correct sanitary control, I believe that warm countries are more conducive to long life than are cold countries; but under neglected and bad dietetic, hygienic, and sanitary conditions, cold countries are better. And, of all countries, those of high altitudes are best. Decomposition is the menace to health in warm countries; the people die of sepsis--blood poisoning--and hepatic derangements; whereas in cold countries health and life are menaced by overstimulation and its consequent enervation.

It is true that heat is enervating, but the bad habit of eating heat-producing foods in hot countries causes hot climates to be more unhealthful than is natural. Investigation will show that there are more people who grow old in warm countries. Cold is hard on old, and on very young, people.

Explorers of the polar regions state that they stood a temperature of from forty to fifty degrees Fahrenheit below zero, without suffering, when there was no wind. It is said that life may be maintained at from seventy to ninety-five degrees Fahrenheit below zero. Authors of this statement, however, counsel against exaggerating the importance of this fact. On an average, about seven hundred persons perish every year in Russia from cold.

All ages do not stand cold equally well. Adults resist the cold best. The old and young chill easily.

The enervated, or those with weakened nutrition, must keep warm.

Discouragement, overwork, starvation, or any influences that depress the mind as well as the body, render the individual unfit to stand exposure to cold. Any enervating habit removes resistance to cold. Drinking of alcoholics overcomes man's resistance. Brandy-drinking, as practiced in Russia, often causes serious suffering, and a few fall dead on being exposed to extreme cold after indulging.

There still persists a popular obstinacy or ignorant belief that alcoholics, or so-called stimulants, are an advantage to those who are exposed to cold, or subjected to fatiguing labor. The truth is exactly the opposite of this belief; for alcohol, in any form, enervates by removing the normal tonicity. Man in a full state of health has tone--a normal irritability or excitability--that enables him to act and react on his environment. A man in full vigor can control or react of strike back, but the impotent man has no control and cannot react or strike back. The rage of King Lear marks the acme of senile impotency. Indeed, anger means impotency; the greater the lack of self-control, the more impotency is marked.

Alcohol is not a stimulant nor a tonic; it is a drug that deadens sensation. Hence its first, last, and only effect is to paralyze. The reason why drinkers like it is because it deadens sensation. The more enervated the alcoholic habitue, the less responsible he is for his acts.

To send a drunkard or a drug fiend to the electric chair is certainly the acme of social stupidity. We have quit legally killing those whom we know to be insane; yet we are slow to recognize the drunk or the dope fiends as artificially and temporarily insane.

Fever often produces mental hallucinations, but these states of aberration are not so often due to fever as to drugs. Alcohol and opium have sent many patients through windows to their death. Suicides and homicides are oftener the acts of brains crazed with drugs than the result of viciousness. And society is so ignorantly stupid as to license drug and gin shops, and clothe physicians with authority to build lunatics for our courts to run into the penitentiaries, hang, or

electrocute.

Habits are easily formed. It is an easy matter to go from alcohol to morphine. These drugs do not act the same, yet both of them deaden sensation and are habit-forming, and both produce physical and mental impotency. It matters not in what quantities taken, they weaken resistance and render those who use them less and less efficient for their work.

There is nothing except food that gives man strength. And too much food--eating beyond the digestive capacity--will cause weakness. When food is taken beyond digestive capacity, and a habitual intestinal fermentation is established, the individual loses his power to keep warm. Victims of this state may put on the heaviest clothing--indeed, they usually wear heavy woolen underwear, often two suits, and the heaviest top clothing--yet the more clothing they put on, the more they may. Still there is no comfort for them; for the more clothing put on the body, beyond just enough to protect from wind and weather, the more such people suffer from cold. Heavy clothes break down resistance, and if the habit of wrong eating and heavy clothing is continued, the refrigeration of death will relieve the unfortunate victims of this health-destroying habit.

When a man is in full health, nothing can add to his strength. Emotional excitement may cause him to use all the power he has for the moment, but the result is enervation that will require more than the usual amount of rest to restore. The same is true of protection with clothing. The body in health has power to protect itself from the varying temperatures. It can adjust itself to all degrees of heat and cold, and needs no protection except from inclemency. And when these facts are ignored and artificial protection is indulged in, self-protection is lost, which results in disease.

Food and clothing beyond necessity, close houses, artificial heat, stimulants (?), and tonics (?), make a conglomeration of influences that spell d-i-s-e-a-s-e and early death.

The body should be protected from wind and weather, but not from contact with the air. The body must live in the air. Open-woven cotton or linen underwear, or a sleeveless and legless light-weight garment that stands for cleanliness rather than bodily protection, is all that is necessary; then the top clothing may be adjusted to be in keeping with the weather conditions.

This is quite the opposite of what is recommended by modem medical science. But it should be known that modem medical science is a wonderfully wroughtout system of palliation which in every particular "borrows from Peter to pay Paul;" breaks down health to relieve suffering; builds a fatal disease by relieving or palliating an innocent one.

In the matter of prescribing for those who are breaking themselves down--becoming so enervated that the chill of death is sending its messengers of warning--the really up-to-date doctor will prescribe heavy woolen underwear and more "good, nourishing food;" and, as auxiliaries, stimulants and tonics to quicken the circulation and give strength! Such trifling with health and life is a disgrace to our civilization. Patients applying for advice--for relief from such symptoms--should be educated into health habits; not turned off with short-lived palliatives that will become allied with the patient's bad habits to hasten his destruction.

Those who find themselves distressed by a weather temperature that does not appear to inconvenience those about them should get busy correcting bad eating, clothing, and housing habits.

Do these people need heat-producing foods? Most of them have broken themselves down by overindulgence in these very same foods. Will they be benefited by eating more of them? This is exactly what modem medical science declares; and the result is more breaking-down, more disease, and at last premature death.

Rest--physiological and physical--whole or partial withdrawal of food, and quiet in bed, with artificial heat, and food only when comfortable, will soon right such patients.

As soon as habitual decomposition in the bowels is overcome, these patients begin to warm up; feet and hands gradually grow warm; the mind and body grow more active; the outlook becomes brighter. Often this change not only restores physical and mental health, but it puts the victim on a solid financial basis. People poisoned with alcohol or drugs, or who are toxin-infected, stumble over opportunities every day; they see others succeeding by, perhaps, picking up the opportunities over which they themselves have stumbled.

Those who are cultivating cold feet must not be surprised to find themselves lagging behind in the affairs of life; and they will certainly grow more diseases from day to day.

Death is a coldness that knows no warming; and the unfortunate person who has cultivated cold hands and feet is started toward that final state.

The greater the intensity of cold, the more pronounced its effects on the parts exposed. At three or four degrees below zero, redness is excited; treble the amount will cause swelling; and six times that amount of cold will result in gangrene.

The first effect of cold is a feeling of fatigue and a desire to sleep. But if sleep be indulged in, there will be no awaking.

Light.--Light is necessary for health. Germ life is destroyed by it. Plants do not thrive any better than animals in the absence of light.

Light is a stimulant, and of course can do injury to those who overindulge in it. Those who chase fad cures, and who are not happy until everyone is in the ground too deep for resurrection, will, while taking the sun-bath cure, blister their bodies and torture themselves in every way, that the sun's rays may be used. When this so-called cure ceases to be disagreeable, they will decide that the remedy has lost its effect, and away they go searching for a new cure that will be disagreeable enough to be curative. A cure with them is valued according to the extent of its disagreeableness. The cure idea with such people has not evolved away from exorcism--disease and cure still being a system of demonism. With the profession the demon has dwindled to a microscopic germ.

Clothes keep the light away from the body, and, because of this, man suffers more or less from light starvation. When such subjects are persuaded by a monomaniac healer to expose their delicate bodies to the direct rays of the sun, they will be very uncomfortable.

When people become accustomed to living in Colorado, and have cultivated the sunshine habit, they are not satisfied to make their homes in a country where the sunlight is shut out by clouds and rain. Light builds optimism, while cloudiness or shade causes more or less pessimism.

Light increases the amount of carbonic acid thrown off. It is said that when the body is brought into the light with the eyes shaded, carbonic acid rises twelve per cent; then, if the eyes are bared and the body covered, the carbonic acid rises to fourteen per cent; when eyes and body are exposed simultaneously, this acid rises to thirty-six per cent, exceeding the combined separate exposures by ten per cent. This increase indicates more combustion; and, in fact, there is a slight elevation of temperature. In children it ranges from one-tenth to one-half degree Centigrade.

The sun's rays, either direct or reflected, will cause a skin irritation--erythema--accompanied by an elevation of the epidermis, with serous liquid; that is, the skin blisters and causes great discomfort. When the sun's rays are reflected from water, the action on the skin in one day is very pronounced.

Pellagra is supposed by a few to be caused by the sun's rays; by others, to be caused by consuming spoiled maize--corn. It has not been my privilege to see more than one or two cases of pellagra; but, judging from what writers say about it, it is probably caused by excessive

starch-eating; or it may be the combined effect of starch, sweet (molasses), and the sun's rays and hot weather. This disease, and hookworm, should be eradicated by correcting the personal habits of those afflicted with them. It is a mistake to look for a unitary cause for these diseases; for, as with all others, there are many causes, and just what causes them in one individual may not be the cause in another. impaired nutrition is the fundamental cause.

Darkened houses are proverbially unwholesome houses. All houses should be built in such a manner as to secure as much light as possible. When light is furnished, air is sure to be, and provision for both these elements makes it almost impossible to overheat.

Blue rays have been used to restore hair; Roentgen, or X-rays, and violet rays are used to treat cancer; and all the rays of the spectrum have been used as remedies for diseases. But these remedies soon fall into disuse because of lack of merit. A few enthusiasts--specialists on skin diseases, or cancer specialists--have lost their lives from administering the X-ray; others have lost fingers, hands, and arms. I have seen cancer patients fearfully burned by the use of the X-ray--and that, too, without corresponding benefit.

The ability of radium to disorganize tissue has caused it to be used and recommended. All these remedies, including the plaster cure made from escharotics, appeal to patients as well as to doctors. Why not? If these remedies can cause the disease to drop out, "root and all," what can possibly do more? Commercialism is just now exploiting radium; but, like all cures based on a false theory of disease, it must fail.

The professional mind seldom thinks farther than to the radical removal of the disease-which is seldom, if ever, anything more than removing effects. That the cause may hark back to a faulty nutrition, and that this fault may be caused by one or more of a thousand-and-one enervating causes, is not thought of; or, if it is, no consideration is given it. It is easier to think palliation and work palliatives.

It is doubtful if anyone will develop a cancer who lives in a properly lighted, aired, and heated home, and who takes reasonable care of his body and mind, and keeps intensely interested in life.

Shut out the light and air from the body with thick, closely woven, close-fitting, and overheating underwear; live in a house in keeping; then have a dietary to correspond, and this will create a habitat in which any disease is liable to spring up and thrive.

A bright light held before the eyes and gazed upon is liable to bring on a state known as artificial slumber or hypnosis. The name of "Braidism" is given to this phenomenon because a man by the name of Braidy discovered it.

The influence of light and shade on the nervous system must be very great, and it should be better understood. Let us hope that it will be.

I have seen young children thrown into convulsions by allowing a bright light to glare into their faces when they were nervous and feverish.

Care should be exercised with babies to prevent shocking them by allowing strong lights to flash into their eyes.

The moving picture shows, attended frequently and over a long period of time, will create nervous derangements. No doubt many are being injured in this way. Those with functional, as well as organic, diseases are having their symptoms aggravated by frequent attendance at these shows; but they have not suspected the cause. One or two hours at a picture show will use up as much nerve energy as a whole day at the usual vocation. The combined effect of eye- and ear-strain--the picture and the music--is very strenuous and nerve-exhausting.

Sound.--The nervous system of those who live in large towns and cities is put to great stress.

We are fast approaching a time when the noise nuisance will have to be legislated out of existence, the same as other nuisances that have been squelched.

The automobile need not be a nuisance, but it certainly is. The majority of people who drive their machines act as though they had a special commission to make as much noise, split as much air, and kick up as much dust as possible.

Since the automobile and motorcycle have come to stay, there has sprung up a type of people who really believe that their other name is pandemonium. Unless they are kicking up enough noise to wreck the "nerve" of a political lobbyist, they will not be able to "split the ears" of His Majesty, the Prince of Perdition, when they go to him; which they will, for they certainly will be out of place at a "rest" resort. The average chauffeur plays with the cut-off as the average motorman on the street car plays with his bell.

The street car is made up of the quintessence of noise, and the motorman has become so noise-crazed that he clangs his bell--not because he is approaching a crossing; not because he has a slow coach in front of him, but because he is playing an accompaniment to his thoughts. He thinks noise, hence he plays noise.

The car itself is a gamester of noise "par excellence.'? But health declares it a disgrace to civilization. Not the slightest attention has ever been given to constructing a silent-running car; it is put together so that every part becomes a rival of every other part in creating din. Then, when this roar-monger is manned by a real bellringer, hell is certainly turned loose when this peace- and quiet-destroyer is sent over a street every thirty to sixty seconds. There is positively no excuse for inflicting such punishment on humanity. Surprise is expressed at the number of people committing suicide and going insane every year. Unless commercialism is controlled in its selfishness, it will fill the world with mad-houses and penitentiaries.

Fill a street with modern cars, and a lot of automobiles with their cut-offs opened and conks conking, and we certainly have a state of uproar that must cause degeneration of the nervous system of all human beings subjected to it.

Why should we wonder at the increase of insanity and crime, when we add to the din the thousand-and-one other nerve-destroying habits of social and business life?

Every lover of music and art should protest without ceasing against the growing tendency to convert this beautiful world into a hideous nightmare of inharmony. When it is admitted that "silence is more musical than any song," why should the mongers of noise be allowed to rule?

Is there anyone so simple-minded as to need to be told that such a bedlam as exists in every large town and city is subversive of ethics, art, and religion? The beautiful, sonorous, and euphonious sounds are suppressed by the uproar, and the prospective mothers of the coming generation are forced into developing a distorted nervous system to impart to their children.

We must certainly expect to reap as we sow. Can any but the fool believe that we can sow inharmony and reap harmony--sow pandemonium and reap Utopias?

Disagreeable sounds, smells, sights, tastes, and feelings are so intimately united and blended with commercialism that there is little hope of overcoming them. With this it is the same as with disease-producing beliefs and so-called cures. The present style of curing and immunizing is so much a part of Rockefeller's millions, and other millions, that there is no hope of any considerable reform. The masses move along tied to the yoke of mammon; the poor, sick fools denounce the system that they declare usurps and exploits them; yet in every other way they uphold it with ballot and voice.

The noise system is a cheap-John scheme. It gets up cars as cheaply as possible--which means that they must be noisy. It charges as much as the law will allow. The patrons are shaken and jolted as only a springless and bumperless car or wagon can shake or jolt; and then their finer

senses are shocked, through the auditory nerves, by the noise that almost prevents thinking. All this wears out the patron; it injures him as a citizen; his health is impaired. The health, morality, estheticism, and artistic development of the people of any city may largely be measured by its cleanliness and absence of noise. A public utility that is grossly selfish, and tears the people down to lift itself, is certainly penny-wise and pound-foolish.

When people are nervous, they lack in judgment--they do not make the progress in trades, professions, arts, music, and business that they should. A city made up of noise-crazed people will not make progress in a substantial way. Why? Because noise-crazed people are nervous selfish, disloyal, and unable to see that to gratify themselves to the detriment of the city's best interests is to cut their own economic throats. This is exactly what every street-car company is doing when its economy lowers the moral, health, and sanity standard of its patrons.

Make a city clean and quiet-or as nearly noiseless as possible. Every utility should be run in the interests of its patrons, on the principle that people well served are happy, healthy, and prosperous, and possess drawing power. They attract other people to their city. Such a city grows; its property advances; and, according to the law of "like attracts like," a prosperous community attracts prosperity.

All physicians who know that sickness is brought on, wittingly or unwittingly, from practicing many bad habits, and from unwholesome environments, by wearing out the nervous system with a lot of unnecessary noise, or by any influence that uses up nerve energy, know that rest is one of the most important elements in any therapeutic plan-rest of body and mind. This means that the body must not labor; that the mind must not labor; and that the nerves of special sense-namely, sight, sound, taste, smell, and touch--must rest from labor.

Everything may be done for a broken-down individual except securing quiet--absence from noise; and if this requirement alone is neglected, restoration to health will not take place. Nervous people must secure rest from noise, because nothing is so uncompromisingly destructive to the nervous system as noise.

It is the duty of parents to control children. When several get together, they are inclined to push their funmaking to excess, and from small noises they go to larger and larger, until they become hysterical. If this is permitted day after day, the decidedly nervous temperament will lose more or less power over coordination, and this will lead to chorea, or St. Vitus' dance, or other nervous diseases.

Light, very restricted eating, and quiet in bed, with visits from children interdicted, is the proper treatment. Such patients must be kept in bed until every sign of irritability and muscle-twitching has subsided.

After nervous children recover, a limit must be set to the amount of play indulged in; and excitement of all kinds must be avoided. The diet of such children must be simple: toasted non-yeast bread, butter, and milk for two meals each day; and fruit, cottage cheese, and milk for one meal. Quiet and rest is the principal remedy.

Not many know that music has other qualities besides the power to "soothe the savage breast;" or perhaps I would better say that most people think that only good can come from music. Inharmony disturbs rhythm, and anything that interferes with rhythm strikes at the base of development and interferes with growth--nutrition.

Everything capable of producing an effect may be said to have at least four influences; namely: a good, natural, or wholesome influence; then an excessive, defective, and perverted influence. This is true of music. I know of people who are made very miserable by music--it might be said that they are badly influenced by it. Then there are strong, healthy people who are driven almost mad by poor or defective musical execution, but who thrive in an atmosphere of harmony.

All people are not attuned to the same key; or it may be possible that it is easier to adjust the nervous system to the different tones than to fall into harmony with varying time.

Sensitive children drive themselves into nervous prostration by the inharmony they produce when compelled to spend long hours in practice.

It may be that only inharmony (noise called music) is to blame for the nervousness I have seen in music teachers and their pupils; but I know that many suffer much from music, or the noise of practice, or butchered harmony. Of course, there are other influences which must be considered besides the noise of musical instruments. They are food, mental, and physical bad habits that help noise build nervousness and break nervous people down.

School children are overworked. School, music, and social duties wear some of those who are food-poisoned to nerve exhaustion.

When enervation is pronounced, as we often see in mothers of undisciplined children, such mothers must be taken away from home environments to be cured of their diseases. There is always something unusual--something out of the ordinary--the matter with mothers who cannot get well in the environment of home and children; for the mother-love converts din--what uninterested people would call bedlam--into sweet music. The ear-splitting shouts coming from one of her future great men she interprets as orders by the captain of the guards; another, whose voice dominates all others, is her Beecher or Spurgeon; still another is a captain of industry who will control all the iron industries of the country. So intensely is her mind fixed on the future of her children that their noises are material out of which she builds their future, and the success that she has in placing each one at the head of his specialty medicines every pain she has. Where this is not true, an accident at one of her confinements has caused septic poisoning, which has reduced the oxygen-carrying power of the blood fifty per cent, causing oxygen starvation; and her brain is so illnourished that her self-protecting imagination fails to convert din into sweet music, and she languishes and dies unless removed and carefully nursed back to the normal.

If our noises are grinding a grist that feathers our nests, the success antidotes to a degree their evil influences on the nervous system.

When a din becomes the vehicle in which to ride to success, it becomes for the time being a tonic, even if it builds insanity when reverses come.

Sound may be health-building and it may be mind-destroying; it all depends on our relationship to it. It comes under the old rule: What is one man's food is another man's poison.

Electricity is a mode of motion. It is said to be interchangeable with light, heat, cold, and sound. The power of a waterfall, and mechanical energy generally, may be converted into electricity, and it may be generated by transforming chemical energy also.

Life may be looked upon as a mode of motion; or, if you please, transformed light, heat, or electricity.

Matter and motion appear to be the cause and effect, and the effect and cause, of everything. It is a mistake to look upon matter and motion as two entities. Matter is. In one of its states, when at rest, it is static--in a condition of absence of motion; when active, it is in a dynamic state--in a state of motion. Motion is inconceivable as an entity; it must be the expression of something--and something is mentally conceived as matter. There are no such things as matter and motion, health and disease, strength and weakness, knowledge and ignorance, etc.

There is matter, and it may be in a static or dynamic state; there is health, and it may be in a good or bad state; there is force or strength, and it may be in a strong or weak state.

In the last analysis there is something, and we call that something matter. The various manifestations-the various shocks and reactions that we experience--are caused by the different

states of matter of which we ourselves are a part.

The primary or elementary states of matter we denominate light, heat, cold, sound, life, etc. Why light, life, or any other state of matter presents may be explained in many correct ways, but a kindergarten explanation may be such as I have sometimes used, namely: The elements of matter may be brought together in such a way that the summa summarum (sum-total) expression is that of light. A little change in the arrangements of atomic structure gives out heat, and another change gives out sound; and so the changes may be made, each giving out a sum-total expression, one of which we call life, and still another, more subtile than all the rest, we call mind. And all these states of matter we like to think of as entities'. but they are notthey are different states of matter.

Animal life cannot be suspended longer than a few minutes at a time, with any hope of resuming its manifestation. Hence it is possible that the elements of the body may be so compounded as to develop the different states we call light, heat, cold, sound, electricity; and, in doing so, air, food, and water are converted into life.

It is almost, if not quite, proved that the energy presiding over, or governing form, is electrical energy. Probably all formative energy is electrical, and possibly the question of sex is a question of a given number of electrons in the atoms comprising embryonic cells.

The ultimate atom, or unit of matter, according to present scientific developments, is conceded to be the electron, which is declared to be a literal atom of negative electricity.

We have become so used to thinking of the various states of matter as entities that it becomes almost impossible to express ourselves in any other form. If I lapse into referring to the different states as individual, I crave the reader's pardon and his indulgence in substituting in his mind the word "state" where I possibly may express myself as referring to "entity."

If in what follows I appear to individualize, entitize electricity, I do not mean it. Electricity, the same as every natural force, is a state of matter.

"Like electricities tend to repel one another," and, according to Lord Kelvin, the atom is held together by a core of positive electricity, which is known as an "ion." The problem of atomic architecture is to reconcile the common attraction of the ion for all the electrons with the mutual repulsion of the electrons themselves, so as to produce a stable structure.

By the aid of mathematical theory, checked by actual experience with magnetized needles--to represent electrons--floating freely in water, under the influence of a centrally placed electromagnet, Professor Thompson has been able to unravel the architecture of the atom.

The atoms of the different "elements" vary only in the number and arrangement of their electrons; every electron, wherever observed, being absolutely identical with every other.

Electrons are found to be arranged in concentric rings within the atom, and the presence of a certain number of them in each ring is necessary for holding any given number in place outside of them. The stability of the atom, therefore, depends on the number and arrangement of the electrons it contains.

Such a thing as an absolutely stable atom--a fixed, never-changing atom--is inconceivable.

Professor J. H. Thompson, of Cambridge, explains how atoms of one element, by losing their outer ring of electrons may be transformed into those of another. This also explains or suggests a law of natural selection among atomic species.

Of the many atoms that have attempted to gain a place for themselves during the countless past eons, there are some eighty that have survived.

This theory is consistent with evolution, and it is to be hoped that it will be proved out in all departments of learning.

We have seen, according to the latest accepted theories, that atoms are in reality atomic electric batteries--that each atom is an arrangement of electrons, or negative atoms of electricity with central core, or ion, of positive electricity.

To prevent perplexity, I will say that, from present knowledge, there are no literal atoms except electrons; all other so-called atoms are compound structures, made up of positive and negative electricity.

Electrical energy is hardly ever used as such, and only after it is transformed into other forms of energy; namely, mechanical, heat, chemical, and light.

Electricity as a remedy for the cure of disease is one of the fads of modern therapeutics. Outside of the benefit derived from suggestion, and the harm caused by so-called therapeutists in their endeavor to cure the sick, there is nothing in the remedy as understood and used today. The market is full of electric belts, garters, amulets, rings, hair-restorers, oxonizers, and all sorts of monstrosities in the shape of instruments and appliances, too numerous to mention. Outside of the suggestion of cure, or what the patient believes will take place after their use, they are not worth a fig a carload.

The profession uses the galvanic and faradic currents; also the X-ray, high-frequency, and static electricity. Very little good comes from any of these. A foreign body and broken bones may be diagnosed by the X-ray, and as a means for diagnosis this form of electricity has come to stay. For the generation of mechanical power, electricity is used. Vibratory instruments for giving mechanical massage are beneficial; but electricity is used only as a generator of the power. X-ray and other light-producing agents are used for the effect of the light--for the stimulation and tonic action. The X-ray can and does kill the tissues, and causes sloughing. Cancer has been, and is yet, treated with electric light. Results are unsatisfactory and doubtful. The radium treatment causes sloughing of tissue. All the new fangled remedies are not a whit better than the old-fashioned escharotic drugs that have been used in the manufacture of the well-known cancer plasters; some of which are "trained to eat out only the cancerous tissue. root and all"!

Electricity, as electricity, cannot be utilized by the human organism. How is it possible to use a state of matter? Life, light, heat, cold, sound, electricity, are states of matter. How can these states be used as food or remedy? Perhaps only as electrons, found in atomic and cellular lifein organized form. Is electricity utilizable? Possibly as electrons--units of matter--but not the force with which these units are torn from organized matter. The force is what is called electricity--not the units of matter carried with the force. The debris gathered in a cyclone is not the cyclone; the force or energy set in motion is the cyclone. The idea of imparting electrical energy to the human body lacking in energy is one of many common errors.

An enervated subject cannot be forced to receive energy. This is attempted by many physicians when they undertake to force food on those who are run down and enervated from lack of digestive power. Nature will not stand for forcing measures. There is no place for heroic treatment. Every vital process has safeguards thrown about it by nature, and those guards cannot be ignored or torn down with impunity.

In enervation, organic functioning is impaired. This means that the organism is deficient in power to take from the blood such matters as are necessary for repair or for the performance of its normal functioning. The organism, once reduced to this state, will remain so, unless the necessary rest can be procured. It is not mere building material that is needed; it is not stimulation that is needed; for enervation is the sequel of overstimulation. Rest is the remedy; and, as rest is secured, electrical energy will be supplied by food, air, water, light, and heat. This subtile energy cannot be forced on the organism in the gross manner offered by the bull-in-the-china-shop methods of modern medical therapeutics; an enervated state cannot be cured other

than by physiological rest--fasting--and physical rest; not exercise, work, stimulation, and starvation. Electric therapeutics amounts to but little more than chemical or mechanical irritation. Locally applied, it may do as much good as a mustard plaster-act as a counter-irritant.

Giving iron to those who are anemic or dysemic, and lime to those who need lime, is on the same order. The rule is that very few are dysemic because their food is deficient in the elements needed. The cause of deficiency is lost selective and appropriative power, and the more of the inorganic elements offered the system by way of drugs, as remedies or food, the more the dysemia develops, until the unfortunate victim is forced from functional to organic derangement, and on to premature death. This is not necessarily a rapid development. Such patients are seeking in vain for cures for from ten to twenty-five years. If they start at from twenty-five to thirty, and require twenty-five years to wear out, trying palliatives and false cures, they certainly die early enough. Besides, efficiency has been wasted in physical and mental impairment caused by disease and so-called cures.

If present scientific developments augur well, it will not be long before we shall know positively that electricity, or electrical energy, or more surely the electron, is the alpha and omega of all things; and, from a health standpoint, a knowledge of bow to conserve, utilize, and generate this energy will be the "summum bonum" of a successful therapeutics.

The most we know today of how to supply electric energy is to have the enervated--the impotent-rest. In a state of rest this energy appears capable of accumulating; and we know from daily observation that unrest, activity, and overstimulation cause its dissipation.

The farmer knows that rest restores energy and potency to land that has lost its fertility from use. But he does not know that ground granite or feldspar will restore its productiveness, and that in all probability the fertilizer "par excellence" contained in it is the static electricity that has entered into its formation and is liberated when the rock is made into bread.

I have proved out on electricity as a remedy the same as I proved out on the regular materia medica.

I once used the galvanic current in treating fibroid tumors, and believed that the electricity caused absorption. But I have learned, after years of experience, that the only really effective remedy is the correcting of bad habits which break down resistance, after which, physiological equilibrium is lost, and this allows cell growth to be perverted.

Lost resistance means lack of energy--lack of life force; and, according to the few hints thrown out regarding the electric architecture of the atoms, when enervation is pronounced, there is probably a dissipation of electricity--electrons--and a consequent change in the structure of the atoms that build the cells. As a result, we see tumors and growths of different kinds, and hardening of tissue--arteriosclerosis--stone formation, etc. If this is a true explanation of the cause, the logical remedy would be to furnish the system with electricity; but to turn. the battery and flood the body with a great current of electricity would be about as appropriate or logical as to tie a rock around the neck of a thirsty man and throw him into a river to relieve his need of water.

Nature never supplies wants in such a blustering way. The rock is built by feeding it with an impalpable supply. If this is true of rock-building, what must be the subtleness of tissue growth, and how slight the change required to convert normal tissue into abnormal-healthy flesh into cancerous!

Instead of flooding the surface of the body with a current of electricity--which the use of a battery means--the therapeutist must know how to cause the body to secure its electricity from the air, light, and food.

The average work done by physicians and surgeons in their application of remedies is what

one would expect of a house painter put to work to paint a portrait. There is a lack of delicacy. It is true that there are many skillful and delicate operations performed; there are also skilled matadors and butchers who perform skilled operations. We should not hold the idea that expert skill in operating is sufficient excuse for operating. I say, with no fear of successful contradiction, that the majority of operations performed have no excuse for being done except that they are done skillfully. In treating patients with electricity, they must be placed in a state favorable to receiving the inflow as offered by nature. All that is necessary, usually, is to learn in what way this energy is being dissipated; then stop the waste. Indeed, this is the simple formula for supplying the human body with all its needs.

3. Chemical Agents

Caustics

Caustics are chemical agents which produce disease through their power to destroy tissue.

As followers of my medical philosophy will use no drugs, they will not be interested in drugs, either of high or low degree.

The action of a caustic is that of causing necrosis or gangrene of the flesh that comes in contact with it. After the flesh is killed, the process of sloughing takes place. This process means that under the dead tissue the living is carrying on the work of separating the living tissue from the dead. The dead undergoes suppuration--disintegration--dissolves, and runs away as pus. Enough serum of the blood is carried to the borderland of the injury to neutralize and wash away the poison of putrefaction.

The normal chemical state of the fluids of the body is alkaline, while that of decaying tissues is acid. To prevent the acid--the septic--fluid of decaying tissue from being absorbed or taken into the body, where it would set up septicemia--blood poisoning--the living tissue that is in proximity to the sloughing tissue is infiltrated--saturated--to overflowing with the alkaline serum of the blood. This accounts for the great amount of fluid and pus seen in all suppurating processes. Pus is laudable when alkaline. Pure vaccine--if there is any--is dried laudable pus, and is inert.

If a wound is closed and the discharge has no outlet, the pus becomes ichoroid--septic--poisonous, sets up blood poisoning when forced absorption takes place, and death follows from blood poisoning. Septicemia is the professional term for pus poisoning.

It is said that the skin resists the action of caustics by throwing out a secretion which furnishes chemical elements that join the caustic elements to make an insoluble compound. Nature is busy meeting and destroying the influence of enemies of health and life. In this work help is needed, and the physician should be able to read the language of nature and assist her in her efforts to keep a rational and sane balance. On account of misunderstandings or lack of interpretation of systemic needs, the physician is often enlisted with the body's foes, and is tearing down rather than building up or defending the body.

Caustics are divided into **coagulating** and **liquefying.**

Coagulating caustics are those known as metallic salts, the various acids, etc. Nitrate of silver, nitric acid, nitrate of mercury, zinc chloride, and the actual cautery (white-hot) are a few that may be listed with these chemicals. These are so powerful that they kill the skin at the instant of contact.

Acids may be neutralized at once if plenty of water is handy; for water dissolves the acid and dilutes it into a harmless solution. The leading acids are: nitric, hydrochloric, sulphuric, and chromic.

Nitric acid produces a yellow eschar; sulphuric causes a black eschar.

Liquefying caustics are potash, soda, and ammonia.

The scars following the sloughing caused by caustics are often severe, causing contractions and disfigurements.

Toxin (Poison)

Any poisonous nitrogenous compound produced by animal or vegetable cells.

"Any poisonous substance--protein in nature--produced by animal or vegetable cells."--Gould's Medical Dictionary.

Toxins are those substances which, when taken into the body, or if developed within the body, are capable of so changing the fluids as to cause sickness or death.

There are two orders of toxins resulting from the fermentation of protein and protein compounds. One is physiological and the other pathological. Snake venom is a type of the first, and sepsin---putrefaction--is a type of the other.

Toxins that are developed physiologically, like the venom of the snake, are said to be for the purpose of defense. If we could know all about the subject, it is possible that the poison serves a physiological purpose in his snakeship's physical economy.

Man's interpretation of venom, odors, teeth, beaks, horns, hoofs, and claws has been from the standpoint of an eternal warfare for existence. Those attributes of animal life--physiological functioning--have been studied quite largely from the standpoint of weapons of offense and defense. If studied from an optimistic point of view, all those supposed defensive and offensive organs, and their functions, will be found to be indispensable aids to metabolism--digestion and assimilation--and to be physiological necessities.

When we keep steadily before the mind's eye that what we call bad is the reverse side of good, that unity is the key to universal order, and that the old and childish belief in two warring forces, namely, good and bad--God and Devil--is unworthy of present-day enlightenment, we are equipped mentally for analyzing chemical, physiological, and pathological processes rationally and certainly sanely.

There is no question but that autogenous toxins are first of all physiological necessities, and when forced to play the role of an enemy in physical economy, it is because it serves nature's purpose better. Hence optimism sees only good in all processes.

It may be asked: What of it, if the ending must be the same?

But the ending is not to be the same. A father chastises his son, not because he is an enemy of the boy, but because he is vitally interested in the son's welfare.

If God is good, then His chastening rod is not to defeat His purpose--to oppose cosmic necessity.

Pain is for good, for education, for development. No good can come from assuaging pain without removing cause; and certainly no good can come from negating--denying its existence, It is true that the opiate stops pain, but the patient dies afterward because the cause of the pain was not removed. It is true that removing the fibroid tumor cures (?) the patient of the tumor, but it does not remove the cause, and in from one to ten years afterward the patient dies of a pneumonia, kidney disease, or cancer. That the doctor is too limited in his reasoning to trace the connection between the cured (?) disease--the removed tumor--and the disease that proves fatal years afterward, does not militate at all against the truth that the two are one, neither does it change the working out of the unchangeable law of cause and effect.

To negate--to deny that there is pain--may banish nature's warning voice, but it does not alter the law of cause and effect; and if cause is not removed, the effect will certainly obey the laws of its nature; for law is God, and God is unchanging--not even the prayer of all mankind centered on one purpose will change one iota or tittle of law.

Pain and discomfort are reactions from undesirable influences. Remove the cause of the irritation, and the irritation and the discomfort of it disappear.

With an understanding of the inflexibleness of the laws of nature, in little as in great things, we should proceed with the subject of toxins with a mind cleared of some of the befogging beliefs of superstition and modern false reasoning.

The toxins that form within the organism are called endogenous poisons. They are called auto-intoxicants, and they set up autotoxemia when not eliminated properly.

These poisons alter the chemistry of the fluid medium--blood and other fluids--in which anatomical elements--tissues of the body--live and are nourished. It may be well to carry the idea that all the tissues of the body live in a sea of blood, as fish live in water, from which they gather nourishment.

At this point it may be well to say that health depends entirely upon the proper chemistry of the fluids of the body; and the chemistry depends upon the elements in the food, the mind, and the toxins developed or taken in. How is it possible otherwise for the various tissues of the body to select the elements needed for their upkeep? This being true, the importance of the part played by food in health and disease should be obvious to all giving any thought to the subject.

Toxins are divided into two groups; namely, **exogenous,** those formed in the alimentary canal from fermentation and decomposition following imperfect or faulty digestion. These toxins are attributed to germ secretions, but in all probability the ferment furnished by the germ is no more toxic than the ferments (ptyalin, pepsin, et al.) furnished by the digestive organs of the body.

The action of the germs is to set up fermentation (for the ever-present germ is a ferment) in all the foods taken into the alimentary canal beyond the digestive limit of the body's physiological ferments.

As a result of germ fermentation, toxins are formed, and their nature is in keeping with the chemic medium. If the fermentation is of vegetables or fruit, the toxins are **irritating,** stimulating, and enervating, but not so dangerous or destructive to organic life as **putrefaction,** which is a fermentation set up in nitrogenous matter--protein-bearing foods, but particularly the animal foods.

Endogenous toxins are autogenerated. They are the waste products of metabolism.

Metabolism means the power possessed by organized bodies of continually using up and renewing the tissues composing the body. In the process of building there must, of necessity, be a waste. This waste must be carried out of the body by the emunctory organs; but if, because of enervation, excretion does not take place, this waste product (toxin) is left in the body to poison it.

Exogenous toxins are those taken in with food and those formed outside of the body, and **endogenous,** those generated within the body.

When the body is enervated from any cause, or from many causes, excretion is always more or less inhibited, and as a result of accumulating the natural excretions (toxins) the fluids of the body are poisoned. The first symptom is a toxic stimulation--intoxication state; then comes a general soreness of the flesh, which is described as an aching from head to foot. A pronounced state causes one to feel very old, and unless relief comes in a few days, life loses all interest to the sufferer. An interested, hustling person will be transformed into a discouraged pessimist in a

few days.

Alimentary Poison.--Potash salts are necessary to the well-being of the body. It is said that dogs fed on meat freed from potash died in ten days--sooner than by starvation--showing that potash is necessary to prevent putrefaction.

Scurvy (acidosis), or ship disease, is due to a deficient supply of potash, furnished by fruit and vegetables, which, when oxidized in the process of digestion, renders the fluids of the body potentially alkaline.

To eat fresh or cured meat, eggs, fish, oatmeal, cookies, bread, rice, cake, puddings, coffee, tea, chocolate, etc., is to generate a slow acid poisoning.

Fruit and raw vegetables--salads--will correct any type of disease caused by acid poisoning.

Meat, potatoes, tomatoes, lettuce, cabbage, coffee, or tea, without fruit, will cause potash poisoning.

Albumin is a rank poison when injected into the blood; but when converted into peptones by the digestive secretions, it becomes one of the most important foods.

Where albumins (nitrogenous foods) are taken in excess, fermentation (putrefaction) takes place, and the absorption of this toxin causes enervation, high blood pressure, **arterial diseases,** heart diseases, catarrhal inflammations, and other ailments.

Beverages

Water, alcohol, coffee, tea, chocolate, and cocoa are common sources of toxin poisoning.

Water quite often contains minerals and organic matter in a state of putrefaction. Water with these elements in it is not so toxic as many professional men believe.

The elements--earth, air, water, and fire--are self-purifying; hence putrefaction taking place in water of sufficient protein toxic potency to render it dangerous to drink will be so offensive to the nerves of special sense that the one about to imbibe will turn away from it in disgust. Too much mineral in drinking water is not desirable, because it is left in the system to harden the tissues and prematurely age those who drink it.

Alcohol is toxic and inclined to bring on rheumatism of joints, gout, gastric and liver diseases, and in time neuritis and other nervous diseases. Why? Because all stimulants continued for any length of time bring on enervation. When the system is enervated, elimination is imperfect; then the toxins resulting from metabolism are retained in the system to poison. The deposits of these waste products in the muscles or the tissues of the body create such diseases as rheumatism.

The danger from fatal poisoning--from taking fatal doses of alcohol--is not so great as that resulting from the slow toxic poisoning--chronic poisoning--or alcoholism.

There is very little drunkenness today, compared with fifty to a hundred years ago, notwithstanding the fact that there is more alcohol consumed per capita. The reason for this is that alcohol is taken in the form of beer and wine, which are not so toxic as brandy and rum.

The continuous stimulation from the daily use of alcoholics causes enervation and imperfect elimination.

The use of alcoholics whips the appetite into taking an excess of animal proteid; and this is the reason why many users of alcohol have rheumatism and gout.

Absinthe contains nine different essences. All are toxic. There is very little of this poison

consumed now in this country. New Orleans has an absinthe house which ranks in age with her most ancient relics.

Coffee is a slow, insidious poison that encourages retention of excretions by its slow but sure enervation.

Coffee fools many into believing that it is an eliminant, because while they use it they have an action of their bowels daily. This is a false belief; for all the time coffee is used as a daily beverage there is a gradual enervation, with retention of the toxins or excretory products--waste from body--building. Coffee outranks alcohol in building endocarditis and sclerosis of blood vessels.

Ordinary reasoning should help anyone to understand that a drug that stimulates as coffee does, must in time cause much trouble by way of enervation, faulty elimination, and autotoxemia.

Tea stimulates, and in time enervates; following which comes retention of toxins in the system. Tea has a special toxic and sedative influence on the nervous system, and when used for a long time it causes neuralgia of an intractable nature.

Coffee and tea cause deposits in the grooves and openings in the bones through which nerves pass, causing in time neuritis or neuralgia that will not down until the habit of taking these table beverages is given up. These are the cases that surgeons undertake to cure by nerve-cutting or nerve-stretching.

Chocolate builds catarrh, and should not be used as a daily table beverage.

Cocoa is a stimulant and, like all stimulants, develops a habit. It brings on enervation and the usual consequences.

Lead.--Nearly all beverages--even water--contain lead. Water pipes, cisterns, reservoirs, etc., are built in such a way as to impart more or less lead to the water. All soft drinks charged with carbonic acid carry lead. Seltzer water and the lighter alcoholic beverages all carry more or less lead. Flour and bread often contain lead. Pewter, which is used to solder, contains lead. The pewter foil around chocolate, and the grinding machines used by butchers, impart more or less lead to the materials with which they come in contact. The diseases developed from lead toxin are what are known as lead colic, arteriosclerosis, kidney and other diseases.

Copper finds its way into the body in bread and wine. When copper vessels are used in preparing food and drink, copper can be found in wine, cider, and beer. It is said that condiments prepared with vinegar and pickles always contain copper.

In the quantities taken into the system from the sources named, copper is not thought to be greatly detrimental.

Arsenic is far more injurious than copper. It is to be found in wines. It is used as a preservative--to prevent fermentation in food. Since the pure food laws have been put into effect, this drug is not so extensively used in preserving food.

Salicylic acid is one of the most extensive poisons used as a preservative. Its use today is not so extensive as a few years ago.

Non-edible vegetables, such as **toadstools, sprouting potatoes,** and others, furnish an amount of poisoning every year,

Poisoning by animals occurs mainly in hot countries. In our country there are **snake-bite, bee-sting,** and poisoning by the eggs of various fishes.

Fish eggs provoke symptoms of cholera--vomiting and diarrhea--accompanied by skin irritation--erythema and urticaria.

Fish are said to be made toxic by living in water containing putrefactive matter.

Oysters are said to be poisonous when living close to the outlets of sewers.

The wholesomeness of healthy fish is questioned. Those who use much fish food are liable to develop skin and liver diseases. Probably, however, one is no more liable to develop disease from fish than from other food eaten beyond the power of the organism to utilize well.

All foods become toxic when indulged in beyond the real needs of the body.

The meat from **overworked animals,** those run down and killed, those that are slaughtered after **fatty degeneration** has well set in, is poisonous.

Stall-fed animals, that would die from disease in a short time if not butchered, are disease producing.

Blasted grains--wheat, rye, and corn--are poisonous to animals as well as to man. Pellagra comes from starch poisoning--so we are informed by those who have had experience in treating the disease.

Poisons in the Air.--People living close to smelters, slaughter houses, soap and glue factories, the outlets of sewers, etc., are injured more or less by poison gases.

Tobacco is a stimulant and sedative. Its stimulant effect is that of irritation. It is a rank heart irritant. During the first ten to twenty years of its use the heart is made to work overtime--often from twenty-five to forty per cent. Through years of use there becomes established more or less toleration. So great does this toleration appear to be that the use of the drug is looked upon by many as of no serious consequence.

The influence of the poison is to lower the individual's self-respect and dull his moral responsibility. It builds selfishness and prevents the evolution of higher efficiency.

At the beginning the effect of tobacco is that of a poison. it causes nausea, vomiting, and great depression of the nervous system. This being true, can anyone so far forget these facts as to say that tobacco is not a rank poison?

The reason why the system appears gradually to develop a toleration is because the irritating effects fail in time to cause the system to react against it as powerfully as at first; but this is no proof that it has lost its influence and is no longer an irritant--a poison. Indeed, the body continues to react, but it is in the form of fortifying against the influence of the poison. The heart and blood vessels are enlarged--these organs are thickened, hardened, and rendered less capable of performing their most delicate functions--namely, renewal of cell life and elimination. As a result, the walls of these organs become thick, hard, and lose their resiliency. This state, when established, is called hardening of arteries--arteriosclerosis, sclerosis, cancer, etc.

The chronic effects of tobacco on other organs of the body are that it causes enervation, and in many people emaciation.

"Tobacco heart" is recognized by the least observant when far advanced. The effect of tobacco on the eye is well known.

Many nervous "breakdowns" come from tobacco rather than from too much work.

Epilepsy, bronchitis, neuralgia, **rheumatism**, and many nervous disorders are brought on, directly or indirectly, by tobacco.

Nicotine is the active principle of tobacco. It is more deadly than arsenic, strychnin, or morphine. The odor will kill a bird.

Women and children are frequently invalided because husbands and fathers practice the filthy habit of smoking in the home.

When smoking is practiced in it daily, a home soon becomes saturated with smoke; after which it becomes a menace to the health of wife and children.

No man would willingly double his expense for tobacco if he knew this. Some might not worry about how uncomfortable wives are made by ill-smelling homes, but if they realized that a hundred dollars expended each year for sickness legitimately belonged to their tobacco bill, they probably would stop ruining their homes.

The use of one stimulant and narcotic calls for another. The smoker usually uses coffee, tea, or alcohol.

Diseased plants may produce digestive disturbances.

Plants infested with disease-producing germs are believed to be a source of much disease. Lettuce has been denounced by experts as a vegetable unfit to eat, because it is a germ-carrier. Personally I have not found this true of any vegetable, and, what is more, I know it is not true. Even if the vegetables that are eaten raw should carry germs, the germs stand no show against normal digestion. This I have been proving for years by prescribing the Tilden salad to every patient as a food to eat with every dinner.

Poison gases are generated in the bowels. The gas coming from putrescence should be washed out of the bowels by enemas, and eating should be suspended until lost digestive tone is restored.

Illuminating gas is very toxic. It contains carbonic oxide.

In cities where gas is manufactured there is more or less loss--waste--and the soil becomes saturated. The atmosphere of Paris is said to contain 1 part per 10,000 parts of carbonic oxide. Much more is believed to exist in houses into which, because of high temperature, the gas is drawn. This is added to by paintings and tapestry.

There is some little excuse for being poisoned by many of the items above pointed out; but what excuse can be given for the wholesale poisoning brought about by the use of tobacco?

Man deliberately poisons himself, but the layman can hardly be held responsible for doing so when we take into consideration that his medical adviser is offensively saturated by the weed.

So long as the world knows so little as to believe that a man who deliberately poisons his own body with tobacco is a safe medical adviser, and is justly a celebrated physician, just so long will rational healing be refused. Man will never come into a satisfying knowledge of anything until he wants to, and then he must put himself "en rapport" with the psychology that will bring it.

We cannot serve two masters. We must choose between the false and the true. And this decision is "up to" us every day and every hour in the day.

Tobacco is a poison that soon establishes a reign over the will of man. The mind is weakened in many respects. Memory for proper names is lost. Dyspepsia and heart disease ended the career of Mark Twain. His discomfort and heart disease were built by tobacco and coffee.

4. Animate Agents

History of Infection

Infection is divided into three stages, according to bacteriology; namely, animate agent, a fermentation, and intoxication. I would divide the history of toxemia--infection--into **Enervation and Autotoxemia.**

Enervation is brought on from one or many causes which use up nerve energy, both of a mental and of a physical character. Then, when enervation is established, functional efficiency is lost, and with this follows a "slump" in the production of physiological ferments, after which the omnipresent pathologic ferment--infectious agent--becomes "master of the show;" and if the good ship of health does not at once discard its jetsam and refuse to take on any flotsam, pathologic fermentation and decomposition will follow.

So long as the body is normal, and secreting a normal amount of physiological ferments, pathological ferments are made to dance attendance upon the body in the capacity of menial servants; and they will serve long and well in that capacity, if the master is sober and sane. But when licentiousness and sensuality force physical insolvency, then servants become masters; and whether this reversed order is ever righted depends entirely upon the amount of organic integrity left, and the skill used in suppressing the insurgents--bacteria--and reestablishing the home guard-enzymes.

This being a true statement of how disease is established, time and attention should be given to methods of keeping up the health standard, rather than spending all the time and attention in the study of bacteriology, when germs are at most only auxiliary agents in the development of health and disease.

Pasteur, after his researches in fermentation, took up the subject of disease. He assumed that disease was caused by fermentation; hence he searched for germs. The rank and file of the medical, as well as the non-drugging, profession filed in after their medical bellwether without question. The reason for so much unquestioning acceptance of the dicta of this great French germophobiac was that the profession was in chaos regarding cause, and it was ready to accept a savior of any kind without question. Today the germ theory fits well only those who take it without thought. Its popularity comes from numbers, not reason.

It will be well to keep in mind that Pasteur, Koch, and Metchnikoff were not practicing physicians; they were laboratory experts who--a priori--assumed that germs cause disease, and undertook to discover the specific germs that cause each specific disease, by experimenting on guinea pigs, chickens, and other animals; and, by making research in human and other excreta, they endeavored to discover the habits and customs of the flora and fauna of the intestinal canal.

In their explorations, experimentations, and deliberations, they found themselves sometimes on one side and sometimes on the other side of the question of whether or not germs were friendly to their host.

The material in the digestive tract, in bacterial form, is said to number one hundred and twenty-six billions for the daily human excreta. This certainly indicates that man has a powerful resistance, or none would reach the age of from sixty to a hundred years. By some observers it is said that guinea pigs have been successfully reared without germs, and that the polar bear and other animals of the arctic region have no bacteria; that even in the temperate regions there are animals whose alimentary tracts contain comparatively few bacteria. The parrot is one. Other observers have arrived at quite different conclusions.

Experiments have shown that, when chickens are fed on sterile food, they fail to develop, or are retarded in growth, and that they show normal growth only when fed food containing bacteria. It is said that Madame Metchnikoff arrived at the same conclusions in her experiments with tadpoles.

Pasteur's research work on the diseases of the silkworm was followed by a study of diseases of mammalia. He created the fundamental methods of bacteriology. It was in this field that Koch

achieved fame and was rewarded by his government, being awarded a title, a hundred thousand dollars, and a pension.

Koch discovered a cure for tuberculosis. In this field of discovery he has had many successful understudies, or imitators, of whom--neither last nor least--was Friedmann with his turtle serum.

That tuberculosis still thrives, except as it has been handicapped by the growing intelligence of the people and an improved sanitary science, is easy of observation to all but prejudiced eyes; yet, notwithstanding, this truth does not militate against the Koch, or bacteriological, theory of cause and cure. Once a fallacy is in the saddle, it rides, for a time, rough-shod over truth.

To utter a word of doubt or protest, that the theories of Pasteur, Koch, Metchnikoff, et al., are not the whole truth, consigns one, so stupidly ignorant, to total professional darkness--oblivion.

It should not be forgotten, in passing, that Koch abdicated his theory regarding bovine tuberculosis, but the profession out-Koched Koch and repudiated Koch's repudiation.

Reader, do not pass judgment on my protesting until you know all I have to say--until all the testimony is in! It is just barely possible that some of it may be evidence, and such haste on your part might not prove wise; for time--the court of last resort--may reverse your decision.

One of these laboratory experts has practiced medicine, thereby familiarizing himself with the peculiarities, habits, and customs, of both a mental and a physical character, of sick people. Theoretically they perhaps knew all about man, his mind and body; but to know--positively know--all knowledge must be lived. A doctor may have a lot of textbook and laboratory knowledge; but, unless he spends years in applying it, it is not his knowledge, and he only thinks he knows.

According to the laboratory expert's opinion, man is an automaton--a fixed entity--that has no power within himself to stay well or make himself sick. It is true that there is a perfunctory recognition that the body has within itself anti-bodies--a given amount of self-protection or immunization; but that activities, both mental and physical, have more than anything else to do with determining whether man shall be sick or well, is not recognized as the great field of causation; and, as to man's having within himself power to live in health--as to his having autoinimunizing power--being a living, breathing, activating knowledge--this is left out of the mental equation of all these eminent bacteriologists; hence the inexplicable failures that have accompanied every well-worked-out plan of cure on a bacteriological basis that has been advanced by them.

Perhaps I should not be personal; but, inasmuch as what I am about to say is of vital importance, I am justified in declaring that each one of the eminent gentlemen named above was a semi-invalid--and that, too, with his knowledge of germs. If germ infection was the cause of their ill-health, they certainly should have kept their bodies free enough from unfriendly organisms to have enjoyed health. A theory of cause and cure that will not give a reasonable amount of health to its possessor is not of great importance.

The conclusions arrived at by the bacteriological experts have been reached by approaching the subject of disease with the fixed hypothesis that there is but one cause of disease; namely, animate agents--that of germs; and then taking for granted that the cause--germs--is irresistible, unless headed off by immunizing the body by inoculating it with the virus of disease--germs. Then the logically obvious must follow; namely, if disease is headed off by immunization, health must be inevitable.

The absurdity of this one-sided search after the cause of disease should be apparent to any intelligent observing mind.

At this point a little reasoning should not be despised: There are a few people who enjoy

health and long life. Is it because they are not exposed to the omnipresent germ? They have not been made immune by virus or serum inoculation. This cannot be the reason. Then it must be because they have within themselves power to resist the influence of germs.

There are people who are well a part of the time, and a part of the time they are sick. Is it because they are exposed to germs a part of the time, and a part of the time they are not? This is not true. Then what causes the immunization a part of the time? They have no artificial immunization. If germs cause them to be sick a part of the time, why not all the time? Do germs cause disease a part of the time, and then a part of the time not? If so, are there subjects whom they never influence, and others whom they never immunize?

There are people who are, like Pasteur and Metchnikoff during their lifetime, in poor health all the time. Is it because they are infected and infested with germs more than other people? Surely this could not have been true of the laboratory experts! Who, knowing the cause of disease, would willingly suffer when a cure was at their hand?

If all that they taught about germs causing disease were true, surely a willingness to live as semi-invalids would be most inexplicable in the two great bacteriological experts.

In our own country, C. A. Herter, M.D.--once a very popular professor in Columbia University, and author of a book on bacterial infections of the digestive tract--died quite young. His perfected knowledge of germ influence in disease availed him nothing when he was called upon to save himself.

Of course, I do not believe that death can be done away with, but we should be able to have health for the most part while we do live, and certainly avoid premature death and waste of life.

Why do germs, in chronic invalids, fail to work out an immunization? Why is it that this class of invalids can be put in very good health when trained into health-producing habits--and this, too, when no attention whatever is paid to the germs that are supposed to produce the disease?

To illustrate my meaning: A few years ago a gentleman living in Tampico, Mexico, wrote me, saying that he understood I did not believe in drugs, and he wished to know if I would undertake his case. He had been suffering from malaria for five years, and every drug having a reputation as a cure for the disease had been tried and found wanting.

I gave him correspondence advice for one month. At the end of the month he said: "You have made good, and that, too, with a skeptical, doubting patient."

Two and a half years afterwards I heard from him, and he was still enjoying health, having had no return of the malaria.

The treatment I gave him was simply correcting all errors of eating and care of the body.

What caused the malarial fever in this case? The malaria germ? Or was it wrong life? Certainly both; but the question is: Which was the real cause? The malarial influence failed in five years to create an immunization; all "specific" drugs had failed. Treatment that allowed nature to return to the normal ended the malarial influence. If germs create immunization, why do we have chronic diseases? What causes chronic disease?

I have many cases of syphilis consulting me every year. According to medical authority, this disease is most positively "specific" in character, and should, according to the germ theory of disease, require a "specific" treatment; but in all cases I never resort to a more specific remedy than that related above in connection with malaria. Correct the habits, and feed properly--and all diseases will get well.

After years of experience in treating disease, I have found that health is the greatest and most reliable foe of disease.

The questions to decide are: Do germs per se cause disease? If germs cause disease, do they cause all diseases, or only a part of diseases? Which diseases are caused by germs, and which are not caused by germs? If there are people who are, and all their lives have been, in good health, without extrinsic or artificial immunization, what is the cause? If the cause is good health, then can the secret of good health be known; and if it can, may the secret be imparted to others who are not so fortunate? If good health immunized the organism to every normal disease-producing influence in man's environments, why cannot his normal immunization be increased to meet extraordinary disease-producing agents and influences? This can be done, and is being done at our "School for Teaching Health," to the satisfaction of many people from many parts of the world.

There are two groups of animate agents which are said to cause disease in man; namely, infectious and parasitic.

It has been thought that natural history could be taken as a basis for the study of animate agents as a cause of disease; and if infection is really produced by an infectious germ, then natural history must embrace all causes of disease. In other words, if infectious-microscopic germs and parasites are the cause of infection, then there is no excuse for dividing animate agents into parasites and infections; they can all come under the head of animate agents. Perhaps it would be well to divide parasites into exogenous and endogenous--those that are confined to the outside of the body and those that are on the inside--in the blood. A parasite that is on the body or in the bowels is still on the outside of the body.

If there are infectious animate agents, they should be divided into specific and non-specific; for, before we get through with the subject, we should see that there are germs which cause (using the word "cause" in a bacteriological sense) different diseases; and, on the other hand, different germs which cause the same disease; this, too, in diseases supposed to be clinically well defined.

As to specific germs, perhaps the gonococcus is one of the most pronounced types; yet it, too, fails to infect in those of pronounced resistance. This being true, what must constitute resistance?

As nerve energy appears to give power--as steam ,gives force to the engine, and as electrical energy gives power to move powerful machinery--so it is apparently necessary that nerve energy must be the force that enables man to resist environmental influences. But we see the physically strong giving way before influences that fail to prostrate others decidedly less strong. The question as to why this is, will not down.

The matter of feeding to keep up strength, so as to enable a patient to resist or throw off disease, is a professional fallacy that has cost, and is costing, more lives than perhaps all other fallacies combined, It is easily demonstrable that, without giving food and drugs, it is impossible to develop a "clinically well-defined" disease. Indeed, this epoch-making truth holds good in venereal diseases as in all others.

Any physician who, is not helplessly and hopelessly swallowed up by the whale of medical fallacy can in a very short time demonstrate, and prove to himself, the truth of all I say.

My theories and practice are not only simple, but they are logical; they are not only logical, but true. And the reason they are true is because they work. If they do not work, it is from a lack of knowledge in applying them. It is never necessary to fall back on that blanket excuse that has covered so much professional ignorance in the past; namely, "idiosyncrasy."

Malaria (malarial fever) is caused by a sporozoid; yet the disease may easily be cured by simply correcting the life of the patient--correcting the eating habits and care of the body generally. Then, when the disease is gone, if the patient continues to live right, he may stay in the malarial country, free from another attack. This being true, what really causes malarial fever?

Are those who continue to live in such countries, without becoming malarial, immune to the poison because of an idiosyncrasy; or are they carriers of the disease, having become immune to its influence? Can one person become immune and another not? The dilemma appears to be fully settled when it is understood that health--full health--is the only reliable opposition to disease; that everything which improves health builds immunity to all disease-building influences; that every influence injurious to health is an ally to disease,

While medical opinion is largely favorable to the idea that germs are disease-building, I should say that even those germs denominated infectious are not autonomous--individual--specific and self-acting, but by nature are convertible allies. When conditions are favorable to health, they add to the body's power of resistance; but when disease-producing influences--influences that lower the body's self-protecting energies--are in the ascendency, then they become allies to health's foes.

It appears reasonable that as germs are omnipresent, they, like the excretory products of the body, are allies for health, when limited to a health-standard percentage; but when that percentage is exceeded, these quondam friends become allies of disease-producing influences.

The treatment of disease, since germs have been recognized as the cause, parallels the treatment given when the profession was pruning itself on being conservative, yet wisely selective from the maze of theories advanced in the past hundred or more years. Perhaps it will be well to name a few theories that have been chaotically mixed in the medical mind previous to the germ theory:

Empiricism (experimental treatment), which is denounced as quacking, has always been handy for all grades of physicians to fall back on.

Organicism--organic disease.

Humoral pathology--all diseases come from derangement of the fluids of the body.

Symptomatology (treating symptoms)--a form of empiricism.

Phlebotomy (blood-letting)--one of the most popular theories previous to the germ theory.

Depleting system--blood-letting, calomel, and opium practice.

The various theories of inflammation.

Organotherapy--organ treatment; the treatment of diseases by the administration of animal organs, or extracts prepared from them. This treatment has existed from ancient times, the method as now practiced being of recent origin.

Hundreds of other theories might be cited, but what is the use? The popular treatment of disease, it matters not what has been the theory of cause, has always been the same; namely, ignoring the power of the body and mind to get well and stay well, when given a chance.

For the main part of all treatment, the medical man has believed it to be his duty to knock down and drag out. Indeed, he has appeared to believe that the more vandalism he practiced on the human body, the better for the victims of disease.

Just before my debut in the profession--in my father's day--the most popular remedy was blood-letting. When my day dawned, it was the physician's duty, according to the then dominant school, to purge, sweat, micturate, and salivate heroically.

Every treatment was heroically carried out. All the natural tendencies of the body to react and throw off disease were ignored, and a physician who would fold his arms and give nature a chance was a fiend, quack, a being to get rid of for the good of the people.

Even today the majority of physicians at the bedside will say of my suggestions--my heroic methods of let-alone treatment: "Such trifling, ineffectual methods may do in a case where there is nothing the matter, but in such cases as this (typhoid fever, pneumonia, appendicitis, or whatever the disease may be) it would be criminal to stand by and do nothing. What are physicians for? If their function is to do nothing, it is time to close medical schools." Indeed, I agree that, if the physician's function must be that of a disease-builder, and the function of the surgeon, two-thirds of the time, that of a vandal, it is time to close all medical schools.

Old methods are extensively carried out all over the world. Germs, serums, and vaccines are the slogans of medical men today; but many drugs are in constant use: quinine for malaria; mercury, iodine of potash, and "606"--the old salvarsan--and neo-salvarsan, and many times neo(new) salvarsan, the great twentieth-century remedy for syphilis which out-specifics all other specifics in "curing" syphilis; then opium and morphine are still working over-time for pain; and when the opiates are not used, the coaltar heart-paralyzers are used-to the death in many cases.

There is a great deal of perfunctory talk, on the part of medical men, about not believing in drugs, and of much believing in diet. But it is a trick of the trade; it is that old, professional, stock-in-trade buncombe that is often used to cover ignorance. If they could not prescribe drugs, and were required to make an effective diet prescription, they would be out of a job.

There is a lot of buncombe by way of professional talk in favor of diet and against drugs; but this is to meet the demand for physicians who understand diet--a demand that is fast running ahead of the supply. That is, the average doctor is compelled to prescribe a diet; and his prescription would be a joke, if it were not so stupid. There is a time and place for everything; but the burlesque acted by many physicians today, in pretending that they know how to diet the sick, is certainly too asinine even to create a smile.

That bacteriology is not satisfying the profession, there are evidences galore. And so long as common sense regarding the cause and cure of disease is to be ignored, all theories of cause and cure must be founded on shifting sand.

There are millions of money , and all the bluff that can be mustered by influence, behind the germ theory; consequently its death-struggles will be long and agonizing. But it must go. Of course, its fossilization stage will be long, and interesting to curio fiends and ancient respectability.

In what follows on the subject of germs, I shall endeavor to do justice to the germ theory. If I too frequently say that germs cause this, that, or the other disease, please understand that I am writing from the standpoint of an advocate.

What is the difference between parasitic and infectious agents, according to the accepted theory?

The parasite is supposed to be much easier on its host. It draws only what it needs for subsistence, and remains on the outside of the body; while the infectious agent invades the sanctity of the blood and fluids of the body, and spreads devastation and anarchy everywhere. It develops rapidly, and destroys organic functioning by exciting intense reactions.

When the parasite causes death, it is more accidental than otherwise. The intestinal worm causes death by finding its way into the lungs. The hydatid disease of the liver (a parasite belonging to the dog) is fatal. The parasites, when they kill, do so by causing tumors, which cause pressure or obstruction.

Both parasites and infection produce toxic substances; it is a question of more or less. The poison is that of intoxication. In parasites, intoxication is reduced to the smallest amount.

The definition of infectious disease is: Disease developed from toxins produced by parasites. The word "parasite" in this case is made to cover all animate agents.

Infection, defined, is a history of intoxication.

There are intoxicants which are not infectious agents. Alcohol, coffee, tea, tobacco, various drugs, and all legitimate foods, are stimulants; and stimulation is the first stage of intoxication. Thoughts stimulate the mind and body, and thoughts may be pushed to intoxication. To aid intoxicating habits to overcome resistance, we have all the domestic and social requirements--habits in daily life, in business and social life--the carrying-out of which uses up more nerve energy.

Intoxication means prostration. The body in a state of drunkenness--in a state of intoxication--is at first exalted until reaction comes; then it is prostrated--enervated. Understand, once for all, that there are many varieties and stages of drunkenness besides alcohol inebriety. The commonest drunkenness is food drunkenness--and it is not often recognized.

A body that is enervated is crippled in its functioning. Elimination is impaired, and this favors auto-intoxication; for the excretions are toxic, and when not carried out as fast as generated, they become a poison to the system.

Besides the intoxicants (stimulants) named, there is no question but that, when enervation is established, the process of digestion is imperfect; then pathologic fermentations take place; and this process generates toxins, which, when added to the daily or habitual supply, add to the enervating influence to such an extent that systemic protection--resistance--is lost. Then it is that bacterial invasion, with bacterial toxins, overwhelms the body, and the victim dies from an infectious type of disease.

Everything points to the fact that so long as the human body is normal, and not overtaxed by care and bad habits, parasites are either suppressed entirely or held down to inoffensive guests of the body. But when enervation is established, the body loses its immunizing power; then, and not before, do germs become the allies of bad habits in destroying health.

Pasteur demonstrated that germs were in the atmosphere, and that, falling into certain liquids, if they there found conditions favorable for their development, they caused fermentation. The great point that should never escape the mind's eye is: If germs find conditions favorable, they set up fermentation.

What are unfavorable conditions? Health! A normal type of health is capable of resisting even an abnormal type of fermentation, when health is not handicapped in some way. For example: In flesh wounds, if drainage is perfect, health defies septicemia. If uterine drainage is perfect, puerperal fever--septicemic fever--is defied. Large quantities of germs--putrescence--may be swallowed, and a normal digestion will defy them.

When putrescence is injected subcutaneously, beyond the immunizing power of the blood, the health is overcome, and the disease and death are enthroned.

When an injection of antitoxin, or even water, is made into the spine, it may kill from shock in a child that is enervated, and its system taxed at the time with an oversupply of food. The body is off guard, or preoccupied, so to speak, when taxed with a large meal, when mentally occupied, or when fear has possession. Under such conditions, a shock that ordinarily would be easily rallied from may prove fatal.

An irritable state and lack of poise are antidotal to resistance, and such subjects become easy victims of infection.

Any influence that consumes energy may become an ally of germs, if pushed to nerve exhaustion.

The human body becomes a victim of germs after resistance is broken down from any cause.

A Reasonable Explanation of Germ Action

Animate agents which have to do with the life and health of man may be divided into **Parasites** and **Microbes,** or **Bacteria.**

Parasites, in biology, are organisms that inhabit another organism and obtain nourishment from it. Microbes, or bacteria, are micro-organisms which should be thought of as yeast fungi, and as the inciters of fermentation, which are as necessary to man as his own unorganized ferments--his digestive secretions. These fungi, or germs, may be divided into as many genera and species as the microscope and the imagination of the bacteriologist may suggest. That the explorers of the microscopic world have some excuse for the infinite number of varieties already discovered, there is no question; for these infinitely small beings have the habit of taking on an individuality, or personality, in keeping with the chemic changes of the medium with which they are correlated. Instead of the bacteria setting up changes peculiar to themselves, they excite fermentation; and the resultant is the sum of the elements involved. These microbes become putrefactive germs when they carry their ferment to nitrogenous--protein--matter. The germ subject is wonderfully simplified when we know that the metamorphosis is in keeping with the chemistry, or the chemic changes taking place in the medium.

Ferments are divided into two classes--namely, unorganized, or enzymes, and organized, or bacteria, or microbes. The unorganized are produced by animal and vegetable life. Enzyme is a product of all living cells; without it there could be no tissue formation. Pepsin is a type of animal ferment, and the so-called vitamin is one of the refined products of metabolism.

When man's body is normal, the digestive secretions--the unorganized ferments--are quite sufficient protection against the metamorphosis of microbes into toxic germs in numbers great enough to do the body harm from the fermentation and decomposition which they may set up in the food intake.

When man's digestive and assimilative powers are reduced, and he fails to digest the food intake, the ever-present germs establish a pathological fermentation which hastens the disorganization and exit from the body of the superfluous food.

The monistic doctrine--the theory of the unity of all things--appears most rational, and should be satisfying to the most philosophic mind. When used medically, it clears the mind on the subject of cause and effect, wiping out many fallacies and superstitions

The negative and the positive, the good and the bad, health and disease, life and death, are two different states of one and the same thing. Of course, this is a theory that the child-mind cannot be expected to grasp instantly; for it requires a very great experience, and much reflection; it requires a priori--beforehand--knowledge, and a posteriori--from experience--knowledge.

In applying the monistic philosophy to digestion, a posteriori--according to experience--we know that digestion is carried on by ferments which are secreted by the body. In keeping with the great truth of the unity of all things, and the dual attributes of all things, a priori we reason that, if digestion is carried on by a ferment--a physiological ferment--indigestion must be the negative side of this phenomenon--it must be a pathological ferment. We must have indigestion if we have digestion; one is the reverse of the other, and one is as necessary as the other. If physiological digestion (fermentation) does not take place, then pathological fermentation (digestion) must; for action and reaction are going on all the time; nothing stands still.

Since Pasteur et al. discovered that there are microorganisms everywhere, which only await a favorable condition to set up fermentation, we reason, a priori, that this fermentation is the other half of physiological digestion or fermentation; and, in harmony with this monistic philosophy, this phenomenon--pathological fermentation--is necessary and physiologically conservative, rather than pathologically destructive.

Bacteriology assumes, a priori, that bacterial ferments cause disease; but all the cures based upon this assumption have failed, and all the testimony advanced in support of it has been more partisan than loyal to truth.

It is reasonable to assume that the ever-present bacteria, or germs of fermentation, are as necessary for physiological fermentation as they are necessary for pathlogical fermentation. Without the aid of these neutral germs of fermentation, it is doubtful whether the unorganized ferments--the digestive ferments of the body (ptyalin, pepsin, et al.)--would be capable of serving the great purpose of nutrition. I say "neutral," as they are found unchanged in nature. But they may be converted into allies or enemies--it all depends upon the chemic nature of the medium. It should always be borne in mind that yeast per se is non-toxic; toxicity is developed by the chemic changes which take place in disorganization. Food is disorganized when pathological digestion fits it for expulsion from the body.

These friends of man, against which Pasteur and Metchnikoff warred, and the influences of which in their own bodies they possibly were successful in controlling sufficiently to render them both semi-invalids, are in reality for man's good rather than his bane.

In this connection, perhaps it would be well to reflect, or to assume a priori, that when mind enters potentially into a compound in which the microbe, or ferment, and nitrogen, or protein, are associated, the character of the resultant must take the form of the mental concept. That is, the toxin that develops must correspond to the chemic change; but the form of the disease must be mentally directed. The disease may be a hydrophobia, a syphilis, or a tuberculosis. The location of the disease is perhaps chemically directed, but the type of symptoms may be directed by the mental concept.

To be more specific: A person is bitten by a supposedly mad dog. This fact starts a chain of morbid suggestions and expectations. Fear perverts digestion; pathological fermentation supplants physiological fermentation; the microbe, or neutral ferment, is made to take on a toxicity in keeping with the chemic agents involved; and all are given form by the mental suggestion, plus the added compound, protein-serum injection, known as the Pasteur serum. When the element of fear cannot be overcome, it is well to keep in mind the possibility that antitoxin serums may be reconverted into toxins and act contrary to expectation. Psychology must be considered.

The average medical treatment, or mistreatment, of supposed rabies is on the order of "a bull in a china shop."

The treatment is brutal, unscientific, and death-dealing in its application. The same is true of syphilis, and, to perhaps a less extent, of all other diseases.

What is the virus--admitting, for the sake of argument only, that there is a specific poison introduced into the human body by the dog's teeth? It must be a protein ferment, which is a pathological ferment. What is man's defense against such poisons? The neutralizing effect of hope, and the unorganized ferments. The normal blood can unhorse, so to speak, a great deal of poison, if the mind is free from fear. But fear kills.

The average physician is a fear-monger, if he is anything. He goes about like a roaring lion, seeking whom he may scare to death.

A normal man, devoid of fear, can develop antidote for poison. Those who are killed by snake bite have a paralyzing fear, which means surrender to the enemy. Keepers of snakes have no great trouble with bites until fear overtakes them.

Confidence in one's self-power is the secret of health and long life. This confidence, with the providence bestowed by a knowledge of the laws of health, is the most dependable immunizer known.

The influence of mind on fermentation is positive The mind may stimulate physiological fermentation, and it may stimulate pathological fermentation. In other words, the neutral germs are made by mind to ferment

physiologically or pathologically. The character of the toxin evolved must be in keeping with the chemical agents involved, but the Psychology of the disease is determined by the mental concept of what the disease must be.

When mind plays only an indifferent role, disease is commonplace.

It should be understood that anything in the alimentary canal (bowels) is still on the outside of the body. To nourish the body, food is taken into this canal, or digestive pouch, but, before it can be absorbed, it must be reduced to a fluid state by the various digestive secretions. When, from whatever cause, the food is not digested in a reasonable time, it must be disposed of--it must be thrown out--and the canal cleaned out. The cleaning is attended to by scavenger parasites.

The toxins resulting from the decomposition are unfit for absorption, and irritate the mucous membrane. The irritation causes the membrane to secrete mucous and serum. The mucous is tenacious and hangs on, coating over and protecting the mucous membrane. The office of the serum is to antidote and hasten the ferment germs and their toxins out of the bowels, and also to disinfect, or help the scavengers destroy, what remains of the transformed neutral germs and their ferment or toxin.

This is a necessary process, going on in the alimentary canal of man daily as long as he lives. If man breaks down his energy, and then persists in eating more than he can take care of by physiological digestion, the surplus must be disposed of by pathological digestion.

Physiological ferments are secreted by the body, and are necessary to prepare food for metabolism. The disposal of food takes place after it is absorbed, and this disposition is called metabolism.

Pathological ferments are generated by the neutral microbes when the latter are made to develop fermentation other than physiological. Their purpose is to dissolve the surplus food intake, and hurry it out of the body. This process is necessary for the life and health of man. When digestion is abused by a constant intake of food beyond digestive ability--beyond the power of physiological ferments--then the bacteria set up a pathological fermentation, which breaks down and disorganizes the surplus food, and forces it out of the alimentary canal by stimulating the expulsive power of the canal.

This work takes place on the outside of the body, in spite of the fact that it is in the bowels. A like work, only much more refined, is going on in the lungs in all cases of tuberculosis.

When digestion and absorption are carried on in the alimentary canal, beyond the needs of repair and building, the surplus must be disposed of. The duty of the lungs is to furnish the oxygen necessary to bum up this surplus. But this function is often overtaxed, and, to get rid of surplus nutritive material, the lungs are requisitioned by the central powers to do vicarious excretory work. In addition to performing their function of exchanging carbon dioxide for oxygen gas, they become excretory organs; and, as the bronchial tubes and air- cells of the lungs, like the bowels, are simply excavations into the body, and their closed cavities are on the outside of the body, germs have free access to them. When the lungs are forced to take up the task of excretion, to aid in freeing the body from its accumulation, a cough develops, which is necessary to rid the lungs of the accumulated matter. When there is no systemic infection, the cough and expectoration may be what is known as bronchitis; or perhaps bronchorrhea, asthma, etc.

When toxins, the result of putrefaction in the bowels, enter by way of the absorbents in the bowels, the lymphatic system arrests the toxin and renders it innocuous; but when the infection, or toxin absorption, is too great for the lymphatics to dispose of, nature undertakes to expel it by

way of the lungs. The neutral germs that join the process are metamorphosed into tubercle bacilli. They undertake to dispose of the accumulation by disorganizing it--causing a disorganization of the hyperplasia, or the protoplasmic deposits; in other words, a disorganization of the tubercles which have been forced to develop from the irritation of the toxins absorbed from the bowels. This disease is called pulmonary tuberculosis. The simple germs of fermentation become the germs of putrefaction. Putrefaction hastens the exit of accumulation by breaking down and liquefying it. The putrefactive germs, because of the chemical medium, metamorphose into T. B.'s.

Bacteriology, like theology, makes the bad more powerful than the good.

The old theology made the devil and sin greater than God and good; and the medical profession has always put disease far ahead of health. The devil, disease, is much more powerful than health; and I admit, when disease has modern, or ancient, medical science as an ally, the combination is more potent than health.

Bacteriology is a splendidly wrought fallacy. How long it will hold the center of the arena of human endeavor, as far as the cause, effect, and cure of disease are concerned, is hard to say. There are millions of dollars invested in exploiting bacteriology; and millions of dollars may keep a fallacy alive for ages. Besides, the fallacious system offers such splendid rewards during the lifetime of its devotees; and, neither last nor least, it gives immortality to those who .are worthy.

To have a germ named after its discoverer is far greater than to have a continent bear the name of its discoverer.

Bacteriological science is so grandly scientific that one who has mastered all its details is entitled to a niche in the Hall of Fame, despite the fact that he can never be a physician--can never know anything of value about the cure of disease-until he has forgotten all he has been taught.

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5. Nervous Reactions

As had been stated before, all acts of the living body are reactions. Every movement of our bodies, either voluntary or involuntary, is a reaction--the result of shock or stimulation--and is aroused by an external cause. Voluntary movements are directed from the mind--the mind wills the movement. Voluntary movements may become so automatic that it is difficult to distinguish them from involuntary movements. For example, the players on musical instruments seem to perform without thought. They read music, and their fingers find the notes on the instruments without hesitation and without a mistake--and that, too, so rapidly that it does not appear to be possible that the acts can be the results of mental deliberations.

The same may be said of reading. The person of educated mind will take up a book in which its author sets forth new and novel ideas regarding an old subject, or perhaps presents new ideas, or ideas contrary to those of convention; and almost instantly, without apparent time for analytical thought, the author's premise is interpreted and compared with the fundamentals of knowledge, and the book and its author are placed where they belong. False or true, the reasons for either are forthcoming and final.

The mind becomes so familiar with the foundation of knowledge that it detects an error on sight; yet it does reason, but with lightning-like rapidity, or, what is more true, with the rapidity of thought.

Every act (and thought is an act) is a reaction from an external stimulation. The effects of stimulation are of two kinds. In some the full reaction may take place at the point of stimulation; others, more complex, cause multiple reflex actions. The impulses are sent to the center from the surface terminals by the centripetal (afferent) nerves, and the irritations are reflexly sent from the center over the centrifugal, or efferent, nerves.

The afferent nerves are the nerves of general sensation; also of special and visceral sensibility. impulses of an irritating character imparted to those nerves result in changes of a psychic, sensory, motor, vasomotor, secretory, or trophic character.

Psychic changes may be produced by fear, anger, happiness, etc. Fear may be caused by a telegram conveying bad news; anger, by anything capable of producing anger.

Sensory changes may take place. For example, if ice cream is eaten too rapidly and the stomach is chilled too suddenly, intense pain or severe frontal headache may result, which will pass off as soon as the nerves of the stomach are relieved from the irritation of cold. Headaches are often the result of indigestion, constipation, etc.

Motor changes take place when toxic or other stimulation has become habitual, until tabes dorsalis or other forms of degeneration manifest themselves.

Vasomotor changes occur when alcoholics, tobacco, coffee, or other chemical toxins are used over a long period of time; or when constipation of long standing has caused systemic infection by forcing absorption of the toxins of putrefaction. Sclerosis, or hardening of the arteries, is a vasomotor change.

Secretory changes are produced by many forms of irritation. Pronounced pain, anger, or fear inhibits secretion, stops digestion, and causes poisoning by modifying the fluids of the body. Pleasant thoughts, renewed hope, or success revive secretions and excretions, and transform the invalid into full health.

Trophic or nutritional changes are caused by any and all influences that irritate, depress, or pervert the nervous system. Any influence that puts the mind at rest will improve digestion,

establish secretions and excretions, and transform the invalid into health. Those who have cultivated a fear or worry habit must be cured of the habit, after which they may continue in health.

An irritation may spend its force locally, as an escharotic (caustic) may cause an ulcer without awakening reflexes. The sun may burn the skin brown without causing a reflex irritation.

A poised mind may be abused--subjected to abuse that is looked upon as insulting--without having its equilibrium disturbed.

A local irritant may cause a sensation at the nerve center, which stimulates a motor impulse, and the part injured will instantly be removed from the point of irritation.

An irritation may cause a multiple of reflexes. A fright may cause vomiting and purging, a chill, headache, heart palpitation, and other vasomotor changes, as well as perspiration. An injury may cause many--or, if severe, only a few--reflexes.

A simple reflex is produced where the impulse from the point of irritation passes to the nerve center and back, or passes to a multiple of points.

Stimulants which act as builders of disease must be continual. For instance, tobacco, when first used, causes great prostration and vomiting. The nicotine is absorbed in the mouth; it enters the circulation and is distributed to an parts of the body. If the boy or man, at his first experience, were no larger than a cat or a kitten, the amount of nicotine required to prostrate him temporarily would be sufficient to kill him. His size is what saves him. The fact that the boy does not die is no proof that nicotine is not a rank poison.

The continuous use of nicotine establishes a toleration, but at the cost of a slow and continuous loss of nerve energy.

Those of low vitality, brought on from chronic tobacco poisoning, break down and die of some form of acute disease. No one ever suspects the truth that, if they had been possessed of the energy they have wasted on stimulants, they could have survived the disease.

This truth is not known, and will probably be disputed by the world of tobacco-users. But it is simply a matter of mathematical calculation. Tobacco is a poison. It uses up nerve energy, It requires nerve energy to resist shock, and, if a given shock is too great for the amount of energy possessed by the injured man, he will die. If he had been possessed of the amount thrown away on stimulants, he would have had enough to withstand the shock.

This is true of any stimulating habit. The inebriate, or the individual with used-up nerve energy from other stimulants, will go down under the influence of a disease that otherwise would not cause death.

The nicotine poison affects the mind by dulling ambition; it affects the sensory centers, and causes more or less loss of taste, smell, sight, and hearing; the vasomotor system is deranged--the heart is overworked, and the arteries are hardened; the trophic or nutritional system is deranged, and the subject loses weight--or, on the other hand, obesity may develop.

So long as man has the balance to the good, he can boast that his habits are not injurious to him. But what about sickness and the death-rate between thirty and sixty-five years of age? Why do more than twice as many men die between thirty-five and forty-five as between twenty-five and thirty-five, and nearly three times as many as die between forty-five and fifty-five? Because the ten years from thirty-five to forty-five is where man comes to the parting of the ways of life. He must let up on his habits or die.

Why should men in the prime of life be prostrated and die of acute disease? Lost resistance is the answer. What causes lost resistance? Persistent, excessive stimulation.

Acute disease cannot down a normal man.

When prostration comes, if a little of the wasted energy could be restored, it would make recovery possible.

To restore lost power reestablishes immunization.

When threescore and ten comes, if habits have been such as to conserve energy, life will be prolonged, and the sane and rational faculties will make the enjoying of life possible.

People who are healthy are normal, and normal people have the faculty of enjoying, be they twenty or a hundred and twenty years of age. Disease is what ruins life; for it means discomfort in mind and body. To enjoy, one must hold the right perspective of life; and this is impossible for those who are drunk--toxin--poisoned.

Dotage and driveling belong to disease--not to old age. Nature never makes a clown of old age. Man builds his own grotesqueness.

The lay reader must keep in mind that shocks of every kind are stimulating, and that stimulation to the point of awareness is overstimulation; and, when this is persisted in, organic change (degeneration) sets in; then the output of sensation is abnormal, and means mental and physical disease.

This is why men in the prime of life become prostrated with acute diseases, and die, or develop such chronic diseases as tabes dorsalis, diabetes, Bright's disease, arteriosclerosis, heart disease, epilepsy, et al.

There is but one reason for disease, either of an acute or of a chronic character; namely, lost resistance--enervation--from habitual overstimulation.

Tobacco, alcohol, coffee, tea, overstimulation from food, wrong food mixtures, sensuality, lasciviousness, overworked emotions, misanthropy, a life of selfishness and dishonesty--any one of these stimulants, used continually, lowers nerve resistance, causing man to become vulnerable to unusual shocks, and at last to the usual shocks of his environment.

The difference between health and disease--between a normal state of resistance and enervation--is that health, or normal resistance, reacts and readjusts from unusual stimulation or shock, and is so adjusted to local environment that its stimulating effects are not noticed--they are subconscious, as they should be if ideal health is desired; while disease is that state of health marked by lost resistance, with little power to react.

A man is not old until the stimulating effects of his environment are too shocking for him--not until he loses his reacting and readjusting power.

Reaction is the body's protector; pain is an educator, a protector. When we listen to the voice of pain--the call of reason--and remove its cause, we conserve our powers and lengthen our lives.

If fear of disease and death is the stimulant that is using up resisting power, then the cause of fear must be removed. If the cause is the bad habit of consulting doctors who frighten--who cause fear--but who do not impart an antidotal knowledge, then such doctors should be avoided.

People should be shown the danger they are in because of the life they are leading, and then have a way pointed out to them that will lead to health. But brutally to tell the sick what their disease is, and then to add that recovery is doubtful or impossible, is quite enough to convert a curable disease into an incurable one.

When all the people shall know that the making and the curing of disease are in their own

hands, then schools for teaching health will be more popular than drugs, vaccination, and surgical vandalism.

It is worse than childish to declare that teaching people to live carefully, eat carefully, and be prudent about the care of the body is disease-building. As well declare that education should be condemned, because, when full and well rounded, it too will cure the ignorance that leads to disease.

Nothing bad can come from teaching children that they must not handle guns, or that, if they do, they must be careful lest they kill themselves; that, for the same reason, they must avoid poisons; that food is body-building, and needed to keep well and happy, but that, if too much is eaten, or wrong combinations are made, disease, and even death, may result. Surely nothing wrong can come from telling young people that all their joys and pleasures may be turned into disease and death, if indulged in until resistance is broken.

Forewarned is forearmed. Disease and premature death come from ignorance, or possibly from the fact that habit is established before knowledge of its danger is acquired. Degeneration is established before cause is removed.

Knowledge will not save all; but it stands a better chance to save if it is taught before habits are formed.

Fear is an offspring of ignorance. Relief from fear is wonderfully curative and health-conserving. If fear is the sole cause of a given disease, then a full cure will follow when fear is removed. But if fear is simply a complicating cause--if fear, and the derangement that caused the patient to seek a physician in the first place, have been allowed to run on until enervation is so profound that one or more organs have lost their power to function physiologically--then to remove fear does check the speed of the patient's decline, and cause a feeling of mental and physical betterment which is often interpreted as a cure. Unfortunately, however, the original causes--namely, stimulating habits, and their effects (enervation), plus perverted organic functioning--still exist, and that, too, without the warning voice of apprehension and discomfort to guide the victim away from danger.

Suppose a trophic (nutritional) change has taken place to such a degree that sugar or albumin appears in the urine--what is to be done? Remove fear? Yes, fear, and every other cause of overworked reactions, must be removed, and then the slow march back to a restored resistance and nutrition will be made.

What can treatment directed to the organ do? What can removing organs do? Nothing. They are only servants of the master--nutrition--and, like all good servants, do whatever menial service is placed upon them. The master of the show is nutrition, and he does good work so long as he is supplied with sufficient food and nerve energy.

Pain and discomfort should be mentally suppressed and ignored, but not until their significance is understood and a well-directed plan for removing their cause is inaugurated.

To stop pain with drugs, or to ignore it, is not removing cause. Those who are wise will remove the cause; then palliatives will not be required.

Nervous reactions are necessary; they are constructive; it is only when excessive that they become destructive.

Exercise, up to a given point, is necessary for developing the greatest nutritive efficiency.

Exercise to the point of abuse overstimulates and becomes destructive. The first effects of stimulation are that the heart and blood vessels respond to extra work; the glands take on increased functioning; the mind becomes more active; the entire body responds; secretions and excretions take on renewed activity, and nutrition approaches the ideal.

This type of stimulation--exercise--is not an unmixed good. When pushed to excess, we see the common result of any form of overstimulation--namely, enervation. The athlete barters a long life for a short and active one.

The sensualist deliberately yields a long, sane, comfortable, and pleasurable life for a bacchanilian feast and the hell of repentance.

Reactions must not be pushed to the point of excess. If they are, nutrition is impaired; and that means that the whole organism is impaired, leaving the brunt of all future shocks to fall upon the weakest organ of the body. If that organ happens to be the lungs, tuberculosis, bronchitis, asthma, or pleurisy will be the headliner, or principal feature, of the pathological play on which the curtain of life will fall. If the vulnerable part of the body happens to be the bursal membranes, deforming arthritis (rheumatism) will take the front of the stage of life. If the kidneys, heart, liver, or other organs happen to be the vulnerable points, the type of disease will be one peculiar to these organs.

This should furnish a key to how it is possible for many unlike diseases to spring from the same cause. Is this fact so very wonderful, when we remember that all the different organs of the body--all the different tissues of the body--with their many varied functions, are all built from the same food? And the mode of treatment is so simple that it should be obvious to even a child mind; namely: if overstimulation--if shocking by any form of stimulant--has worn out the reactive powers of the system, and enervation is established, a cure must consist of conserving energy by avoiding shocks of all kinds. Rest--physical, mental, and physiological--is necessary. In established diseases, all foods must be given up for a time; certainly exercise of all kinds; and the mind must be freed from worry. To inaugurate such a treatment requires educated skill. Even if a child mind knows that the treatment must be rest, great skill is required in knowing what to eat, when and when not to eat.

Sensual pleasures of all kinds become enervating when indulged in to satiety. When they are, then it is that "life's apples turn to dust;" then it is that we see the "dregs" in the "wine of love," and know we have "bartered life's bread for a crust, and a draft that is as bitter as brine."

The discomfort of excess--overworked reaction--may be pushed so far that the warning voice of frequent crises is lost; after which the organism may be abused to the point of a fatal collapse without warning.

For example, the victim of apoplexy has the discomfort of overworked reactions early--years before the collapse. He suffers from overworked heart, rapid pulse, headache, vertigo, fullness of the head, roaring in the ears. More or less of these symptoms he will have from ten to twenty years before the final collapse. Slowly but surely a toleration for these discomforts is built. Apprehension is dulled; the "still, small voice" of self-protection is hushed; and all unexpectedly and without warning the collapse comes, and the victim is not permitted to say goodbye and farewell to his best friends. This is the price we pay for ignoring warning.

Food is a stimulant, and necessary to the building of body and mind. The stimulating effects of food are necessary to secure digestion and assimilation. Nutrition depends upon the reactions stimulated by food, as well as upon the building material furnished by the food. This being true, it must be obvious to a thoughtful mind that too much food, or food too highly stimulating, must frustrate the object of food by causing too much reaction, ending in enervation. Overstimulation from excessive eating is the commonest cause of disease.

Stimulation is necessary; for reaction must be continual. Without reaction there can be no heart action; breathing must stop; metabolism ends; in fact, life goes out.

Stimulation, like every other need of life, is good up to a given point; then it becomes bad. Again we are reminded that every good is linked to bad, which is educational and a test of worthiness to survive.

Indispensable stimulants are those which carry on their work subconsciously. All that is necessary to carry on vital action can be supplied without creating enough reaction to receive conscious attention. It is when reaction arouses consciousness that the stimulation is excessive.

The intensity of reactions increases, as does the excitability of the centripetal nerves-the nerves carrying impressions from the surface to the centers. For example: The nerves in the skin over a boil, an inflamed joint, or a blistered surface create central reactions, noticed in general nervousness.

The reaction is greater when the part irritated is naturally sensitive; for example, the eye, the ear, or the tongue.

Heat increases the excitability, while cold diminishes it.

A body made too warm by overheated houses, overclothing, too heavy underwear, is made too sensitive. This is a form of overstimulation that leads to enervation; following which, catarrhs; of any and all mucous membranes develop. When toxin poisoning is added, sensitiveness is diminished. This is a conservative measure; but, like all other good things, it becomes destructive when pushed too far.

An organ rendered less sensitive from overstimulation. is also rendered less efficient in carrying on its regular functioning; hence, when a cure is desired, the cause of its overstimulation must be removed, and, until time is given for a normal reaction, the organ must not be forced into a functioning which it is not able to perform. A season of rest is nature's remedy for all exhaustions following overstimulation. In this matter nearly all systems of healing are based on theories of cure that work in just the opposite way. When the organs where reflex action ends are badly altered, very grave symptoms are developed by stimulation of the peripheral or afferent nerves.

Chronic irritation, inflammation, and the accompanying organic enlargements from overwork, or from rheumatism, cause the organs to be sensitive to reflex stimulation.

In the case of myocarditis, or rheumatism of the heart, an impression--a shock-that would not be noticed by a normal heart will cause death. Heart stimulants are dangerous remedies.

On the other hand, when exercise has been neglected, the various organs of the body are weakened from lack of stimulation. Under such conditions the heart becomes so enervated that unusual exercise, such as running to catch a car, may end in collapse and death, the heart being unable to do the extra work forced upon it. Often such heart weakness has been aggravated by the use of alcoholics, tobacco, coffee, tea, and sugar. The excessive use of sugar tends to weaken muscular energy, because of its power to overstimulate.

When stimulation has been excessive-such as overindulgence of the grand passion--there may be such an alteration of the nerves of transmission--the centripetal (afferent), nerves--that sensation is retarded, or perception and reaction end in impotency. On the other hand, indulgence may be so great, from the excitability of the transmitting nerves, that the reflex centrifugal (efferent) nerves are so altered in their functioning that trembling and irregular movements, up to lost coordination, are established.

Syphilis is credited with building tabes dorsalis and paralysis; but overstimulation from the drugs used in its cure, and excessive venery, are more likely to be the cause. Excessive venery lays the foundation; then toxins from septic infection and drugs may prove to be the exciting cause.

Mental or Physical Reactions

In the foregoing it has been my endeavor to explain, as well as I can, physical reflexes, their causes and variations; also to give a hint regarding the diseases brought on from overwork and

underwork.

Nervous reactions, when expressed in the highest order, are mental or physical. All ideas, as well as all movements, have an external origin.

The spiritualistic school will not agree that our psychical nature is built from sense-impression, and that, for us to learn or know anything, we must have sensation. Our special senses are educated by external impressions. Without external stimulation, or without the sense-perception to recognize external impressions, we remain in ignorance--a state of ignorance known as idiocy.

Mind-potentiality evolves as the ages roll on. We do not inherit mind or innate ideas; we do inherit potentiality--an aptitude to understand. Probably the most potent factor in this inheritance is power of attention. With mental alertness a child will gather knowledge so rapidly that to dull pupils it will appear as though it must have inherited its knowledge.

The study habit, when once formed, is a great help to the dull mind.

Mind can never come into its own until man ceases to build physical disease. The mind of a sick man is handicapped. Habits that build disease of the body affect the mind also.

It is common knowledge that the character and type of intelligence and capacity for work are under the influence of various diseases. For instance: A deranged liver causes pessimism. Liver and stomach derangements cause sadness and the so-called neurasthenia. Genito-urinary affections produce irritability, jealousy, and a desire for revenge. Hypochondria and self-destruction are among the potential effects of venereal derangements. Granular inflammation and stricture of the urethra create irritability.

Delirium in fevers and drunkenness is a well-known phenomenon.

Psychical impressions are reflected on the body. Fear envy, and jealousy provoke excessive kidney, bowel, and heart action. Digestion is very seriously affected by worry. fear, or an unsatisfied state of the mind.

Nervous Reactions in the Normal State

In the normal state reactions vary; the conditions also differ.

Species.--The higher the species, the more powerful the reactions. Shocks, stimulations, or irritations which cause little or no response in animals, produce suffering and sometimes fainting in man. Shock seldom occurs in animals; when it does, it is always due to violent causes. This being true, why should vivisection throw any light on the management of man's diseases?

Influence of Sex in Bringing about Shock in the Human Species.--Women are far more easily affected than men.

Women are more easily affected through their emotions than men. This condition, however, is of artificial development; for the spermatozoon is more lively than the ovum, the male fetus is more active than the female, and boys are more active than girls.

Possibly the reason why women are more responsive through the emotions than men is because they have a different training. Women are protected, pampered, and kept back, and perhaps under. Men have done the world's work and the world's fighting, and that would educate them into a control over the emotions. Everything else being equal, it would be logical to presume that women should be less sensitive and emotional. They need control; for they take care of the children.

It is generally taught that the nervous system of children is feminine; that reactions are quick, mobile, and excessive; and that, as they grow older, the male becomes less reactive, until

advanced age finds the old man physically and psychically without reactive ability. This lost sensitiveness, however, can be accounted for from habits of life. Men use more stimulants than women, and indulge themselves more in every way; hence their reactions are suppressed or inhibited by overstimulation. The fact that stimulants impress the child greatly, while they scarcely affect the old man, is proof that the matter of little or much reaction is wholly a matter of education. Mind, with its auto-suggestion and imagination, builds sensitiveness.

The difference in the reactive power of races is a matter of climate, food, and education. The animal is dull compared with man, and the difference is a matter of mind. Animals differ in their reactive power, and the difference is a matter of intelligence.

In man, education should teach poise; for it certainly teaches imagination and sensitiveness, and poise is necessary for self-control.

If irritability is not a matter of imagination, after leaving the animal state, why are children of young parents more apt to react--more lively and cheerful--than children of older people? Experience teaches poise; hence reaction is largely a matter of education without experience, until sensation is dulled from satiety.

Children of very old parents lack youthfulness; they appear to continue the aging of the parents. This indicates that physical energy is transmissible, but that education and physical training leave a legacy of impotency and senility.

6. Nutrition

Nutrition is that which takes place in the body of a live, healthy animal between the time when food is taken into its body and the time when the ash resulting from the combustion of the food is excreted.

Life is the phenomenon we call nutrition, or, vice versa.

We see an automobile or a train moving with all the grace and celerity of an ideally constructed machine, and we say that its mechanism is perfect; hence its nutrition is perfect. If we see it halting, coughing, puffing, and blowing, in an effort to move, we know that something has gone wrong with its nutrition, or its mechanism. When we see the machine at rest, we know that the life of the engine is killed, The phenomenon which in animals and plants we call nutrition, and motion in the case of machinery, is life.

The power behind all activity--the power that makes activity possible--is the sun.

A machine is a synthetical arrangement of properly constructed and adjusted parts. When all parts are ready, it will not move until the sun's rays are thrown upon it by way of oil, coal, or electricity, all of which represent static energy, or stored-up sunshine.

Those who hold the dualistic idea persist in teaching that there is a mysterious force behind and on the outside of nature that causes the phenomenon we call life. They will not admit that it is the sun. Such minds are not satisfied with a simple explanation; they must have an unexplainable, mysterious, or, as Spencer declared, an unknowable cause.

It is wonderfully consoling to have faith in something--to have something that faith can lay hold of. Such a something I have. But, while I myself can get rest and comfort out of it, I realize that the majority of people cannot. I do not ask anyone to give up his beliefs for mine; but certainly no one can be injured by allowing me to try to explain the cause of life that gives me satisfaction.

Those who never have taken a peep into the world that is above, below, and beyond their unaided sense-perceptions must feel their limitations and know that there is an Infinite existence which has not been revealed to them. They are right; but they have no right to declare that it has

not been revealed to others.

The study of bones, flesh, and organs gives us an acquaintance with the animal, its mechanism and personality; but how its bones, flesh, and organs are constructed is quite another study; indeed, it is a world all to itself--a world hidden from common observation. Because of its infinitesimalness, this world is beyond the horizon of unaided sense-perception. On the other hand, the telescope and spectroscope reveal the infinitely large and distant.

To explore the regions where nutrition is going on, one must take one of the torch-lights of The Infinite--the microscope--and there will be revealed the mysterious--the handiwork of the Creator!

In the workshop of The Infinite there is a department where the rudimentary units out of which everything is made are evolved. They have but recently been discovered, and they are called electrons. For the sake of brevity, and to have a definite and inexhaustible source whence to draw a supply of electrons, we will say that the sun's rays are made up of electrons. So necessary a substance as the base out of which everything is made, should be everywhere: and certainly sunlight is everywhere.

In another part of The Infinite's workshop there is a place where cells are made. Cells are the units out of which living matter is made. The human body is made out of cells, the same as houses are made out of brick.

As stated before, we cannot observe The Infinite work unless we are aided by The Infinite's torchlight--the microscope. With this instrument we discover that the tissues of the body are made up of cells. To understand a cell, it will be well to examine some of the lowest forms of life.

The ameba is a colorless, single-celled, jelly-like, protoplasmic organism found in sea and fresh water. It is constantly undergoing changes of form, and nourishing itself from surrounding objects.

The white corpuscles of the blood perform ameboid movements--i.e., changes of form, consisting of protrusions and withdrawals of substance. (Gould's "Medical Dictionary.")

The ameba is found in mud and decaying vegetation at the bottom of pools of water. On examining a drop of this slime with a microscope that magnifies two or three hundred times, life is observed. A great variety of living forms are seen.

The ameba is the lowest type of cell-life. The structure of a cell is made up of a nucleus (a small nut) and a body which is composed of a substance known as protoplasm. In biology a cell is known as a bit of protoplasm containing a nucleus.

All tissues--nerve tissue, muscle tissue, bone tissue, and tissue of cartilage--are made up of cells. These vary in size, notwithstanding they are all microscopic. The microscope reveals the fact that there are characteristic forms of cells for each tissue; and, so far as known, all have a cell body and a nucleus.

The microscopic appearance of protoplasm is a colorless, semi-fluid substance, in which are seen solid particles, or granules. The nucleus is found near the center of the cell, and is composed of protoplasm denser than that of the cell body. The cell body may be likened to a bit of the white of an egg; but it should not be forgotten that the white of the egg is not living substance. The fertilized egg needs the sun's rays to add the missing link--to breathe into it the breath of life. The unfertilized egg needs a nucleus that is potentized with life. All the rest of the egg is body food, if you please.

An egg is not complete without the nucleus; and then, without the sun's rays, it can never take on life. This is true of the cells of a living body; for the sun's rays must be utilized to the extent of furnishing a pent-up heat of about one hundred degrees Fahrenheit, or these cells cannot renew

themselves.

Nutrition is the principal attribute of matter. The phenomenon known as nutrition is life; and this life cannot continue to manifest without the properties imparted by the sun--electrons and heat. The sun, then, is the source of all life.

Assimilation means that the cell seizes upon the nutritive materials placed at its disposal, and groups them together into an organic synthesis--a molecule--that is very unstable. In order to do this, heat, or the sun's rays, or the electrons, must be furnished in sufficient quantity. Every cell of the body is an electric cell; all are connected into a whole instrument, or battery, represented by the cerebro-spinal system; and the refined output is mind.

The feeding and the waste of this wonderfully complex electrical apparatus take place in the cells, which are microscopic bodies, and which have the power to gather the electrons from the sun, and select other elements from the food, with which to build a living organism.

Each cell is made up of molecules. A molecule is the smallest quantity into which the mass of any substance can be divided and retain its characteristic properties.

Disassimilation means that the molecules of the cells disintegrate and are reduced to simpler and more stable elements; and at the same time there is a loss of energy.

The disintegration of molecules is attended by the loss of forceh-heat or energy. This means the wearing-out of the cell; and the phenomenon is a manifestation of life, the same as the building-up. One is appropriating nourishment, the other is discarding worn-out material; and all the phenomenon is metabolism--nutrition or life.

It is well to note, in this connection, that life is the same, from the ameba found in the slime at the bottom of a pool of waste water, to the cell in the gray matter of a Websterian brain; from the lowest vegetable cell found at the mouth of the sewer, to the highest type of the most exquisite flower. All cell life is generically the same, differing or dividing into species.

The laws of nutrition are the same. The plant cell liberates force as does the animal cell, and both produce carbonic acid. The electron or carbon from the sun's rays, and the oxygen from the earth's atmosphere, meet in the cell and are united into carbonic acid, This phenomenon is not carried on in plant life to the extent that it is in animal life. The plant does not spend so much energy; assimilation predominates in plant life. The cells of **the plant feed upon** carbonic acid and water, which, under the influence of the sun's rays, unite into hydrate of carbon, furnishing vital force to animals. It was Herschel who first declared that the sun's rays are the source of all life.

In the study of cell life, four chief phenomena are observed; namely, a physical--that of taking in nourishment--absorbing--endosmosis; a chemical, consisting of organizing the material absorbed; disorganization; and, lastly, the throwing-out of the waste, which is called exosmosis.

Necessary to Cell-Building.--That these processes may be carried on properly, the nutritive material must be in a state of solution. Life is possible to the cell only when its nourishment is liquid. The cells of the human body are in a liquid medium-namely, blood, lymph, and plasma--from which they draw their nourishment.

The phenomena of cell life have been hastily gone over, and now it will be necessary to study the phenomena of cell-colonization.

Functions of Nutrition

The animal body is made up of organs. Each organ, may be regarded as a colony having individual as well as systemic attributes.

In the nutrition of an organized being there are seven successive functions, each one important. For ideal health to be maintained, they must all be carried on well.

1. Preparation of Food for Absorption.--Mastication and swallowing of food; transformation of food into a liquid state--the starch being transformed into sugar, the albumins into peptones, the fats emulsified, and all rendered liquid.

2. Absorption.--The liquefied food passes through the intestinal walls. This is what physically takes place, but in some way there is imparted to this absorbed nourishment a property that resists change--it is given resistance.

3. Dehydration.--The surplus fluid, a part of which is left behind when passing through the mucous membrane, would, if not left behind, cause elimination as fast as absorbed. Dehydration is finished in the lymphatic glands and liver. The liver has deposited in it the fatty acids, the peptones, and the sugar.

The glucose is dehydrated and becomes glycogen, which accumulates in the muscles and liver.

4. Cell-Nutrition, which has been explained before, takes place when the intestinal plasma--digested pabulum--reaches the cells. The cells appropriate the matter they want, and eject the waste, which passes into the blood and is eliminated.

In all cases of constipation that are not due to mechanical obstruction, the cause may be traced back to faulty cell-functioning. The endosmosis (absorption) and the exosmosis (organization, disorganization, and elimination) fail to be carried on ideally. One reason why this work is not carried on properly is because there are not enough enzymes generated in the system to render the food material dializable. The nutritive material that bathes the cells must be capable of passing through the cell walls; and, once in the cell, cell enzymes must prepare it for organization and elimination. Where there is more food material furnished than the secreted enzymes can take care of, or the amount secreted is below normal, cell-exosmosis fails to take place, and, as a consequence, elimination into the blood is retarded. Once in the blood, there may. again be a retardation, because the excretory material is not dialized enough to be excreted by the organs of elimination. Hence there follows a state of obstinate constipation which nothing can overcome except a treatment that reaches cell-inactivity; and, inasmuch as the real cause is a lack of enzymes, the amount of food taken into the system must be reduced to within the digestive capacity. I do not mean the digestive capacity of the stomach and bowels; for it is self-evident that there is more than enough of this digestion, or the cells and blood would not be taxed beyond their capacity.

The remedies for this constipation are fasting, resting, and water-drinking. After elimination has cleared cell- and blood-obstruction, a properly selected diet, taken in sufficiently moderate quantities not to force a recurrence of the obstruction, will bring about a permanent cure.

Where interference with elimination is of a grosser character than that which takes place in the cells--namely, in the liver or kidneys--we see stone-formation. When the excretions of these organs are rendered dializable--rendered liquefiable--the integrated stones will disintegrate and pass out of the body. In order that waste products may leave the system readily, they must be dializable; which means that waste matter must be liquefied fit for exosmosis. In the matter of gallstone and stone in the kidney, these stones are on the outside of the body, because such cul-de-sacs as the gall bladder are connected with the outside by the bowels, into which the bile and disintegrated stone can pass. Stone does not need to liquefy, for it has no membrane to pass through.

5. Disassimilation.--The liver changes nitrogenous products into urea--a crystallizable body which readily leaves the organism, favoring renal elimination.

6. Elimination is by the lungs, kidneys, skin, and bowels. By examining the excreta, it has been

found that 250 grams of carbon and eighteen grams of nitrogen are voided by an adult each twenty-four hours.

To eliminate eighteen grams of nitrogen, it is necessary to consume 500 grams of meat. To throw off 250 grams of carbon, two kilograms of meat would be required.

In a mixed diet of five parts of carbohydrates to one part of albuminous matter a perfect blend is had. Health depends upon a properly mixed diet.

7. To have all the foregoing stages of nutrition carried out properly, the mental state must be that of optimism; for the opposite mental state depresses, and inhibits more or less every process.

Fasting.--To keep food away from a man slowly starves him to death. Disassimilation continues, and it is supposed that death comes after forty per cent of the weight is lost. This may be true of those who are very thin, but it is not true of those who are overweight.

The loss of the various tissues is not equal. Fat diminishes ninety-five per cent. The organs lose most in the following order: spleen, liver, muscles, kidneys. The heart, nerves, and brain are most resistant. It has been said that the brain shows no loss from starvation.

Fat goes first; then the muscle or nitrogenous substance. When the muscle begins to go, there is an increase in the urea; albumin appears in the urine; the temperature falls, and the symptoms become serious.

Drinking water enables the one starving to live longer. Fear will cause a fatal termination much earlier than fasting and going without water; for fear inhibits elimination, if it does not also generate a poisonous toxin.

A dog, deprived of food and water, died in twenty days; another, deprived of food but given water, was still living at thirty days. Much depends upon the weight at the beginning of the fast, and the treatment during the time. If warmth is supplied, life will be prolonged.

People who take a fast to control disease must be kept warm. Chilling during a fast is very dangerous.

Unless much water is used during a fast, toxin poisoning will take place; and that, with chilling, is liable to kill the one fasting in ten days. When fear is added, death will come in from three to seven days.

The first common cause of disordered digestion is improper chewing. Next comes overeating, or eating of improper combinations.

When more food is taken than can be prepared for absorption, the food is caused to ferment because of the ever-present germ of fermentation. The result is fermentation, catarrh, or inflammation of the mucous membrane; gastritis, dilation of the stomach, diarrhea of the lienteric type; then poverty of flesh, nervousness, etc.

In those cases where too much sugar and starch are consumed (in children), gastritis, pharyngitis, tonsillitis, enlarged tonsils, adenoids, constipation, polyuria, and nervousness are common; in adults, rheumatism, glycosuria, diabetes, flatulency, headache, eczema, heart palpitation, constipation, colitis, piles, and prolapsus of the rectum.

It is hard to define exactly, or clearly to draw the line between cause and effect, when a mixed diet is being used; but it is safe to say that there will be no putrid or septic poisoning from food decomposition unless animal alburninoid is mixed in the dietary.

When animal foods are taken to excess, a severe type of whatever disease is developed may be

looked for. In children, a tonsilitis will be diphtheria or scarlet fever. Fevers will take on a typhoid or septic character. Wounds and puerperal derangements will take on septicemia.

The glands of the body--the lymphatic, liver, and ductless glands--are probably quarantine stations for the purpose of arresting and detaining septic toxins. These glands probably secrete enzymes which neutralize the septic toxins. The liver undertakes to care for the surplus protein and fit it for cell nutrition; it stores the sugar in the form of glycogen.

If the liver is out of condition, from overwork, it allows the sugar to escape. Then the kidneys take up the task of eliminating it. This is a glycosuria, caused by hepatic insufficiency. It is not diabetes proper. Real diabetes is a nervous derangement, and must be cured by restoring nerve energy.

The different acts of nutrition in man are now to be reviewed, with their perversions.

Liquefying Food

The first process in digestion is the liquefying of food. The food is ground by the teeth, and then mixed with the digestive secretions. When the individual is normal, and eats normally of a properly balanced dietary, and when everything else is normal--i.e., the mind is at rest, and the care of the body (such as bathing, rubbing, clothing, etc.) is normal, and properly adjusted to external influences--it can be said that ideal health is enjoyed. But, inasmuch as an ideal adjustment of man to his environment is obviously impossible, ideal health is a utopian dream. Like all such ideals, however, it is useful, in that it feeds ambition and rewards approximate attainments.

In every branch of life's activities the ideal is unattainable. The best is secured by endeavoring--the reward is in pursuing, not in attaining; for attaining is reaching an equilibrium where life ceases. Life is activity, growth, attaining. Health is activity, building, doing, striving, fighting against deterioration, and endeavoring to give life, or activity, to every potential of body and mind. It should be known that the possibilities potential in man are drawn upon very lightly.

When food is unfit, when it is taken in too great quantities, or when the quality is bad, or made bad by improper preparation, very complex derangements are set in motion.

When the food supplied is appropriate, but partaken of too abundantly, or when it is bad in quality or wrongly combined, and is not suitable to the demands of the individual, digestive disturbances result, Fermentation takes place; for the microbe of fermentation is everywhere. It is retrograde nature's enzyme, is omnipresent, and is for the purpose of fermenting and disintegrating the excess, defective, and worn-out material in the body. It is the function of fermentation to remove everything that is unfit, or not appropriate, for physiological digestion--life--building--growth and repair.

Life and death-growth and decay-are presided over by two elements of destruction. Life, at its beginning, has enzymes that ferment and dissolve and prepare food for integration--organization into living bodies; while death, at its beginning, has enzymes (microbes) that ferment, dissolve, and prepare surplus, waste, and worn-out material for exit from the body--to give back the elements to nature.

These two processes are at work side by side, and a study and understanding of them give knowledge of how to aid each in its particular sphere. It is a physician's prerogative to understand life and death--growth and decay; for he must lend a hand in freeing each from its particular entanglements.

When more food is taken than can be appropriated by the body, it must be got rid of; otherwise it obstructs and prevents normal operations. The germ of fermentation dissolves and fits this surplus for immediate exit from the body. **When too much is eaten continually, this microbic fermentation creates irritation, inflammation, or catarrh of the digestive tube and**

the associate, contiguous, and communicating organs.

On account of the gas generated by microbic fermentation, and the consequent distention of the stomach and bowels, dilation of the various parts of the digestive tube takes place. As a result of this distention, constipation is built, and the heart is disturbed, in that its action is interfered with by pressure on the diaphragm. All contiguous organs are pressed upon and put out of commission.

It is after intestinal fermentation is established as a habit that the reproductive organs of both sexes become functionally deranged.

The first functional disturbances set up by an oversupply of food are indigestion, dyspepsia, and sometimes diarrhea--usually constipation.

Nervousness and reflex symptoms accompany functional disturbances; namely: headaches, frequent urination--in children polyuria, causing bed-wetting; rapid pulse and palpitation of the heart; cough from throat irritation. Between insensible eructations of gas escaping from the stomach, causing throat irritation and cough, and a purely nervous cough from stomach and bowel irritation, it is hard to draw the line; but, as the treatment must be the same, an erroneous diagnosis will not prevent a cure.

Gastrectasia, or dilation of the stomach, is caused by years of overindulgence at the table. A common symptom of this derangement is the development of nodules around the second joints of the fingers, named "nodosities" or "bonehard." In subjects of low resistance, or in subjects who have become profoundly enervated, the nodules may be the early symptoms of a **developing rheumatoid arthritis.**

The kinds of food taken in excess govern the type of disease. An excess of starch, sugar, and fat--especially the starch in the form of whole grain--causes deforming rheumatism and builds stone in the gall bladder (gallstones), kidneys, and urinary bladder in the lithemic or gouty diathesis; lime is deposited in the heart and arteries, around joints, and in other parts of the body.

An excessive intake of sugar and sugar compounds--such as puddings, cakes, and pies--develops obesity. Where the intake of carbohydrates is in excess of the needs of the system, glycogen is stored, and when there is more than can be utilized, it is passed in the urine, producing glycosuria. It is the function of the liver to arrest and store sugar by dehydrating it to glycogen. When the liver is altered, the sugar passes into the blood and goes out of the body by the kidneys. Both these varieties of glycosuria are alimentary diabetes--the first cellular, the second hepatic from liver insufficiency.

Where animal proteins are taken in excess, they are taken up, but their digestion is not complete--cell- and blood-digestion flags. This nutritive perversion favors putrescence, and the building of simple catarrhal inflammations into ulcerations.

Gout is supposed to develop from defective digestion of animal foods. Alcoholics stand first as a cause of this disease, and the alcohol produced in the body from imperfect digestion of carbohydrates is a common cause of all types of rheumatism.

It was observed that digestion by the cells of the body is carried on by the aid of endosmosis and exosmosis (physical laws), but nutrition cannot be accounted for by physical laws alone. When peptones (the liquefied nitrogenous foods) pass through the walls of the bowels, the membranes appear to possess the power of dehydrating, so that peptone, as such, never reaches the blood so long as digestion is normal. In abnormal states peptone is found in the urine, causing peptonuria of intestinal origin. The nutritive materials that are carried to the liver by the portal vein are dehydrated by that organ. When the liver is diseased, however, peptones and sugar appear in the urine.

When intestinal indigestion and catarrh develop, the pelvic organs become involved; menstruation is made painful, irregular, and often too profuse; toxins are absorbed from the bowels; the lymphatics acting as quarantine stations are, in time, overworked, and catarrhal inflammation develops in the ovaries or womb, or both.

Because of a thickening of one side or the other of the womb, this organ is bent on itself, crooking and obstructing the passage or canal, causing pain when the menstrual flow seeks exit.

The womb and ovaries become very sensitive, and the downward pressure from gas in the bowels causes much discomfort.

The mucous membrane of the lower bowels takes on a catarrhal state from the constipation and gas distention. Colitis, appendicitis, proctitis, ovaritis, metritis, inflammation of the spermatic cord, urethritis, **prostatitis,** piles, and prolapsus of the reproductive organs, bladder, and rectum, are possible diseases coming from fermentation and gas distention. Indeed, a part or all of these derangements are so common that there is a procession of people, young and old, headed toward every surgical institution in the country.

When operating is once started--when, for example, the appendix is removed--the causes remain. The habit of overeating, or improper eating, fermentation, gas distention, toxin absorption, catarrhal inflammation of the intestinal mucous membrane, and lymphatic involvementall these remain to continue the discomfort for the removal of which appendectomy was performed.

Occasionally the patient has a respite from discomfort following the operation--not because of any curative effect produced by the operation, but because of the powerful suggestion often imparted by a surgical operation. Those who undergo an operation have faith that they will be cured, or they would not submit to it. The power of this suggestion holds the patient's belief for a time. If there is any discomfort following the operation, it is thought to be the consequence of the necessary mutilation, which will pass off in a short time.

After a brief, questionable rest from pain, the patient begins to complain to the doctor of pain similar to that suffered before the operation. The doctor may declare that the post-operative pain comes from adhesions; or the pain may be declared to be due to ovaritis or gall bladder disease. In due course of time the ovary or ovaries are removed, and the gall bladder is drained; or, as in the case of the late Governor Johnson, of Minnesota, operation after operation may be performed for overcoming adhesions--all to no purpose, for the cause is not removed, not even suspected.

In the case of men, the appendix, gall bladder, prostate gland, piles, and prolapsus of the rectum are attacked with the knife because of the pain produced by intestinal indigestion, catarrhal inflammation, and gas distention. Of course, each and every operation must be a disappointment; for none of the organs is pathologic to such an extent as to justify its removal. Besides, the disease is not of these organs proper, which are sensitive only because the real disease has developed a neurosis of all the organs.

Where appendicular operations have been performed, and the appendices have been found normal, the patients often remain better for a time, because of the suggestion carried by the operation; but in pronounced types of intestinal indigestion, with catarrhal inflammation of the bowels and infection of the lymphatics, there is a general sensitiveness, with periodic attacks of pain, apparently confined to one or more of the organs of the abdomen or pelvic viscera. The real cause, however, of the paroxysms of pain that pass as appendicitis, ovaritis, or disease of other organs, is gas distention, the pressure on the hypersensitive organs from gas being the sole cause. This being true, it should be obvious to every thinking person that surgery can be nothing but detrimental to those afflicted in this way.

The above is a true picture of the physical states of the great majority of those operated upon in

the past two or three decades, and those who are now on their march to a surgical hospital. It must be continued; for it is certainly obvious to the discerning, with the illumination above given, that removing any one, or a half-dozen, of these organs will not remove the disease. Removing the lymphatic system of the lower bowels and pelvis, were it possible, would not cure a derangement of this kind.

Lymphatic or scrofulous diathesis is a structural evolution of the lymphatic system favoring the development of tubercular diseases. The word "diathesis" is out of date, and "germ infection" is made to cover all diseased states once ill understood under the name "diathesis." It may be said of disease, the same as of a rose: "What's in a name?" This is true when a name carries no meaning.

Names only confuse, and help to hide from the mind's eve the true cause.

If we may look upon every child, born of well-disposed parents, as a purified lump of protoplasm with the potentialities of health and mental development normal, we can use the child as a standard of ideal health.

There are children, born of vicious parents, who are said to be born with venereal disease. It may be true; I believe that children are born with disease; but they were infected after conception.

My practice has been confined to a superior class of people, While I have always enjoyed a large private practice, it has been with those of a middle to a superior class of intelligence. The ignorant and vicious have always sidestepped me, because I require the giving-up of bad habits as a first step to a cure. Consequently, children born with venereal infection have never occurred in my practice. If they had, I should not believe that nature allowed the infection to take place before conception; for nature makes sterile all who are unfit to propagate.

Starting with perfect physical health, a child is fed too frequently, and kept from fresh air and sunshine. Many are bathed too much, handled too much, and subjected to too much noise. As a result the child's resistances--its enzymes and body defenses--are inadequate to meet the enemies of health; and the result is that a catarrhal state is developed. The child "catches cold" easily. The stomach and bowels are made sensitive, and ready to take on a state of indigestion; then toxin poisoning takes place, resulting in an effort, during the cold months, to throw off the poison by the skin and mucous membrane--gastritis, sore throat, and the exanthemata (eruptive fevers). It is a fact that the eruptive fevers--skin diseases--occur all the year around; yet their tendency is to appear more frequently in the winter, or during cold weather; whereas diseases of the stomach and bowels--mucous membrane--occur oftener in the summer, or during hot weather. Gastritis, bowel diseases, and the various eruptive fevers are a necessary sequence to feeding beyond the child's nutritional needs, and catarrhal inflammation of the mucous membrane is established as a habit. Finally resistance is broken, making the child susceptible to epidemic influences. When the heat of summer comes, it adds the last link to a chain of causes that ends in cholera infanturn. If treatment is unsuitable and the nursing bad, the child may die; indeed, many do die.

Children who get over the diseases peculiar to the teething age, carry, and further develop, enlarged tonsils, adenoids, gastric irritation, intestinal indigestion, constipation, intestinal parasitic diseases, the so-called contagious diseases, glandular enlargements, adenitis, tuberculosis, rickets, lymphangitis, scrofula, etc.

These diseases develop from childhood to puberty. Those children who are not swept out of existence will have seasons of betterment; a few will be carried by the force of development, which in a cyclonic fashion sweeps everything before it into health--and that, too, often in spite of wrong life, and a medical treatment that might prove fatal if administered at any other time in life.

These health storms, typhoons, revolutions, often sweep invalids into health, starting up without apparent cause, and carrying many victims of ill-health into physical states approximating good health. Then, if they are fortunate in having sense enough to follow proper advice, they may recover from the ill-health of youth and live to a ripe old age, enjoying life, health, and success. A few will enjoy approximately good health from early puberty to early middle life. Perhaps it would be better to say that there are a few who, through the impetus of development, will enjoy fairly robust health until perhaps the end of the first ten years of business life; then, because of neglect of exercise, and the practice of bad eating, and other habits, they break down and die of acute or chronic disease.

There are others who reach middle life before they have, by vicious habits, broken down their resistance and placed themselves in a physical state out of sympathy with health's revolutionary forces. These go down and out with tuberculosis, Bright's disease, diabetes, tabes dorsalis, apoplexy, and other diseases.

There is still another class who die between fifty-five and sixty-five of kidney, heart, brain, blood vessel, and nerve diseases, because they have lost their resistance to such an extent that they fail to attract the evolutionary forces that would carry them on another decade.

We hear of disease influences, but never of health influences. The truth is that there are more epidemic influences for health than the reverse. Indeed, if man ever learns to court heatth--cultivate resistance, attune himself to the harmonies of nature--he can make himself immune to disease-producing influences.

Chlorosis is thought, by many writers on medicine, to be caused by a syphilitic "taint;" but this is no more true than the claim, set up by the same authorities, that the whole human family is tainted.

Chlorosis I have found to rest on a basis of toxin poisoning derived from intestinal indigestion. After the uterine lymphatics have taken on a state of subacute inflammation (sometimes called adenitis), painful menstruation begins to develop, and the amount of menstrual discharge grows gradually smaller, until many such cases cease to menstruate entirely. In the opposite state--**hyperemia--**the pelvic circulation, due to toxin infection of the lymphatics, causes painful and profuse menstruation; if not corrected, cystic and fibroid tumors may follow.

Chlorosis presents a catarrhal state of the neck of the womb; the mucous lining thickens up and prevents the menstrual discharge from escaping freely. The discharge is bottled up to such an extent that decomposition takes place. It is the absorption of this decomposition that causes the anemia peculiar to chlorosis. When the disease is well developed, patients suffer from oxygen starvation. Carbonic acid accumulates; digestion and nutrition are impaired, and cell renewal is almost impossible.

The blood becomes so thin that there are noises in the head and giddiness. The patient is troubled with cold feet and hands. The mind is dull and inactive. Shocks--such as disappointment in love--may be fatal. In many chlorotics, excessive venery, sorrow over the death of a near relative or friend, inability to keep up with classes in school, worry, etc., further impair the health and prevent a return to health.

Mothers who eat imprudently and worry over family affairs--mothers who worry over boys who are unruly and who are getting into trouble--build indigestion, catarrh, and toxin poisoning.

Business men who carry their business worries around with them, or who use tobacco, coffee, tea, and other stimulants, and overeat, develop toxin poisoning.

Any worry that is habitual, in one who is severely taxed in a business way, and who eats too

much, or eats improperly--for example, bread, butter, and fruit jellies, jams, or preserved fruits--will lead to a premature grave with hardening of the arteries. When excessive venery is added, nerve resistance is lost, and the ordinary fermentation changes into septic decomposition. Bright's disease, suppurative inflammations of the lymphatic glands, liver, appendix, pleura, lungs, and other parts of the body, are liable to develop. Tabes dorsalis is a common disease in those who abuse nutrition with food, work, stimulants, and excessive venery.

Those who live far away from the markets, who live on dry beans, cured meats, and an inferior quality of bread, potatoes, and a few canned vegetables, and who are shut out from sunlight, fresh fruit and vegetables (such as miners), develop a state of acidosis, and, when predisposed to tuberculosis, break down and die of that disease. Others develop rheumatism and paralysis.

Emotional disturbances derange nutrition. Fear inhibits digestion; it deranges heart action to such an extent as to develop, in time, organic heart disease.

Anger has a serious effect on digestion and the heart.

Jealousy changes the whole being. From a sweet, even-tempered person, with mild, kindly features, the jealous subject is changed into a demon, with hard, cruel features; a kind, benevolent, philanthropic nature hardens into a cruel, selfish misanthropist; a disposition incapable of causing pain to the lowest animal is metamorphosed into a hatred that can kill the thing it loves.

Envy disturbs the entire body in the same way.

The giving-way to these emotions not only disturbs nutrition and interferes with cell-development, but alters the secretions from a benign, health-imparting influence to a malignant, disease-producing influence; from a neutral or agreeable odor to a rank, offensive smell that causes disgust even in those who are bound by love to the unfortunate one whose emotions have gone astray.

The cause of insane emotions is a wrong understanding of the relationship that should exist between people. The most violent types of emotional insanity spring up between married people. There is, and has always been, a feeling of ownership among married people. This is a survival of the chattel-slavery idea; it belongs to an ignorant age, and is not in keeping with advanced civilization.

Do away with the ownership idea, and have married people stand or fall on behavior--merit. Indeed, an abiding love must rest on the everlasting bonds of respect which spring up from conduct becoming, and in harmony with, dignity and refinement.

Too often, when men and women are united in the "holy bonds of matrimony," they forget all estheticism. They are more polite and considerate of the most inferior member of society than they are of each other.

So long as marriage means license to be common, immodest, indelicate, and too often vulgar, just so long will love become shipwrecked.

Why should a man expect a woman's infatuation to ripen into everlasting love, when she discovers him to be a cad with disgusting personal habits, or vice versa?

The bonds of "holy matrimony" are not sufficient to disinfect vulgar habits. Nothing but habits of cleanliness of mind and body can keep men and women aseptic--worthy of love.

What has all this to do with disturbed nutrition? Allow the veriest swain, or professional novitiate, to answer! Indeed, marital infelicity is a common cause of intractable indigestion and chronic toxin poisoning. What can palliatives do toward curing such cases? The surgeon is busy removing complaining organs; but, much to his surprise and his patients' dismay, the same old

symptoms are back after the operation. If the surgeon had not been so material, he would have known that he had to deal with pathology of the mind instead of the body.

Women have disturbed nutrition during pregnancy. The vomiting of pregnancy is often due to catarrhal inflammation of the neck of the womb. In all cases of excessive vomiting in pregnancy the womb should be examined; if congested, scarification of the mouth and neck of the womb, allowing a little of the surplus blood to escape, will relieve the tension and the reflex irritation. Often one or two treatments will correct the vomiting. There are cases of vomiting that cannot be controlled short of dilation of the mouth and neck of the womb.

The real cause of morning sickness harks back to overeating, fermentation, toxin absorption, and the concomitant causes. It is hardly necessary to spring an Irish bull by saying that people who are well will not be sick. However, the best writers on the subject of disease write much about the diseases of pregnancy, of change of life, of teething, etc., etc. In fact, it is necessary to have an undercurrent of toxemia, and, without this undercurrent, disease cannot develop. Indeed, toxemia is the only disease to which flesh is heir. Medical nomenclature clothes the various symptoms with individuality, but they are no more basically individual than are the limbs of a tree.

Diseases were clothed with a vague, uncertain specificity before bacteriology stamped them with an assumed individuality satisfying to the profession. I say "satisfying" advisedly; for the profession is so sure it is right that in all diseases where a germ has not been discovered to account for it, one is assumed to exist, and, as in infantile paralysis, all care, nursing, and treatment are in keeping with this assumption.

The nervous system must be normal, or nutrition will be interfered with.

Loss of sleep, overwork, excessive venery, overworked emotions--anything that uses up nerve energy--lower the digestive and assimilative powers, and also lower the power of the organism to organize its defenses--its enzymes. Hence, an amount of food that could be eaten and utilized by an organism in health would be too much, and would cause toxin poisoning, which would further enervate, and create nervous derangements.

Those in the habit of using coffee, tea, tobacco, alcoholics, or other drugs will find that these stimulants have a much more profound effect on them when, from food poisoning (toxins from fermentation) and lowered nerve energy caused by irregular daily life, their resistance is lowered.

Where the enervation is great, elimination is inhibited.

Urea.--The amount of urea excreted by a healthy adult thirty-five to forty years of age is about 500 grains (32 to 33 grams). A child five years of age secretes 180 grains (10 to 12 grams). In hysteria the amount may fall very low--sometimes to 35 to 50 grams. When this takes place, nutrition is almost at a standstill. Hysterical women can refuse nearly all nourishment without getting thin.

The elimination of phosphates is affected by hysteria. After an attack, the earthy phosphates increase and correspond to half of the phosphoric acid, whereas normally the proportion of earthy to alkaline phosphates is as one to three.

Drugs acting on the nervous system cause disassimilation. Mercury and iodid of potash pervert cell life; and where cells are broken down, sclerosis follows, and then the diseases peculiar to hardening of the tissues--tabes dorsalis and arteriosclerosis.

Drugs like those above mentioned spend their influence on organs which are most enervated. If the nerve centers have been outraged by a lascivious mind and excessive venery, such drugs as those that are given for syphilis will cause such disassimilation of the great nerve cells that spinal sclerosis will follow; and this change will be ascribed to syphilitic infection, when the

truth is that the sclerosis is due to the treatment. All secondary symptoms are due to lesions of the connective tissue, brought on by celldestruction from drug action--not from syphilis; for that disease spends its force on the surface of the body

If the vulnerable organ should be the kidney, the epithelium would be first affected by the drugs; or if the liver, the biliary cells would be affected by the drugs.

If the mucous membrane should be catarrhal, mercury causes ulceration.

Gall-stone is very common. The foundation is undoubtedly laid, in many cases, by mercury; first enervation from the thousands of influences which use up nerve energy, then toxin poisoning, which ruins the body's defenses. With this basis, chronic organic disease can be built by any habits or treatment that will cause disassimilation of the cells of the most important structure of the weakest organ of the body.

The seat of the primary lesion of all toxic poisons is in the highest organized cells. If a poison spends its force on the nerves and brain--as morphine, alcohol, and other drugs do--the disease will be of the brain and nervous system.

Morphine produces emaciation and morphinomania; alcohol often produces obesity and alcoholism, rheumatism and gout.

Lead disturbs the metabolism of proteids and causes an accumulation of urea, and rheumatism develops.

In those who are poisoned on starch and sugar, when the habit of taking too much is discontinued, and the intoxication and its influence are overcome, loss of flesh will be marked; but if proper habits of eating are adhered to, a normal weight will be restored as soon as physiological adjustment can be reestablished.

Constipation, with its infection, often causes great poverty of flesh; but, when overcome, fatness may follow.

The habit of overeating not only creates catarrhal inflammations and the toxin poisoning described, but in those who have great digestive power it causes plethory--full habit--and great strength for a time. A time comes, however, when the organism begins to go down, obesity takes the place of muscle and strength, and **rheumatism,** "gout, lithemia, oxaluria, or the formation of renal, vesical, and hepatic calcule" (stone) are established. Biliousness, or congestion of the liver, with engorged stomach and intestine, with the accompanying symptoms--namely, constipation, heavily coated tongue, bad breath, foul odors from the body and bowels, piles, prolapsus of the rectum, colitis, appendicitis, engorgement of the ovaries and uterus--are developed; and, when toxin poisoning is added, the usual pelvic diseases follow, including tumors.

The secretions are altered; the urine becomes overloaded with salts, sugar, albumin. The overstimulation at last ends in enervation; then comes sluggish elimination, with headaches, fatigue, lassitude, chronic tired state, drowsiness, mental stupor, apoplexy; and the linking of this diseased state with the state described before, coming under the head of chronic intestinal toxin poisoning, all together completes a vicious circle or chain, the links of which furnish the cause of all diseases.

The foods that feed this state are the carbohydrate and nitrogenous foods--the starch or sugar, and the meat or protein. When these staple foods are eaten in a refined state, with the tissue or building salts left out, or the foods that furnish them--namely, raw fruits and vegetables--the body starves for the salts, and disease must follow.

Few people in the centers of civilization starve to death from lack of food. They have food enough, if it only were the proper kind.

Many people eat what may be seen in the bakeshop windows. These windows contain what the masses want. This starch, fat, and sugar are eaten to the exclusion of fruit and vegetables, and the result is acidosis--scorbutus--ill-health, dull mind, and early death.

It has been the fashion in penal institutions to punish the refractory by placing them in solitary confinement and limiting their food supply to bread and water. Nothing more stupid could be done. If it is the institutions' desire to make the criminal or insane more criminal or insane, no better method could be adopted. But if the institutions exist for the cure of these invalids, they should be put in well-aired and sunlighted rooms, with the comforts of reading matter and a good bed, with fresh water and apples, keeping bread--one of the causes of their insanity--away from them.

Fresh fruit three times a day, with wholesome environments, will start these incorrigibles on the road to recovery. Then, if they are fed properly afterward, they may be cured, with a prospect of staying well.

Tumors or neoplasms are allied with infection. Without toxins, and obstructions to the free circulation of the blood, there can be no tumors developed. The cure for tumors means the correcting of toxin poisoning and freeing the circulation.

All the nutritive changes we have gone over are caused by external influences. These changes are not transmissible, but there is no question but that children born of parents whose nutrition is perverted are more sensitive to like influences than those who are born of healthy parents.

The victim of alcoholism will beget a child with a sensitive nervous system.

Abuse to nutrition may extend to sterility. Any stage short of sterility is stamped on children as a potentiality for taking on perverted nutrition far more acute than normal, but not a state that cannot be resisted, and even improved upon after birth. Nature puts the stamp of sterility on the positively unfit.

Disturbed Nutrition

Auto-intoxications are imminent under ordinary conditions--when health is normal.

In that state known as health, assimilation is approximately balanced with disassimilation.

The disposal of waste--of the catabolic products--is as necessary as the proper assimilation of the anabolic products.

Man is nearest an ideal state of health when his digestion and assimilation are almost balanced with his disassimilation and elimination.

Health is that state of man's body and mind that oscillates between near-health and near-death.

Disease is health's thermometer, so to speak, which marks the degrees of departure from an assumed ideal state of health to complete loss of health.

Disease, per se, is non-existent. The state of the body which we call disease is nothing more or less than the degree of departure of health from the ideal standard.

The cause of the departure may be any influence that increases, decreases, or perverts nutrition.

In previous articles cellular nutrition has been gone over; the causes of increase, decrease, and perverted nutrition have been cursorily referred to. Now it is necessary to give a thought to the consequences of inhibited elimination of the waste products of metabolism.

Auto-intoxication.--When there is retention of waste products in the system, the phenomenon is called autotoxemia.

The waste products are all toxic. They are eliminated by the different emunctories.

The bile is not entirely an excretory product; it serves several physiological needs. First of all is its action on the bowels. It is nature's laxative. When its elimination is interfered with, the liver becomes diseased. When carried into the bowels as it should be, it is taken up by absorption and used over; after which it is excreted by the skin, lungs, and kidneys.

The skin eliminates the fatty acids and other toxic substances. The lungs carry off water, carbonic acid, and volatile substances taken in with the food. For example, when onions are eaten, the volatile substance is thrown off by the lungs, skin, and kidneys, as evidenced by the breath and the strong odor from the urine. Asparagus causes the urine to be offensive for several hours after that vegetable has been eaten.

The solids in the bile are thrown off by the kidneys. Before this can be done, however, the solids must be rendered soluble. The nitrogenous products must be converted into urea.

The liver assists the kidneys by preparing different substances for excretion.

All organs of the body are commissioned to furnish enzymes for the purpose of preparing all solids within their jurisdiction for assimilation; in other words, rendering the solids dializable. This is necessary, or the system would become fatally clogged up. In this, bacteria become allies of the enzymes.

Blood.--The blood has enzymic properties to a great degree. And this is well; for the blood vessels are so numerous and so small that if the blood did not have the power to digest--render all solids dializable--deaths from embolism (obstruction to blood vessels) would be most frequent.

Pancreas.--When the pancreas is obstructed in its work, and fails to secrete its digestive ferment, sugar appears in the urine. It is thought that the primary trouble may begin with faulty functioning of the liver.

Thyroid Gland.--The thyroid gland has a secretion which appears to be necessary for keeping a perfect nutritive balance. When the gland is cut out, it is said to be followed by tetanic convulsions. Why? Because of imperfect digestion of starch; it also disturbs nutrition to such an extent as to cause myxedema (mucous infiltration of the tissues).

In suppression, from any cause, of the thyroid secretion, it is said that the administration of thyroid extract will correct the symptoms caused by the suppression. The administration of too much extract has been known to kill.

Trembling and albuminuria are symptoms of excessive use of the thyroid extract.

In some cases of obesity and albuminuria it is thought that there is a suppression of thyroid secretion.

Suprarenal capsule has a function to perform in nutrition. Suppression of its secretions gives rise to melasma (dark discoloration of the skin), or bronzed skin. Addison's disease is a tubercular infiltration of the capsule. Symptoms: skin discoloration, progressive anemia, and asthenia, ending fatally.

Testicles and Ovaries.--The removal of these organs in young subjects is followed by defective development. Boys remain boys; they fail to develop; their hair is thin and lacking in full development. In animals, the brain is smaller in those that have been mutilated.

Toxins in the Tissues of the Body in Standard Health.--As has been made plain in previous chapters, ideal health is a utopian dream; for the most perfect state of health which it is possible to attain carries a given amount of toxins in the blood and tissues.

Disassimilation means the breaking-down of cells; the result is the accumulation of debris, or waste, which is toxic, and it must be removed from the body as soon as possible. The blood contains a quantity of waste. The organism is adjusted to a reasonable amount of this poison--it is necessary, for it stimulates to action. But when elimination is checked and an oversupply is retained, then excessive stimulation becomes disease-producing. All parts of the body contain poisons. When nutrition is best, there is a balanced state of unorganized and organized ferments. Agreeing with what I have often said, health is only an approximate state. The body at best--under normal conditions--is a laboratory for building tissue, and necessarily becomes the receptacle of the waste and by-products, which are poisonous. An over-supply of toxins is liable to occur at any time from almost any indiscretion.

An extract of the tissues of the body will kill, if it should find entrance into the blood. When elimination is slow, the tissues carry more toxins. Exercise is necessary to force elimination.

It requires about one-fifth as much of liver as it does of muscle to furnish an amount of poison necessary to kill. Then it must be injected into the veins, or it cannot do harm.

Toxicity depends mostly on the nitrogenous matters.

The Toxicity of Urine.--An adult in health passes approximately three pints of urine in twenty-four hours. The poisons contained in the urine come from the food fermentation, and the waste products of tissue building.

Urotoxy.--A term invented by Bonehard to denote the standard of toxicity of the urine necessary to kill a kilogram of living substance. In order to find the toxicity of urine, inject a representative specimen into the veins of a rabbit, allowing it to enter at a uniform rate. When the animal is dead, the amount of urine necessary to kill should be divided by the weight of its body. This gives the dose necessary to kill one kilogram, or two and two-tenths pounds.

It is said that a man weighing one hundred and forty pounds secretes enough urine in fifty-two hours to kill him or kill his own weight.

The poisons in the urine, if not eliminated properly and if retained in the blood, cause many symptoms, a few of which are: sleepiness, headache, eczema, spasms, coma, overworked heart, arrested heart action.

The toxicity of urine may be inhibited by reducing the amount of potash salts taken in. A milk diet reduces the amount of poison in the urine; moderate exercise does the same. But if exercise or work is pushed to the point of great fatigue, the urine becomes loaded with the toxins.

The bile, gastric juice, pancreatic juice, and sweat are all poisons, to a greater or less extent, when injected into the blood. It is common knowledge that the expired air is poisonous. Investigators have found that in expired air there is a poison similar to ptomains.

It is reasonable to believe that the expired air must vary in keeping with the individual. The person who is living normally certainly cannot pollute his expired air, as one does who eats and lives in such a way as to keep his system poisoned with the toxins absorbed from a chronic state of intestinal putrefaction. This must be true of every other natural excretion of the body.

If the excretions of the body under normal conditions are toxic, then this toxicity must vary as health declines.

Auto-intoxication varies from the amount that exists in the physical and mental state known as health, to the amount that causes death. All the degrees between these extremes are states of

health.

To make my meaning clear: Alcohol is not a disease; it is a distillation from fermented grain--from starch. Grain, starch, bread, and alcohol are not diseases. If a man in health (standard health) takes small portions of alcohol, frequently repeated, he will gradually lose his power of coordination of mind and body. This gradation from full bodily control to a helpless lump of protoplasm is not disease; it represents different states of health. If the drunk man is diseased, what is the disease? There has been no entity added or generated. As soon as the alcohol is eliminated, the man returns to his former state--not suddenly, but gradually as he departed. If he eats grain, starch, or bread beyond his assimilative capacity, he develops certain symptoms of poisoning. Is not the man's state the same as that of his normal being, plus overeating? Surely nothing has been added--no entity has gained entrance; hence, if the drunk state, or the food-poisoned state, is a disease, then what is disease? Certainly not an entity, but a state of health brought on by any influence that increases, decreases, or perverts the state of man recognized as health. There is no such thing as disease per se. "Disease" is a word that should not carry other meaning than that a sick man is one whose health standard has been lowered by some external or internal influence which has disturbed nutrition.

If the influence is continuous, that organ on which the stress falls will take on functional, and later organic, change. Suppose the liver is the organ and is made to enlarge--is it rational to give special treatment to the liver? Is enlargement of the liver, or is hardening or atrophy, per se disease? Certainly not. The cause lies back in nutrition; the liver enlargement is merely a symptom.

The reader may extend this analysis to all the organs of the body; for it applies to all. The chronically alcohol-poisoned develop enlargement of the liver. The alcoholic poisoning is the cause. Possibly the enlargement has been brought about by the consumption of too much bread, starch, or sugar. Should the liver be taken out, or massaged, or drugged? Why? Would it not be rational to remove the cause, and allow nature to take care of the effects? Apply this theory to all organs and parts of the body.

Enervation is the principal cause of auto-intoxication, and it is sequential to overstimulation and any influence that uses up nerve energy.

When the body is enervated, functioning, both of secretion and of excretion, is lowered, which condition interferes with nutrition and causes a retention of excretions, resulting in autotoxemia.

Constipation is a common source of toxin poisoning. A few of the symptoms due to this poisoning are: headaches; a feeling of exhaustion; indeed, in chronic constipation is to be found the cause, or auxiliary cause, of about all the diseases caused by toxins.

Toxemia, irritability, monomania, delusional insanity, mania, epileptic convulsions, colitis, appendicitis, and many other symptoms, are brought on, directly or indirectly, by constipation and putrefaction in the lower bowels.

Overworked Organs.--It is obvious that overworked organs must fail to perform their functions, A stomach abused to the point of developing dyspepsia favors the development of poisons from food. An excessive intake of fat--butter, for example--favors the development of skin diseases. In nursing babies too much butter-fat in the milk causes deranged digestion. So much alkali is required to emulsify the fat that, unless the child can take fruit, a state of acidosis--scurvy--may develop.

When too much nutriment is carried to the liver, the hepatic cells are altered. If too much sugar is consumed, the liver fails to act upon it well, and the kidneys are forced to do vicarious work for the liver, by carrying out of the system sugar that cannot be utilized. The liver fails to act on the nitrogen, and the amount of urea is diminished.

Jaundice is caused by toxin poisoning, or by a weakened liver function from overwork or from obstruction of the bile-duct.

Cancer, hydated cyst, stone, catarrh, etc., are the results of years of wrong living habits-except the hydated cyst. This derangement is supposed to be caused by a parasite furnished by dogs.

An overworked liver and underworked lungs force extra work on the kidneys. When kidney derangement is to be treated, as auxiliary treatment the lungs and liver must also receive attention. If they do not, it should be obvious that failure to cure the kidneys must follow; for causes must be removed.

Icterus, or jaundice, is a toxic infection caused by an overworked liver, bringing on liver insufficiency.

Auto-intoxication from Enervated Skin, Lungs, and Kidneys.--The lungs throw off poisons--eliminate the volatile substances; but probably their greatest role is that of neutralizing poisons, such as tobacco, volatile drugs, and toxins from fermenting foods. Their action is not experienced unless respiration is normal and a sufficient number of red corpuscles are found in the blood. Breathing may be normal; but in anemia, dysemia, and chlorosis, oxygen starvation is experienced, and certainly there must be a failure to neutralize poisons which depend on a sufficient amount of oxygen.

The skin eliminates volitile substances. An animal varnished, shutting off elimination and radiation, dies in coma. The temperature falls; the urine becomes scanty; albumin and blood show in the urine before death. The same occurs if an extensive burn is suffered, or if the skin is covered by a disease.

To a certain degree the functions of the skin are inhibited by heavy underwear. It is a common thing to have consultants come in the winter wearing two or three heavy undershirts. In spite of this, they invariably complain of feeling chilly. The fact is that they dress so heavily that they suffer more or less as the varnished animal--namely, from suppressed skin function. Such subjects cannot be cured until they are rid of their bad habits--especially that of overdressing. These patients are always surprised to find that they are more comfortable in every way with the thinnest gauze than they were with all the clothing they could pile on themselves. The skin is a protector; when pampered and spoiled, it goes out of business.

Uremia is caused by the kidneys endeavoring to do vicarious work for the liver and skin.

Strong condiments, alcoholics, and toxins generally overwork the kidneys. When these organs are long overstimulated by overwork, they flag; and if they fail to carry off the urine--if they fail to separate the urinary elements from the blood--the excretion will be retained and uremia will be developed.

Lactic Acid Poisoning.--This poisoning takes place when breathing is shallow, or when from any cause there is oxygen starvation. In gastro-intestinal affections and diabetes this acid accumulates. This is the cause of so-called growing pains and polyuria in some children.

Acetous Fermentation.--This fermentation causes acid stomach, rheumatism, headaches, nervousness; in children, coughs, colds, enlarged tonsils, adenoids, etc.

Acetone or Ethy1diacetic or Acetylacetic Acid Poisoning.--This acid causes irritability. Unless controlled, it may lead to insanity. The breath is strongly that of ether or chloroform.

If this acid is suspected, a drop or two of perchlorid of iron should be allowed to run down the side of the test tube into the urine. The iron being heavy, it will go to the bottom and turn a brownish-red color.

Other acids are formed, but all those developments come from auto-intoxication, and will

disappear when the errors of life practiced by the patient are corrected.

We should get away from belief in certain diseases; for excesses of all kinds pervert nutrition and interfere with elimination. In this may be found both cause, effect, and cure.

7. Diatheses

Bad habits of speech and language are formed, as well as other bad habits. I have been in the habit of using the word "diathesis" in a reckless and meaningless sense. My only excuse is that I learned it early in my medical education, and continued to use it in the belief that my meaning would be understood better than if I should undertake to reform my language. Time has taught me to believe that truth can never be taught by fallacy, and so long as expression is fallacious it will hold thought to its dead-level.

The meaning attached to "diathesis" has varied. The general and prevailing idea has been that there are a tubercular, a syphilitic, and a cancerous diathesis. Since bacteriology has become the headliner on the medical vaudeville stage, and has been handing out "specific" etiology, the idea of diathesis is considered painfully deplorable. Notwithstanding the deplorability of the diathetic idea, the germ-theory advocates talk glibly of a universal syphilitic taint, and have appointed Wassermann to censor all suspects. After a blood test, if Wassermann nods assent, the doctor proceeds to medicate specifically; if he shakes his head in dissent, it is not final--oh no! The taint is suspected, and the victim is dismissed for a few months on suspended judgment. Like Victor Hugo's Jean Valjean, he must return and stand trial again and again. There is no hope of his ever being free from the sleuth hounds of persecution and prosecution. Neither the medical Sherlock Holmes' nor their victims suspect that the continual hounding builds in time the positive Wassermann reaction for which they are looking.

Taint, like diathesis, is never overcome; so what is the advantage of changing terms, if both carry an eternal fiat?

Diathesis, with a few, means a morbid temperament; and this definition is better than others. Hippocrates was nearer right than the mass of authority since his day. He declared that there were a diathesis of health and a diathesis of disease. But, as health and disease are two different phases of one state, there could not be a diathesis of health or disease; for neither is entitative--both being states.

Health and disease are different states of one and the same being. Perhaps the two states cannot be better defined than by saying that one is optimism and the other pessimism. One person believes in health and knows intuitively that it is his for the asking; another person believes in disease--believes that it is a heritage vouchsafed to him by divine providence.

To the discerning in physical as well as psychological health phenomena it is so plain that he who runs may read the truth; namely, that mind is the court of last appeal.

When the mind declares for health, health, and all that goes with it, will be realized. When the mind declares for disease, disease, and all that goes with it, will be realized. It should not be understood, however, that the mental declarations referred to are meant to be passive assumptions. Indeed not! The mind that declares for health believes that health is potential in life., and that, if the proper efforts are put forth, it can be realized. To make a homely illustration: Sugar is a potentiality of the sugar beet; but without effort--intelligent effort--sugar can never be a realization. Again, mind is a potentiality of brain; but unless the proper efforts for development are put forth, mind will not be realized. Passively to assume that health is positive and disease negative, and that by assuming the positive idea the negative must disappear, is self-delusion. Simply to assume that health is imminent, and will appear when its imminence is acknowledged, is pure, unadulterated delusion. Health must be the realization of properly adjusted means to ends. This state may be brought about fortuitously or by intelligent effort. It is not well, however, to trust to chance.

A belief in disease--a belief that man will be ill in spite of his best endeavors--is fatalism. Germs are everywhere, and that man cannot escape the disease they create is the attitude of the medical mind today. Watch the priests of this belief in convention assembled. Their wise deliberations are carried on in a cloud of tobacco smoke. One of their gods--namely, Lord Nicotine--goes before them "by day in a pillar of cloud.. and by night in a pillar of fire," in their search after truth. These priests of modem medical science are protected by their gods of sensuality, who move before them in pillars of smoke, fire, booze, and food--eating to keep up their strength. These gods do not abandon them "by day . . . nor by night, from before the people." And their constituencies stand for it. Great are the people, Selah!

As society stands today on the subject of health, the professions of religion, law, and medicine have declared for disease. And they should rejoice at their success; for disease is universal. Jails, penitentiaries, insane asylums, alms-houses, hospitals, sanitariums, sanatoriums, and, neither last nor least, the World War, all declare for the god of disease.

Only those with a philosophical comprehension will understand the significance of the above indictment. Those who have the proper understanding will know that to right all this world of error--disease--and its cause, will require much time; for health must be returned as it has been sent away-namely, by the slow process of evolution.

Is it not a fact that fear has been taught from the pulpit for ages? Fear of death, on account of the hell beyond, has caused a fear and belief in disease, because disease precedes death. Medicine has taught, and is teaching, with all the vehemence of sordid selfishness or stupid superstition, that disease is inevitable, with no escape by a route that is fraught with as many subtle causes for developing disease as there are schemes for immunization. All modem plans of immunization, except sanitation, are disease-building.

And what of law and order? It dare not take one step which is not squared on medical superstition. As much as it boasts of its erudition, and affects charity for the mental shortcomings of its weaker sister, medicine, its jails. penitentiaries, electric chairs, and insane asylums are built and filled on the authority of the preacher and the doctor, who censor the moral responsibility.

Our government gets its ethical eyes, ears, tongue, and opinions from doctors (medical dogma). Only a few months ago I saw a confidential letter from the Bureau of Foreign and Domestic Commerce of the Department of Commerce at Washington. The letter was for the use of the morning papers of Monday, March 19, 1917, and for the benefit of proprietary-medicine men, calling their attention to the rich field that China now offers for education in the patent medicine line. That country must have dropped back rapidly; for not long ago--twenty- five years ago--all our cities had skilled Chinese doctors. Is it possible that the medicine men of this country have run away from Drs. Sam Lang, Hooch Cooch, Ham Fat, and Wun Lung in so short a time?

That the readers may know with what zeal Washington is endeavoring to enlighten and benevolently assimilate the Heathen Chinese medically, I quote the last two paragraphs of the confidential letter:

> "Through judicious and persistent advertising, the natives are gradually being educated to the necessity of paying some intelligent attention to their ailments, and are responding remarkably well. For this reason it is not difficult to introduce a good article (proprietary drug) at a reasonable price, if supported by the right kind of advertising.
>
> The Bureau's report is devoted chiefly to sales methods and advertising, and the material presented on these subjects is new and important. Copies of the bulletin, which is entitled "Proprietary Medicine and Ointment Trade in China," Special Consular Report No. 76, may be purchased for five cents from the Superintendent of Documents, Washington, or from any district office of the Bureau of Foreign and Domestic Commerce. It contains twelve pages."

If, as prophesied by wiseacres, China is to be the future hope of republicanism, civilization, and the highest enlightenment, and if she is to pattern after the republicanism of today, it will be a case of "Hope long deferred maketh the heart sick." When in our imagination we see the present four hundred million Chinese, and the billions of their progeny that must follow before they can arrive at the stage of adopting even our medical and ethical superstitions; and then when we think of how long it will take the Chinese republic to give up the joy of forcing every other country to bow to it commercially before its ethics is evolved to the point of adopting the principle that in building others we build ourselves, hope is certainly deferred to such an eternity of waiting that it might as well die; for the realization is not for us nor our posterity.

It is not reasonable to believe that a people will escape the superstitions of the country from which they derive their inspiration. Obviously, then, the immediate future offers little hope for the retirement of disease--building beliefs and customs.

It is true that drugs have gone out of favor very rapidly in the last fifteen years, but the fundamentals on which health rests have not changed to more rational principles. Indeed, the medical mind has laid hold of bacteriology, which is a much more elusive delusion than any, if not all, of the profession's previous theories concerning etiology. With a new theory of causation, real cause, which should be largely intuitive--planted in the consciousness of man by the law of self-protection--is no longer of any use. Literally translated, the new law of cause and cure reads: Man may do as he likes; his acts count for nothing; if he is ill, a microscopic germ has attacked him, and the cure must be accomplished by a wise use of the cause. According to this theory, cause of disease is specific and entitative, and the cure and prevention must be specific and entitative. This being logically true, there is no excuse for the failure to cure disease, as is only too evident on every hand.

Modern medical science declares that disease is caused by a specific entity. If this declaration were true, therapeutics should be specific, and so certain that there would be no chance for disease to get a foothold. Certainly quacks and empiricists would have so little success, compared with established medicine, that no laws would be required to keep them from selling their inefficiency to an innocent and confiding public.

The germ theory is just one other false promise of vicarious atonement--a promise of immunization from the effects of broken law. If the offender will believe, and have a priest of the faith vaccinate or inject the immunizing agent (Savior) into his blood, he will be cured of all his sins.

With this superstition ingrafted on church and state, and even accepted by liberals, or those who pride themselves on having evolved out of superstition, what possible chance has a rational scheme of cause and effect--a rational interpretation of health--a real Philosophy of Health?

Before the nutrition of man's body can be advanced to a stable type--before man can build a state of health that will be dependable and allow him to develop his full efficiency--superstitions of all kinds must give way to truth. This is the truth that will make man free. When will it come? When!

Meanwhile we shall be busy with our pick and shovel, doing what we can toward leveling this mountain of error that stands between man and his health and normal development.

Probably apologies are due for such a lengthy digression from disturbances of nutrition. But is it possible to digress from the subject of nutrition when showing up fallacy? It is to be hoped, however, that this digression will be found potentially laden with enough side illumination on subjects the bearing of which on health is not well understood, to justify the liberty--or perhaps I should say outlawry committed against the writer's art.

To resume the subject of diathesis: It appears reasonable that a continual increase or decrease of physiological functioning must modify structure to correspond; and when structure is

changed from the effects of use--continual functioning--then it is transmissible, and not before.

The athlete can transmit as much of organic change as he has brought about in his nervous system. Not his muscles; no, he transmits nervous change--a potentiality--an ability to become an adept in athletics.

Organized skill transmits potentiality. Organized skill means that nerve- and brain-cells have taken on a memory that is transmissible in potentiality. A Webster transmits potentiality of brain. But such transmission does not necessarily mean that his progeny will be above mediocrity; for brain potentiality may be the only transmission. The nerve centers that furnish will power to work, concentration, capacity for continuous effort, may have been abused in the senior Webster to the point of degeneracy, and therefore the young Websters lack power to labor enough to bring out their mind potentiality.

The rule is that the masters in art and science do not leave children who represent them. One reason, perhaps, is that great skill comes to progenitors after families are begotten; and another reason is that great skill is the precursor of dissolution.

Great composers are near death physically when they reach their zenith. Is it strange that death should sing? Death should be the lowering of the curtain on the stage of life, at the close of the most skilled performance.

It would be strange for a Mozart or a Mendelssohn to transmit. But not so with great singers, or interpreters of their art; for the former are creators, and pay with degeneracy for their creative skill--in other words, they are consumed by their production; while the latter simply digest and function music, and may develop a transmissible ability to enjoy and reproduce.

Singers, as a rule, are not producers. A producer must climb the ladder of experience with educated faculties; and if he will give ear to the music of the spheres, he may be honored with a message to convey to his people before he dies. Those who enjoy what he brings may transmit the ability to enjoy to others. But the producer, the creator, pays with his life for his power to produce--and degeneration is not transmissible.

Brain is developed by thought. When a change in the structure of the brain is established from functioning, such change is transmissible.

Structural change from injury is not transmissible; for the change is not represented in the nerve centers.

The whole nervous system must be occupied more or less, directly or indirectly, in order to cause a structural change that is transmissible.

At conception, man has passed nature's quarantine and enters life with a clean bill of health. He may not be born in health; for, from conception to birth, he has time for vicious habits of parents or society to cause him to be born in ill-health.

Nature inhibits, and puts the stamp of sterility upon, the unfit--the degenerate. Conception means fit for birth. But each individual born brings into life with him family predispositions.

Disease is non-existent per se. Impaired health--a lowered health standard--is what we call disease. We cannot inherit disease; we do inherit predispositions, and these we call diatheses.

Diathesis means an inherited tendency to take on certain forms of disease. This tendency is divided into general and special. The general diatheses are scrofulous, gouty, and neurotic; the special diatheses are of the various organs of the body.

Because of the manner of living, habits, etc., certain organs are made to bear more of the burdens of organic life than others. If the extra work is uplifting--meets the approval of nature's

health censors--the transmission will be in keeping; if the overwork is organically vicious, the transmission will be in the nature of a diathesis; which means that the practice of ancestral habits will cause an early breaking down, and disease peculiar to parents will develop in children when the habits of parents are adopted.

The tobacco habit of parents will show in children as a type of nervousness with lowered resistance. The children of inebriates are born with the nervous diathesis. Children born of parents who suffered from stomach, liver, kidney, bowel, or brain diseases inherit a diathesis to correspond. If the children fall in with the habits of life peculiar to their parents, they will develop similar organic derangements; if they take up other habits of life--habits and customs which throw the weight of their enervating influence on other organs--then the predisposition--the organic diathesis--will not manifest, and perhaps will never have heavier burdens laid upon it than it can bear. However, if the organism becomes generally broken down, and enervation and autoxemia become pronounced, then the organ with a diathesis may lend its influence in complicating the case.

Organic diathesis is the only way to explain why people develop different organic diseases--why one develops a skin, another a bowel, a heart, a stomach, a liver, a lung disease, or a disease of some other organ of the body.

This is the only rational explanation of the fact that one man may drink barrels of whisky and continue to live, while another may take on liver disease, or develop an alcoholic neuritis, and die in early life from only a few years of tippling.

The man who has a liver diathesis develops liver hyperemia soon after developing the alcohol habit, while the one with the nervous diathesis develops neuritis in a short time after taking on the drink habit.

Achilles had a vulnerable heel, and most people have a vulnerable organ. This we call. predisposition or diathesis, Knowledge of predispositions is valuable to parents; for, if they act upon such knowledge, they can educate their children into a safety health knowledge.

A general survey of the field of medicine justifies one in declaring that there are scrofulous, nervous, and gouty diatheses, which are constitutional, and the organic diatheses, which are special.

Scrofulous--Adenitis--or Tubercular Diathesis.-- In the light of the truths set forth immediately precedingnamely: that all transmissible alterations must be organized in the nervous system--the subject of diathesis can be understood to better advantage, Scrofula--adenitis, or tuberculosis--is an organic change in the structure of the lymphatic glands. The cause of the change is chronic toxin poisoning. The special toxin is the alcoholic or acetous from sugar and starch. This causes a chronic catarrhal or inflammatory state, which defined means lost resistance--an enervated state. In this state the body fails to adjust itself to heat and cold; the radiating power of the skin is disturbed, and the mucous membranes are made to do vicarious service. This overworks or over-stimulates, and, as a consequence, the membranes exude--secrete an exaggerated quantity of mucous.

The hypersecretion of mucous serves a double purpose: that of excretion and, by coating the mucous surfaces, that of preventing the absorption of poisonous toxins. In this the lymphatics assist; for one of the functions of these glands is to arrest poisonous toxins and neutralize them. When the glands are forced to do excessive work in this line, they take on a state called adenitis or lymphangitis--a catarrhal state of the lymphatic glands. Like the mucous membrane, the lymph glands are made exceedingly sensitive to the influences of the toxins developed by putrefaction of animal proteins.

Characteristics of the Scrofulous Subject.--Scrofulous children are often very good-looking. The skin is white, soft, and beautiful; the eyes are adorned with long, exquisitely curved, and

flowing eyelashes; and the brow is mounted with a splendidly curved line of hair to match the eyelashes. The legs and arms are plump and prettily formed; but the flesh is soft and flabby, and, when youth is past, the flesh of such subjects sits on their bones much as a saddle fits a sow. The nose is often large and broad; the hair of the head long and beautiful in texture.

The young scrofulous subject, at or even before puberty, is troubled with acne, and often most beautifully featured young women and young men develop the most disgusting types of "acne vulgaris." Girls develop leucorrhea, and are often sexually precocious. Boys develop sex-neurosis.

These children have enlarged tonsils, adenoids, and enlarged submaxillary and cervical glands.

Slight inflammation of the eyelids is common. Often the edges of the eyelids are red, and discharge a secretion that glues the lashes together slightly during the night.

Glandular inflammations, that come and go, are common. When the glands once suppurate, they are inclined to repeat. It is hard to say when they are cured, as they appear to recover fully, but a week of indiscretion in eating is quite enough to start up the inflammation again.

Scrofulous children develop the first symptoms of catarrh soon after birth. The very bad habits of frequent feeding--every two or three hours--and giving sugar and starch, produce catarrhal symptoms. A cold is the first symptom; and, if errors of diet are continued, glandular involvement soon follows. Tonsillitis and adenoids ensue as a matter of course, and then all the diseases peculiar to childhood, in sequential order. A large percentage of these children die before teething is finished. Those who do not, have a history of many sick spells, besides the regular diseases of childhood. Those who have the diathesis most profoundly established, and whose anatomical construction favors the development of pulmonary tuberculosis, will go down with this disease about the end of the development period.

The age when bodily development is greatest is the most important age in life. This is the age when resistance to inherited tendencies is held back. If understood, and rational means were adopted for overcoming these tendencies, many who now go down and out with scrofulous diseases would improve on their ancestral stock by giving evolution a chance to bring out previously suppressed potential energies. Inherited diseases, or inherited predispositions to take on disease, mean ill-balanced anatomical construction; and defective construction must mean defective functioning. To illustrate: Environments and habits which neglect lung development and cause under-development predispose to tuberculosis in scrofulous subjects, but in those who have the nervous temperament unduly developed, brain diseases, insanity, or some form of nervous trouble will be developed.

In those cases where bone development falls below ideal physical construction--where eating habits, or geographical location, fail to supply material for proper bone development, or where drugs have been used which derange the nutrition of the bone--tubercular bone diseases may be looked for, such as caries; also tubercular inflammation of the synovial membranes, burse, and membranes of the brain.

The scrofulous diathesis is a constitutional state favoring the development of inflammations of all kinds.

In just what way a given scrofulous subject will be afflicted will depend on, first, his anatomical build; secondly, his habits; and, thirdly, his domestic and civic environments.

He may develop tuberculosis of the lungs when construction favors it, and the eating and other habits develop the necessary toxin poisoning.

If the most vulnerable point be the liver, heart, lungs, kidneys, skin, bowels, brain, or parts of less importance, indiscretion in the indulgences of appetite and passion will turn loose the sleuth

hounds of toxins, whose business is to seek out the most vulnerable gland or organ in the body, and there set up an inflammatory state, the severity of which must depend upon the bodily resistance and the continuance of the exciting cause.

The cure should be obvious to the most stupid; namely, to build up lost resistance by rest, and to correct the sensuality.

It is obvious that the state of resistance--the state of enervation--must range from one nearly normal to one of almost no resistance at all. The question of cure, then, must be a question of determining to which class the patient belongs. If to that of lowest resistance, the possibilities of recovery are nil. A perfect treatment will secure the most comfort and the longest life possible, but no cure. Not so of the type representing almost full resistance. Those in this class can be cured when in the first stages of almost any disease, by simply correcting their daily habits.

It is quite obvious that physicians whose experience is confined to large clinics filled with charitable subjects--patients of the ne'er-do-well type, the unsuccessful and scrofulous types--will have quite a different opinion, as to the curability of most chronic diseases, from that of the physician whose practice and experience have been confined to a more successful and higher physical type of people. There are two classes of patients who have low resistance. The first comprises charitable cases, found in county hospitals and public clinics. The second class is composed of the overindulged, pampered, and spoiled who have gone the pace--lived such a sensual life that an otherwise good constitution is reduced to no resistance whatever. The former class cannot be brought back, because the degeneration is too complete. The latter class cannot be brought back, because habits are more powerful than the will. Add to these hopeless cases a treatment that is degenerating, and then a consuming fear, which is commonly imparted, and there is reason a-plenty for building the pessimism of the average professional man.

Those physicians who look upon syphilis as one of the most dreadful diseases on earth have gained their experience by seeing and treating scrofulous--syphilitic--subjects of very low resistance. They have made the mistake of breaking down what resistance the patient had left by mercurialization, developing a scrofulo-syphilo-mercurial type that cannot be cured because of the physical degeneration which existed before the syphilitic infection. The force of these statements will be better understood if through the mind's eye there may be contrasted the scrofulous subjects, from the most resistant type to the type too low to throw off disease, with a non-scrofulous subject who, when in full health, cannot be infected.

The immune people--people who have no scrofula, and who fail to take on disease, no matter how much exposed they are--resist infection from specific diseases until their habits of life lower their resistance; then they frequently become infected.

Scrofulous subjects should be in the open air and sunshine as much as possible; and, if they desire comfort and a reasonably long life, they must be moderate in all things.

Gouty Diathesis.--This constitutional derangement--nutritive perversion--favors the development of arthritis, herpes, gout, inflammatory rheumatism, neuralgia, stone formation, and all skin derangements of a nervous type.

It is the vital temperament that takes on these diseases when toxin-poisoned.

The gouty diathesis belongs to the mental temperament.

The peculiarity of the gouty diathesis is that, as the intellect develops and becomes predominant, nutrition grows correspondingly poorer.

The scrofulous subject is slow and sluggish; he has soft, flabby muscles, cold feet and hands, with oily, doughy skin. The gouty subject is nervous; his flesh is firm, his skin dry, his hands and feet dry and hot. The skin of the body is inclined to be dry, and often sheds a scurf that will make black underwear quite white from the amount thrown off.

The gouty subject may be very lean, and he may be quite stout or fat. His hair may be thin, but seldom, if ever, to be compared in thickness, softness, and beauty with that of the scrofulous subject.

The gouty subject loses his hair early and becomes bald young. Great beards belong to the scrofulous diathesis.

The gouty subject is inclined to be melancholy, but he is often a comedian. He is bright, intellectual, witty, sharp, but in disposition more sad than otherwise.

The young gouty subjects suffer much pain in their sickness. They have headache, and are often sent to bed on feast-days, because of the bad effect that the excitement of preparation for the day has upon them. The scrofulous subjects go to bed the day following the feast, because of the overindulgence.

While yet young, the gouty subject often becomes asthmatic. In middle life and beyond, if out of health, he will have a wheezing in the lungs--sometimes a bronchial asthma. Heart asthma belongs to the gouty.

In babyhood convulsions are common. The babies of the gouty diathesis are nervous; when quite feverish, there is a tendency for congestion of blood to the brain, bringing on convulsions.

The gouty are inclined to have dyspepsia, headaches, constipation, piles.

The gouty are very fond of sugar and eatables made up of sugar, starch, and fat. Such eating often leads to enlargement of the liver.

Eating too much of rich and highly seasoned foods causes the formation of toxins of the fatty, acid type. The absorption of these toxins causes the asthma and bronchial irritation mentioned above, because of the elimination by the lungs; the breath is made offensive; the odor from the skin is bad; the skin becomes eczematous, because of the material eliminated by it.

Nutrition of the cells is perverted, and elimination is imperfect. This changes the fluids of the body.

Sugar in the urine of the gouty indicates that it is not consumed, but remains in the blood. This is the diabetes of the arthritic.

The gouty subject digests nitrogenous foods badly; hence there is present in the urine an excess of phosphates, uric and other acids. Oxalic acid helps in forming stone in the liver and the kidneys.

The gouty and scrofulous diatheses are sometimes mixed. In such case there must be a mixed pathology.

The gouty subject may develop an asthma, if the lungs are the most vulnerable organ; headache or migraine, diabetes, stone in the liver or kidneys, whichever of these organs happens to be the least resistant.

The gouty diathesis differs from the scrofulous in that tuberculosis is not likely to develop in a gouty subject. If it does, the disease is not inclined to develop a severe type, and it has a tendency to take on a spontaneous cure--take on a fibrous character, which is curable.

To sum up: Health is divided into good and bad. Health, then, is a generic term representing two states of the body, which are ill-defined except in pronounced types. These we call health and disease, which are species of health. The species disease is divided into races or diatheses, and diatheses are organized predispositions.

The scrofulous and gouty diatheses have been developed by influences continued long enough to change the fundamental cell structure. When the structure is changed, the function must be in keeping.

Gouty diathesis means that part of the human family has been subjected to influences which have produced a physical state functioning in a given manner under normal influences. When under abnormal or disease-producing influences, diseases are all linked together, taking on like nutritive changes.

All diseases developing under the influence of the scrofulous diathesis have a like basis, and must receive the same general treatment.

The same is true of the gouty or arthritic diathesis.

8. Heredity

"The fool inherits, but the wise must get."

The fool inherits. Indeed, the man who waits for a dead man's shoes is waiting for an empty inheritance; for the only inheritances worth while are our static possibilities, which are racial, ancestral, and parental.

The wise man cannot leave wisdom, but he does leave mental potentiality. But if his children succeed to a like wisdom, they must buy and pay for it as he did. The only advantage the children have over their parents is that they may see a little more clearly, and inherit a greater attention and a more persistent purpose. Yet they may not inherit industry. Power for work may be exhausted in the parents.

Indeed, children from wise parents may fail altogether in accomplishing anything; for they may be rendered impotent because of unwise care. When the habits of children are forming, they may have an abnormal conceit, selfishness, envy, jealousy, irritability, or hypocrisy developed that will more than offset any intellectual potency inherited. Careful training at the proper time will overcome these undesirable traits.

We inherit nothing except genus, species, and race. Even racial proclivity may be overcome in a few generations by change of environment; but much sooner by amalgamation.

To wait for money is to refuse to develop talent for securing it. To wait for talent to develop is to wait in vain; for we inherit only potentiality, which is an empty inheritance without cultivation. We inherit potentialty--not disease or affection.

The vital force, or vital energy, of the teachings of a generation or two ago has now given way to cause and effect--action and reaction--stimulation and reaction.

Man's type of body--his material construction--is fixed by heredity. He cannot get away from his genus, which is animal, nor his species, which is man. Man has many physical attributes which are as fixed as law; but his possible reactions are limited only by the variety of stimulants in his environment.

Species possess individuality, which is fixed and transmissible. Man inherits his ancestral type of body. The type has preserved its individuality throughout the ages so fixedly that men of all kinds and climes resemble each other.

The animal man has characteristics that are individual. He has two legs, and a foot on each leg; two arms, and a hand on each arm; a body which presents a front and a back; and, when he stands upright upon his feet and legs, on top of this body is a neck, and on top of the neck is a head. This is a common description of man that fits every member of the species. There are a common anatomy and a common physiology that fit every man, from as far back as man's

records run, down to the present. The chemistry of man's body is the sameyesterday, today, and forever.

The first step--evolution--out of the common, universal clay type is into races.

Naturalists are not at one in their division of mankind into races. Cuvier classified men into three races; Agassiz divided them into eight races.

A common classification is into five races; namely: the Caucasian, or white, race, to which belong the inhabitants of the greater part of Europe and western. Asia; the Mongolian, or yellow, race, to be found in Tartary, China, and Japan; the Ethiopian, or negro, race, which is found in Africa, Australia, and Papua (New Guinea and other Pacific islands); the American, or red, race--the Indians of South and North America; and the Malayan, or brown, race, found on the islands of the Indian Archipelago. Recent writers place the Malay, Indian, and Mongolian together.

Races divide into nations, peoples, tribes, and families.

Each departure from the common stock of species shows a specific difference. Each race has a personality all its own. The Caucasian race has a specific personality that differs from that of all other races. These differences are brought about by mechanical, physical, chemical, and psychological agents. The changes are brought about slowly. So strong is the force of physical heredity that it takes many generations to evolve into and out of the Roman nose, the potato lip, and the almond eye. Psychological changes move as slowly, if not slower. Look at our religious, medical, and legal superstitions!

Each subdivision of each race is marked by distinguishing characteristics.

Those with a cosmopolitan acquaintance can distinguish the nationality of the people whom they meet in their travels. If their education has been extended to a full familiarity with the inhabitants of any one country, a distinguishing difference will be found in those who have been confined to a limited section of that country.

Every country has its educated or intellectual, intelligent, and ignorant classes. These are not distinctions without differences. Intellectuality does not always mean intelligence; intelligence does not mean intellectuality, neither does it mean ignorance.

In our country we have a North and a South, an East and a West. The people in these four divisions have distinctive characteristics. 'There is a type called the "westerner," who is distinctive and unlike the "down easterner." And there is a westerner who is cosmopolitan in personality, and who is typical of all other cosmopolitan types.

These differences are brought about by intelligence, travel, and food. Causes for varying types of man at the beginning are certainly geographical, climatic, and food, as well as physical, influences. Climate and food are type-builders.

Psychology should not be left out of the list of causes of type-building. From now on this subject will hold a conspicuous place among causes that make for individuality.

Religion has stamped its influence on the face of humanity. A close student of physiognomies can read the ancestral type of religion in the faces of humanity today. This shows what part the mind has played in molding the body.

When we consider that a fixed physical development can be made to function in such a way as to change the individuality, we are ready to believe that there is nothing fixed from a hereditary standpoint, except the elements and genus or type, and the possibilities of types. The possible types into which the elements may be molded are infinite. This being true, it should be easy to see that there is little which is bound to the hard and fast lines of heredity, and that heredity, outside of genus and species, is more an accident than a well-ordered plan. If a child takes after

its parents, it will be due to postnatal, rather than to prenatal, influences. On this subject I have experienced a most radical change in belief in the past twenty-five years. I certainly hope I am not retrograding.

An adopted child from a criminal family will show as much advance in a good family as a child from a good family will show degeneracy when brought up in a bad family.

As function precedes structure, it must be obvious to the mentally discerning that a change in function must be followed by a change in structure.

But when does a change in function take place? Only when function is changed. We may profess a change in belief--we may preach our belief--but if we do not live it, we do not function it; hence there is no structural change. We may believe in diet as a remedy for all our physical and mental defects, but if we do not live our beliefs, we do not reap the benefit of our beliefs.

We see the proof of this in so-called criminals. They are put in reformatories; they are made to conform to the laws of reform; they talk it and act it, but do not think it; hence no structural change takes place, and, when the acid test comes, they are found to be the same.

When the Mongolian takes up his abode in our country, and proceeds to establish the habits and customs of his native country, and lives them daily, he continues to function Mongolian-like, and builds a physical structure to match. If he leaves Mongolia behind, and thinks, eats, and lives the American life, his structure changes to agree with his change in function. The physiognomy of structure is what I mean; for, as a matter of act, a real change of the fundamentals of genus requires much time and many generations. The foreign-born citizen who lives the life and thinks the thoughts of his native country never becomes a citizen in love and sympathy; he remains an alien to his adopted country so long as he lives.

It is impossible to amalgamate and assimilate disagreeing functions. Universal amalgamation will follow universal like functioning--like sympathies.

In matters of religion, we often see orthodoxy affecting reform--pretending liberality; the leaders struggling to reconcile their old beliefs to new ones, even going so far as to compromise on strong differences. Among the lay orthodox many live, act, and talk in such a way as to make it appear that they have experienced a change in belief. But there is really no change; for below the surface they function orthodoxy, hence preserve a structural physiognomy to correspond.

A pretended belief will bring no change. Belief must be lived; then a change in structure that is potentialized. follows, and this is inheritable. But please understand that it is inherited as a potentiality, which, if it be cultivated, may develop, but which may never arise as a material attribute.

When organs function crime, it is because the stimulation which causes the functioning calls out this particular effect. Change the stimulation, and we change the functioning--poisoning; for whatever toxins there are in the system cause a functioning to correspond.

Crime--Cause of

Crime is a disease brought on by bad habits. It is made up of such elements as a sluggish liver, brought on from overindulgence in alcoholics; or too much sugar, fat, and starchy foods. Such habits bring on discouragement, amounting to pessimism and a reckless indifference to consequences. These consequences may be reversed in the same subject, showing that good and bad depend on the kind of stimulation used in exciting reaction.

The intoxication from starch poisoning causes the building of pessimism. Gloom leads to recklessness and a desire to be thrilled by new sensations. Normal sensation is dulled when starch poisoning is pronounced, and common appeals, such as good advice from parents or guardians, have no influence.

This dulling influence extends so far as often to strike a withering blow at the fountain-head of intelligence--namely, attention. The power of attention--power of continuous attention--is the secret of intelligence and intellectuality.

The Influence of Toxin on Mind

A brain rendered dull by the toxins of indigestion, or from intoxicants of any kind, loses its power of attention; hence an otherwise bright mind is consigned to ignorance or crime, or both. If the child is idealistic, the toxin drunkenness may cause it to dream fanciful or grotesque daydreams. If the sensual elements of its nature predominate, its dreams may be such that, when materialized, they are called crimes. Toxins acting on the brain cause it to objectify in keeping with its type of thought; and the type may be sensual or not.

When attention is capricious, irregular, or spasmodic--in a word, when it cannot be sustained--knowledge must be fragmentary. Such a mind cannot be philosophical. It may be scientific, but it cannot be depended upon to work out the relationship of fundamental principles. The unity of all things is beyond the mental horizon of all who cannot build a reliable attention.

Importance of Attention

Nothing but the organizing effect of sustained attention can build for the future--can build for transmission--heredity; and this legacy is potentiality only.

Food poisoning is always marked by sluggishness of the brain as well as the other organs of the body. Every organ is represented in the brain, and the reactions from the impulses--be the stimulation from food or whatever the cause--will be in harmony. If the brain is made brutal by toxins, its functions will be in keeping.

The toxin-poisoned--the inebriate--acts from the promptings of his grosser sensations--his animal nature.

Change the life, and the functioning changes. Remove all influences that cause an undesirable reaction, such as toxin poisoning, and we see a desire for the good and a desire for the best supplanting a desire for the bad and a desire for the worst.

This being true, the atmosphere of despair thrown around people because of the general belief in the heredity of depravity should clear up, and hope and intelligent action should from this time on manipulate the scales of justice, wisely placing the blame for crime where it belongs.

Society must become intelligent enough to direct and control the functioning of its sick members--the sick in mind (the criminal) and the sick in body (the diseased). And, as function is the author and builder of structure, society must perfect criminal man, if he is ever perfected--must cure man, if he is ever cured-for nature executes the unfit.

Degeneration Is Not Transmissible

Wrong life, causing wrong functioning, is disease. All crime is disease. If continued, it ends in degeneration. Degeneration is not transmissible. When a man becomes an organic criminal--when a disease becomes organic--the God of Genesis steps in and declares: "Thus far shalt thou go, but no farther!"

Genesis means creation. It means that old things have passed away and new things have come into existence,

Birth and death are antithetical. The one comes into life; the other passes out with its infirmities.

What a hell life would be, if all the imperfections of parents could be visited upon children!

Why Criminals Do Not Reform

Why is it apparent that crime and criminals herd together? Why do not more criminals reform, if crime is functional and not organic? Because they continue to live in the same way. After they have served a term, they know no more of correct living than they did before; for in prison they are fed haphazardly. Perhaps the limited supply of a very plain food is all the benefit they get in the line of diet. Thus they return home to their heavy, gross eating, toxin poisoning, and the depressing effects of being pointed out as ex-convicts, and too often hounded about the country by petty officials of the law, who appear to take a delight in branding them as criminals and setting all the dogs of gossip howling at their heels.

It is difficult to say which is the greater criminal--society or society's victim. Truth declares that they are related as cause and effect.

There is little chance for a bad man to reform; for the undiscovered bad man in every community appoints himself a committee of one to see to it that the ex-convict gets what is coming to him.

Ignorance makes man a criminal, and ignorance keeps him a criminal.

The good and the bad in all mankind are purely functional. If we react good, it is because the shock that caused the reaction was good, and vice versa. We must get away from the ancient and should-be past belief in the entities good and bad.

We are; and the fact that **we are** is proof that **we are fit;** for otherwise we should not have passed through the portals of life. Inasmuch as **we are,** and **are fit,** our functioning will be proper if the cause of our functioning is censored properly and the right stimulation is used to bring about the reaction (functioning). Our reactions are just what they must be; for they are in keeping, and under the guidance of the laws of cause and effect.

If we would have ideal effects, we must bring them about through ideal causes.

Who can be so childishly silly as to expect figs from thistles--good from bad training? So long as the fundamentals of our ethics are false, when will the superstructure become true and ideal man-building?

Man is man. He is a microcosm--a duplicate of the macrocosm. He is neither good nor bad. He acts and reacts on his environment in kind. If he can so shape the impulses which cause him to react as to build good--the truth--he will soon function truth.

If the influence that causes him to react is good, beneficent, and worthy in every way, his reaction will be in kind. If the influence is bad, selfish, and unworthy in every way, his reaction will be in kind.

The idea of heredity-meaning the inheriting of good and bad--with all the disqualifying, soul-stifling, and health-destroying beliefs and customs that have grown up about this belief, should be given up--should be discarded; for it is a disgrace to this age, and belongs with the devil--with demonology. Indeed, it is one of his majesty's children. In the place of that fallacy should be put man in a state of neutrality. Man should be recognized as an unmoral being who is capable of being molded into truth or fallacy--law-abiding or criminal, loving or hating, healthy or diseased, wise or ignorant. It is all a matter of teaching.

To sum up the foregoing, let us assume that when a child is born it comes with a clean bill of health. I mean health; and the word includes what is ordinarily understood as health of mind and body, free from crime or criminal nature. When a child is born with venereal infection, the infection has taken place since its conception.

The Possibilities of a Child

A child at birth is a highly sensitized lump of protoplasm--human clay--which is made up of cells. A cell is composed of a central spot, or nucleus (small nut), and a body. This cell is the protoplasm out of which the human body is built.

At birth a child is an undifferentiated lump of protoplasm, possessed of ancestral form which binds it to its genus, which is animal, and species, which is man. It is no more a thinking man than the young sprout or twig is a tree with developed fruit.

The lump of protoplasm is potentially a human being. Whether it is to develop ideally or not depends upon the artificer--home and society.

A lump of potter's clay has all the potentiality needed to be brought into the most exquisite forms; yet, if it falls into the hands of a bungler, it may end in some grotesque shape with neither order nor reason.

If there are few expert artificers in the field of art who can send out perfect specimens, when in the privacy of their studios they may try and try again, we certainly should not expect that people without the slightest knowledge of man-building could mold a lump of human clay--protoplasm--into a perfect human being. Indeed, should we not expect just what we see-namely, nearly every finished product misshapen in some way?

If the molding is started wrongly, it may be gone over and covered-up; but the scars are left.

Why should the majority of human beings know how to rear children successfully, when they have but little common-sense in matters of far less importance?

The bungling work of stupid parents and teachers is charged to Providence. That a child inherits its faults and failures is accepted by law and society; yet that same law and society give themselves the double cross by holding the victims of heredity responsible for their inheritance.

When the best intellects of the day confuse facts as they do, what hope can we have that we shall ever evolve out of our chaotic state?

If children evolve undesirable traits, is there not more prospect of bringing about a reform with beliefs and actions based on the hypothesis that every child is a new and perfect being at birth, than by acting on the old hypothesis that they are cursed before birth by an inheritance out of which they can never be trained?

If training is worth anything, it should be started at birth. What kind of training can a child get at the hands of a father and mother who lack training, and whose stockin-trade is a lot of bad habits, kept at white heat by a cultivated sensualism? When the offspring of such unions go to the bad, it is from inheritance! Is that so? Then training has nothing to do with these degenerate children?

We must accept or reject the idea that children can be taught. If we accept it, then we must not excuse our failures and charge them to Providence.

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5. Nervous Reactions

As had been stated before, all acts of the living body are reactions. Every movement of our bodies, either voluntary or involuntary, is a reaction--the result of shock or stimulation--and is aroused by an external cause. Voluntary movements are directed from the mind--the mind wills the movement. Voluntary movements may become so automatic that it is difficult to distinguish them from involuntary movements. For example, the players on musical instruments seem to perform without thought. They read music, and their fingers find the notes on the instruments without hesitation and without a mistake--and that, too, so rapidly that it does not appear to be possible that the acts can be the results of mental deliberations.

The same may be said of reading. The person of educated mind will take up a book in which its author sets forth new and novel ideas regarding an old subject, or perhaps presents new ideas, or ideas contrary to those of convention; and almost instantly, without apparent time for analytical thought, the author's premise is interpreted and compared with the fundamentals of knowledge, and the book and its author are placed where they belong. False or true, the reasons for either are forthcoming and final.

The mind becomes so familiar with the foundation of knowledge that it detects an error on sight; yet it does reason, but with lightning-like rapidity, or, what is more true, with the rapidity of thought.

Every act (and thought is an act) is a reaction from an external stimulation. The effects of stimulation are of two kinds. In some the full reaction may take place at the point of stimulation; others, more complex, cause multiple reflex actions. The impulses are sent to the center from the surface terminals by the centripetal (afferent) nerves, and the irritations are reflexly sent from the center over the centrifugal, or efferent, nerves.

The afferent nerves are the nerves of general sensation; also of special and visceral sensibility. impulses of an irritating character imparted to those nerves result in changes of a psychic, sensory, motor, vasomotor, secretory, or trophic character.

Psychic changes may be produced by fear, anger, happiness, etc. Fear may be caused by a telegram conveying bad news; anger, by anything capable of producing anger.

Sensory changes may take place. For example, if ice cream is eaten too rapidly and the stomach is chilled too suddenly, intense pain or severe frontal headache may result, which will pass off as soon as the nerves of the stomach are relieved from the irritation of cold. Headaches are often the result of indigestion, constipation, etc.

Motor changes take place when toxic or other stimulation has become habitual, until tabes dorsalis or other forms of degeneration manifest themselves.

Vasomotor changes occur when alcoholics, tobacco, coffee, or other chemical toxins are used over a long period of time; or when constipation of long standing has caused systemic infection by forcing absorption of the toxins of putrefaction. Sclerosis, or hardening of the arteries, is a vasomotor change.

Secretory changes are produced by many forms of irritation. Pronounced pain, anger, or fear inhibits secretion, stops digestion, and causes poisoning by modifying the fluids of the body. Pleasant thoughts, renewed hope, or success revive secretions and excretions, and transform the invalid into full health.

Trophic or nutritional changes are caused by any and all influences that irritate, depress, or pervert the nervous system. Any influence that puts the mind at rest will improve digestion,

establish secretions and excretions, and transform the invalid into health. Those who have cultivated a fear or worry habit must be cured of the habit, after which they may continue in health.

An irritation may spend its force locally, as an escharotic (caustic) may cause an ulcer without awakening reflexes. The sun may burn the skin brown without causing a reflex irritation.

A poised mind may be abused--subjected to abuse that is looked upon as insulting--without having its equilibrium disturbed.

A local irritant may cause a sensation at the nerve center, which stimulates a motor impulse, and the part injured will instantly be removed from the point of irritation.

An irritation may cause a multiple of reflexes. A fright may cause vomiting and purging, a chill, headache, heart palpitation, and other vasomotor changes, as well as perspiration. An injury may cause many--or, if severe, only a few--reflexes.

A simple reflex is produced where the impulse from the point of irritation passes to the nerve center and back, or passes to a multiple of points.

Stimulants which act as builders of disease must be continual. For instance, tobacco, when first used, causes great prostration and vomiting. The nicotine is absorbed in the mouth; it enters the circulation and is distributed to an parts of the body. If the boy or man, at his first experience, were no larger than a cat or a kitten, the amount of nicotine required to prostrate him temporarily would be sufficient to kill him. His size is what saves him. The fact that the boy does not die is no proof that nicotine is not a rank poison.

The continuous use of nicotine establishes a toleration, but at the cost of a slow and continuous loss of nerve energy.

Those of low vitality, brought on from chronic tobacco poisoning, break down and die of some form of acute disease. No one ever suspects the truth that, if they had been possessed of the energy they have wasted on stimulants, they could have survived the disease.

This truth is not known, and will probably be disputed by the world of tobacco-users. But it is simply a matter of mathematical calculation. Tobacco is a poison. It uses up nerve energy, It requires nerve energy to resist shock, and, if a given shock is too great for the amount of energy possessed by the injured man, he will die. If he had been possessed of the amount thrown away on stimulants, he would have had enough to withstand the shock.

This is true of any stimulating habit. The inebriate, or the individual with used-up nerve energy from other stimulants, will go down under the influence of a disease that otherwise would not cause death.

The nicotine poison affects the mind by dulling ambition; it affects the sensory centers, and causes more or less loss of taste, smell, sight, and hearing; the vasomotor system is deranged--the heart is overworked, and the arteries are hardened; the trophic or nutritional system is deranged, and the subject loses weight--or, on the other hand, obesity may develop.

So long as man has the balance to the good, he can boast that his habits are not injurious to him. But what about sickness and the death-rate between thirty and sixty-five years of age? Why do more than twice as many men die between thirty-five and forty-five as between twenty-five and thirty-five, and nearly three times as many as die between forty-five and fifty-five? Because the ten years from thirty-five to forty-five is where man comes to the parting of the ways of life. He must let up on his habits or die.

Why should men in the prime of life be prostrated and die of acute disease? Lost resistance is the answer. What causes lost resistance? Persistent, excessive stimulation.

Acute disease cannot down a normal man.

When prostration comes, if a little of the wasted energy could be restored, it would make recovery possible.

To restore lost power reestablishes immunization.

When threescore and ten comes, if habits have been such as to conserve energy, life will be prolonged, and the sane and rational faculties will make the enjoying of life possible.

People who are healthy are normal, and normal people have the faculty of enjoying, be they twenty or a hundred and twenty years of age. Disease is what ruins life; for it means discomfort in mind and body. To enjoy, one must hold the right perspective of life; and this is impossible for those who are drunk--toxin--poisoned.

Dotage and driveling belong to disease--not to old age. Nature never makes a clown of old age. Man builds his own grotesqueness.

The lay reader must keep in mind that shocks of every kind are stimulating, and that stimulation to the point of awareness is overstimulation; and, when this is persisted in, organic change (degeneration) sets in; then the output of sensation is abnormal, and means mental and physical disease.

This is why men in the prime of life become prostrated with acute diseases, and die, or develop such chronic diseases as tabes dorsalis, diabetes, Bright's disease, arteriosclerosis, heart disease, epilepsy, et al.

There is but one reason for disease, either of an acute or of a chronic character; namely, lost resistance--enervation--from habitual overstimulation.

Tobacco, alcohol, coffee, tea, overstimulation from food, wrong food mixtures, sensuality, lasciviousness, overworked emotions, misanthropy, a life of selfishness and dishonesty--any one of these stimulants, used continually, lowers nerve resistance, causing man to become vulnerable to unusual shocks, and at last to the usual shocks of his environment.

The difference between health and disease--between a normal state of resistance and enervation--is that health, or normal resistance, reacts and readjusts from unusual stimulation or shock, and is so adjusted to local environment that its stimulating effects are not noticed--they are subconscious, as they should be if ideal health is desired; while disease is that state of health marked by lost resistance, with little power to react.

A man is not old until the stimulating effects of his environment are too shocking for him--not until he loses his reacting and readjusting power.

Reaction is the body's protector; pain is an educator, a protector. When we listen to the voice of pain--the call of reason--and remove its cause, we conserve our powers and lengthen our lives.

If fear of disease and death is the stimulant that is using up resisting power, then the cause of fear must be removed. If the cause is the bad habit of consulting doctors who frighten--who cause fear--but who do not impart an antidotal knowledge, then such doctors should be avoided.

People should be shown the danger they are in because of the life they are leading, and then have a way pointed out to them that will lead to health. But brutally to tell the sick what their disease is, and then to add that recovery is doubtful or impossible, is quite enough to convert a curable disease into an incurable one.

When all the people shall know that the making and the curing of disease are in their own

hands, then schools for teaching health will be more popular than drugs, vaccination, and surgical vandalism.

It is worse than childish to declare that teaching people to live carefully, eat carefully, and be prudent about the care of the body is disease-building. As well declare that education should be condemned, because, when full and well rounded, it too will cure the ignorance that leads to disease.

Nothing bad can come from teaching children that they must not handle guns, or that, if they do, they must be careful lest they kill themselves; that, for the same reason, they must avoid poisons; that food is body-building, and needed to keep well and happy, but that, if too much is eaten, or wrong combinations are made, disease, and even death, may result. Surely nothing wrong can come from telling young people that all their joys and pleasures may be turned into disease and death, if indulged in until resistance is broken.

Forewarned is forearmed. Disease and premature death come from ignorance, or possibly from the fact that habit is established before knowledge of its danger is acquired. Degeneration is established before cause is removed.

Knowledge will not save all; but it stands a better chance to save if it is taught before habits are formed.

Fear is an offspring of ignorance. Relief from fear is wonderfully curative and health-conserving. If fear is the sole cause of a given disease, then a full cure will follow when fear is removed. But if fear is simply a complicating cause--if fear, and the derangement that caused the patient to seek a physician in the first place, have been allowed to run on until enervation is so profound that one or more organs have lost their power to function physiologically--then to remove fear does check the speed of the patient's decline, and cause a feeling of mental and physical betterment which is often interpreted as a cure. Unfortunately, however, the original causes--namely, stimulating habits, and their effects (enervation), plus perverted organic functioning--still exist, and that, too, without the warning voice of apprehension and discomfort to guide the victim away from danger.

Suppose a trophic (nutritional) change has taken place to such a degree that sugar or albumin appears in the urine--what is to be done? Remove fear? Yes, fear, and every other cause of overworked reactions, must be removed, and then the slow march back to a restored resistance and nutrition will be made.

What can treatment directed to the organ do? What can removing organs do? Nothing. They are only servants of the master--nutrition--and, like all good servants, do whatever menial service is placed upon them. The master of the show is nutrition, and he does good work so long as he is supplied with sufficient food and nerve energy.

Pain and discomfort should be mentally suppressed and ignored, but not until their significance is understood and a well-directed plan for removing their cause is inaugurated.

To stop pain with drugs, or to ignore it, is not removing cause. Those who are wise will remove the cause; then palliatives will not be required.

Nervous reactions are necessary; they are constructive; it is only when excessive that they become destructive.

Exercise, up to a given point, is necessary for developing the greatest nutritive efficiency.

Exercise to the point of abuse overstimulates and becomes destructive. The first effects of stimulation are that the heart and blood vessels respond to extra work; the glands take on increased functioning; the mind becomes more active; the entire body responds; secretions and excretions take on renewed activity, and nutrition approaches the ideal.

This type of stimulation--exercise--is not an unmixed good. When pushed to excess, we see the common result of any form of overstimulation--namely, enervation. The athlete barters a long life for a short and active one.

The sensualist deliberately yields a long, sane, comfortable, and pleasurable life for a bacchanilian feast and the hell of repentance.

Reactions must not be pushed to the point of excess. If they are, nutrition is impaired; and that means that the whole organism is impaired, leaving the brunt of all future shocks to fall upon the weakest organ of the body. If that organ happens to be the lungs, tuberculosis, bronchitis, asthma, or pleurisy will be the headliner, or principal feature, of the pathological play on which the curtain of life will fall. If the vulnerable part of the body happens to be the bursal membranes, deforming arthritis (rheumatism) will take the front of the stage of life. If the kidneys, heart, liver, or other organs happen to be the vulnerable points, the type of disease will be one peculiar to these organs.

This should furnish a key to how it is possible for many unlike diseases to spring from the same cause. Is this fact so very wonderful, when we remember that all the different organs of the body--all the different tissues of the body--with their many varied functions, are all built from the same food? And the mode of treatment is so simple that it should be obvious to even a child mind; namely: if overstimulation--if shocking by any form of stimulant--has worn out the reactive powers of the system, and enervation is established, a cure must consist of conserving energy by avoiding shocks of all kinds. Rest--physical, mental, and physiological--is necessary. In established diseases, all foods must be given up for a time; certainly exercise of all kinds; and the mind must be freed from worry. To inaugurate such a treatment requires educated skill. Even if a child mind knows that the treatment must be rest, great skill is required in knowing what to eat, when and when not to eat.

Sensual pleasures of all kinds become enervating when indulged in to satiety. When they are, then it is that "life's apples turn to dust;" then it is that we see the "dregs" in the "wine of love," and know we have "bartered life's bread for a crust, and a draft that is as bitter as brine."

The discomfort of excess--overworked reaction--may be pushed so far that the warning voice of frequent crises is lost; after which the organism may be abused to the point of a fatal collapse without warning.

For example, the victim of apoplexy has the discomfort of overworked reactions early--years before the collapse. He suffers from overworked heart, rapid pulse, headache, vertigo, fullness of the head, roaring in the ears. More or less of these symptoms he will have from ten to twenty years before the final collapse. Slowly but surely a toleration for these discomforts is built. Apprehension is dulled; the "still, small voice" of self-protection is hushed; and all unexpectedly and without warning the collapse comes, and the victim is not permitted to say goodbye and farewell to his best friends. This is the price we pay for ignoring warning.

Food is a stimulant, and necessary to the building of body and mind. The stimulating effects of food are necessary to secure digestion and assimilation. Nutrition depends upon the reactions stimulated by food, as well as upon the building material furnished by the food. This being true, it must be obvious to a thoughtful mind that too much food, or food too highly stimulating, must frustrate the object of food by causing too much reaction, ending in enervation. Overstimulation from excessive eating is the commonest cause of disease.

Stimulation is necessary; for reaction must be continual. Without reaction there can be no heart action; breathing must stop; metabolism ends; in fact, life goes out.

Stimulation, like every other need of life, is good up to a given point; then it becomes bad. Again we are reminded that every good is linked to bad, which is educational and a test of worthiness to survive.

Indispensable stimulants are those which carry on their work subconsciously. All that is necessary to carry on vital action can be supplied without creating enough reaction to receive conscious attention. It is when reaction arouses consciousness that the stimulation is excessive.

The intensity of reactions increases, as does the excitability of the centripetal nerves-the nerves carrying impressions from the surface to the centers. For example: The nerves in the skin over a boil, an inflamed joint, or a blistered surface create central reactions, noticed in general nervousness.

The reaction is greater when the part irritated is naturally sensitive; for example, the eye, the ear, or the tongue.

Heat increases the excitability, while cold diminishes it.

A body made too warm by overheated houses, overclothing, too heavy underwear, is made too sensitive. This is a form of overstimulation that leads to enervation; following which, catarrhs; of any and all mucous membranes develop. When toxin poisoning is added, sensitiveness is diminished. This is a conservative measure; but, like all other good things, it becomes destructive when pushed too far.

An organ rendered less sensitive from overstimulation. is also rendered less efficient in carrying on its regular functioning; hence, when a cure is desired, the cause of its overstimulation must be removed, and, until time is given for a normal reaction, the organ must not be forced into a functioning which it is not able to perform. A season of rest is nature's remedy for all exhaustions following overstimulation. In this matter nearly all systems of healing are based on theories of cure that work in just the opposite way. When the organs where reflex action ends are badly altered, very grave symptoms are developed by stimulation of the peripheral or afferent nerves.

Chronic irritation, inflammation, and the accompanying organic enlargements from overwork, or from rheumatism, cause the organs to be sensitive to reflex stimulation.

In the case of myocarditis, or rheumatism of the heart, an impression--a shock-that would not be noticed by a normal heart will cause death. Heart stimulants are dangerous remedies.

On the other hand, when exercise has been neglected, the various organs of the body are weakened from lack of stimulation. Under such conditions the heart becomes so enervated that unusual exercise, such as running to catch a car, may end in collapse and death, the heart being unable to do the extra work forced upon it. Often such heart weakness has been aggravated by the use of alcoholics, tobacco, coffee, tea, and sugar. The excessive use of sugar tends to weaken muscular energy, because of its power to overstimulate.

When stimulation has been excessive-such as overindulgence of the grand passion--there may be such an alteration of the nerves of transmission--the centripetal (afferent), nerves--that sensation is retarded, or perception and reaction end in impotency. On the other hand, indulgence may be so great, from the excitability of the transmitting nerves, that the reflex centrifugal (efferent) nerves are so altered in their functioning that trembling and irregular movements, up to lost coordination, are established.

Syphilis is credited with building tabes dorsalis and paralysis; but overstimulation from the drugs used in its cure, and excessive venery, are more likely to be the cause. Excessive venery lays the foundation; then toxins from septic infection and drugs may prove to be the exciting cause.

Mental or Physical Reactions

In the foregoing it has been my endeavor to explain, as well as I can, physical reflexes, their causes and variations; also to give a hint regarding the diseases brought on from overwork and

underwork.

Nervous reactions, when expressed in the highest order, are mental or physical. All ideas, as well as all movements, have an external origin.

The spiritualistic school will not agree that our psychical nature is built from sense-impression, and that, for us to learn or know anything, we must have sensation. Our special senses are educated by external impressions. Without external stimulation, or without the sense-perception to recognize external impressions, we remain in ignorance--a state of ignorance known as idiocy.

Mind-potentiality evolves as the ages roll on. We do not inherit mind or innate ideas; we do inherit potentiality--an aptitude to understand. Probably the most potent factor in this inheritance is power of attention. With mental alertness a child will gather knowledge so rapidly that to dull pupils it will appear as though it must have inherited its knowledge.

The study habit, when once formed, is a great help to the dull mind.

Mind can never come into its own until man ceases to build physical disease. The mind of a sick man is handicapped. Habits that build disease of the body affect the mind also.

It is common knowledge that the character and type of intelligence and capacity for work are under the influence of various diseases. For instance: A deranged liver causes pessimism. Liver and stomach derangements cause sadness and the so-called neurasthenia. Genito-urinary affections produce irritability, jealousy, and a desire for revenge. Hypochondria and self-destruction are among the potential effects of venereal derangements. Granular inflammation and stricture of the urethra create irritability.

Delirium in fevers and drunkenness is a well-known phenomenon.

Psychical impressions are reflected on the body. Fear envy, and jealousy provoke excessive kidney, bowel, and heart action. Digestion is very seriously affected by worry. fear, or an unsatisfied state of the mind.

Nervous Reactions in the Normal State

In the normal state reactions vary; the conditions also differ.

Species.--The higher the species, the more powerful the reactions. Shocks, stimulations, or irritations which cause little or no response in animals, produce suffering and sometimes fainting in man. Shock seldom occurs in animals; when it does, it is always due to violent causes. This being true, why should vivisection throw any light on the management of man's diseases?

Influence of Sex in Bringing about Shock in the Human Species.--Women are far more easily affected than men.

Women are more easily affected through their emotions than men. This condition, however, is of artificial development; for the spermatozoon is more lively than the ovum, the male fetus is more active than the female, and boys are more active than girls.

Possibly the reason why women are more responsive through the emotions than men is because they have a different training. Women are protected, pampered, and kept back, and perhaps under. Men have done the world's work and the world's fighting, and that would educate them into a control over the emotions. Everything else being equal, it would be logical to presume that women should be less sensitive and emotional. They need control; for they take care of the children.

It is generally taught that the nervous system of children is feminine; that reactions are quick, mobile, and excessive; and that, as they grow older, the male becomes less reactive, until

advanced age finds the old man physically and psychically without reactive ability. This lost sensitiveness, however, can be accounted for from habits of life. Men use more stimulants than women, and indulge themselves more in every way; hence their reactions are suppressed or inhibited by overstimulation. The fact that stimulants impress the child greatly, while they scarcely affect the old man, is proof that the matter of little or much reaction is wholly a matter of education. Mind, with its auto-suggestion and imagination, builds sensitiveness.

The difference in the reactive power of races is a matter of climate, food, and education. The animal is dull compared with man, and the difference is a matter of mind. Animals differ in their reactive power, and the difference is a matter of intelligence.

In man, education should teach poise; for it certainly teaches imagination and sensitiveness, and poise is necessary for self-control.

If irritability is not a matter of imagination, after leaving the animal state, why are children of young parents more apt to react--more lively and cheerful--than children of older people? Experience teaches poise; hence reaction is largely a matter of education without experience, until sensation is dulled from satiety.

Children of very old parents lack youthfulness; they appear to continue the aging of the parents. This indicates that physical energy is transmissible, but that education and physical training leave a legacy of impotency and senility.

6. Nutrition

Nutrition is that which takes place in the body of a live, healthy animal between the time when food is taken into its body and the time when the ash resulting from the combustion of the food is excreted.

Life is the phenomenon we call nutrition, or, vice versa.

We see an automobile or a train moving with all the grace and celerity of an ideally constructed machine, and we say that its mechanism is perfect; hence its nutrition is perfect. If we see it halting, coughing, puffing, and blowing, in an effort to move, we know that something has gone wrong with its nutrition, or its mechanism. When we see the machine at rest, we know that the life of the engine is killed, The phenomenon which in animals and plants we call nutrition, and motion in the case of machinery, is life.

The power behind all activity--the power that makes activity possible--is the sun.

A machine is a synthetical arrangement of properly constructed and adjusted parts. When all parts are ready, it will not move until the sun's rays are thrown upon it by way of oil, coal, or electricity, all of which represent static energy, or stored-up sunshine.

Those who hold the dualistic idea persist in teaching that there is a mysterious force behind and on the outside of nature that causes the phenomenon we call life. They will not admit that it is the sun. Such minds are not satisfied with a simple explanation; they must have an unexplainable, mysterious, or, as Spencer declared, an unknowable cause.

It is wonderfully consoling to have faith in something--to have something that faith can lay hold of. Such a something I have. But, while I myself can get rest and comfort out of it, I realize that the majority of people cannot. I do not ask anyone to give up his beliefs for mine; but certainly no one can be injured by allowing me to try to explain the cause of life that gives me satisfaction.

Those who never have taken a peep into the world that is above, below, and beyond their unaided sense-perceptions must feel their limitations and know that there is an Infinite existence which has not been revealed to them. They are right; but they have no right to declare that it has

not been revealed to others.

The study of bones, flesh, and organs gives us an acquaintance with the animal, its mechanism and personality; but how its bones, flesh, and organs are constructed is quite another study; indeed, it is a world all to itself--a world hidden from common observation. Because of its infinitesimalness, this world is beyond the horizon of unaided sense-perception. On the other hand, the telescope and spectroscope reveal the infinitely large and distant.

To explore the regions where nutrition is going on, one must take one of the torch-lights of The Infinite--the microscope--and there will be revealed the mysterious--the handiwork of the Creator!

In the workshop of The Infinite there is a department where the rudimentary units out of which everything is made are evolved. They have but recently been discovered, and they are called electrons. For the sake of brevity, and to have a definite and inexhaustible source whence to draw a supply of electrons, we will say that the sun's rays are made up of electrons. So necessary a substance as the base out of which everything is made, should be everywhere: and certainly sunlight is everywhere.

In another part of The Infinite's workshop there is a place where cells are made. Cells are the units out of which living matter is made. The human body is made out of cells, the same as houses are made out of brick.

As stated before, we cannot observe The Infinite work unless we are aided by The Infinite's torchlight--the microscope. With this instrument we discover that the tissues of the body are made up of cells. To understand a cell, it will be well to examine some of the lowest forms of life.

The ameba is a colorless, single-celled, jelly-like, protoplasmic organism found in sea and fresh water. It is constantly undergoing changes of form, and nourishing itself from surrounding objects.

The white corpuscles of the blood perform ameboid movements--i.e., changes of form, consisting of protrusions and withdrawals of substance. (Gould's "Medical Dictionary.")

The ameba is found in mud and decaying vegetation at the bottom of pools of water. On examining a drop of this slime with a microscope that magnifies two or three hundred times, life is observed. A great variety of living forms are seen.

The ameba is the lowest type of cell-life. The structure of a cell is made up of a nucleus (a small nut) and a body which is composed of a substance known as protoplasm. In biology a cell is known as a bit of protoplasm containing a nucleus.

All tissues--nerve tissue, muscle tissue, bone tissue, and tissue of cartilage--are made up of cells. These vary in size, notwithstanding they are all microscopic. The microscope reveals the fact that there are characteristic forms of cells for each tissue; and, so far as known, all have a cell body and a nucleus.

The microscopic appearance of protoplasm is a colorless, semi-fluid substance, in which are seen solid particles, or granules. The nucleus is found near the center of the cell, and is composed of protoplasm denser than that of the cell body. The cell body may be likened to a bit of the white of an egg; but it should not be forgotten that the white of the egg is not living substance. The fertilized egg needs the sun's rays to add the missing link--to breathe into it the breath of life. The unfertilized egg needs a nucleus that is potentized with life. All the rest of the egg is body food, if you please.

An egg is not complete without the nucleus; and then, without the sun's rays, it can never take on life. This is true of the cells of a living body; for the sun's rays must be utilized to the extent of furnishing a pent-up heat of about one hundred degrees Fahrenheit, or these cells cannot renew

themselves.

Nutrition is the principal attribute of matter. The phenomenon known as nutrition is life; and this life cannot continue to manifest without the properties imparted by the sun--electrons and heat. The sun, then, is the source of all life.

Assimilation means that the cell seizes upon the nutritive materials placed at its disposal, and groups them together into an organic synthesis--a molecule--that is very unstable. In order to do this, heat, or the sun's rays, or the electrons, must be furnished in sufficient quantity. Every cell of the body is an electric cell; all are connected into a whole instrument, or battery, represented by the cerebro-spinal system; and the refined output is mind.

The feeding and the waste of this wonderfully complex electrical apparatus take place in the cells, which are microscopic bodies, and which have the power to gather the electrons from the sun, and select other elements from the food, with which to build a living organism.

Each cell is made up of molecules. A molecule is the smallest quantity into which the mass of any substance can be divided and retain its characteristic properties.

Disassimilation means that the molecules of the cells disintegrate and are reduced to simpler and more stable elements; and at the same time there is a loss of energy.

The disintegration of molecules is attended by the loss of forceh-heat or energy. This means the wearing-out of the cell; and the phenomenon is a manifestation of life, the same as the building-up. One is appropriating nourishment, the other is discarding worn-out material; and all the phenomenon is metabolism--nutrition or life.

It is well to note, in this connection, that life is the same, from the ameba found in the slime at the bottom of a pool of waste water, to the cell in the gray matter of a Websterian brain; from the lowest vegetable cell found at the mouth of the sewer, to the highest type of the most exquisite flower. All cell life is generically the same, differing or dividing into species.

The laws of nutrition are the same. The plant cell liberates force as does the animal cell, and both produce carbonic acid. The electron or carbon from the sun's rays, and the oxygen from the earth's atmosphere, meet in the cell and are united into carbonic acid, This phenomenon is not carried on in plant life to the extent that it is in animal life. The plant does not spend so much energy; assimilation predominates in plant life. The cells of **the plant feed upon** carbonic acid and water, which, under the influence of the sun's rays, unite into hydrate of carbon, furnishing vital force to animals. It was Herschel who first declared that the sun's rays are the source of all life.

In the study of cell life, four chief phenomena are observed; namely, a physical--that of taking in nourishment--absorbing--endosmosis; a chemical, consisting of organizing the material absorbed; disorganization; and, lastly, the throwing-out of the waste, which is called exosmosis.

Necessary to Cell-Building.--That these processes may be carried on properly, the nutritive material must be in a state of solution. Life is possible to the cell only when its nourishment is liquid. The cells of the human body are in a liquid medium-namely, blood, lymph, and plasma--from which they draw their nourishment.

The phenomena of cell life have been hastily gone over, and now it will be necessary to study the phenomena of cell-colonization.

Functions of Nutrition

The animal body is made up of organs. Each organ, may be regarded as a colony having individual as well as systemic attributes.

In the nutrition of an organized being there are seven successive functions, each one important. For ideal health to be maintained, they must all be carried on well.

1. Preparation of Food for Absorption.--Mastication and swallowing of food; transformation of food into a liquid state--the starch being transformed into sugar, the albumins into peptones, the fats emulsified, and all rendered liquid.

2. Absorption.--The liquefied food passes through the intestinal walls. This is what physically takes place, but in some way there is imparted to this absorbed nourishment a property that resists change--it is given resistance.

3. Dehydration.--The surplus fluid, a part of which is left behind when passing through the mucous membrane, would, if not left behind, cause elimination as fast as absorbed. Dehydration is finished in the lymphatic glands and liver. The liver has deposited in it the fatty acids, the peptones, and the sugar.

The glucose is dehydrated and becomes glycogen, which accumulates in the muscles and liver.

4. Cell-Nutrition, which has been explained before, takes place when the intestinal plasma--digested pabulum--reaches the cells. The cells appropriate the matter they want, and eject the waste, which passes into the blood and is eliminated.

In all cases of constipation that are not due to mechanical obstruction, the cause may be traced back to faulty cell-functioning. The endosmosis (absorption) and the exosmosis (organization, disorganization, and elimination) fail to be carried on ideally. One reason why this work is not carried on properly is because there are not enough enzymes generated in the system to render the food material dializable. The nutritive material that bathes the cells must be capable of passing through the cell walls; and, once in the cell, cell enzymes must prepare it for organization and elimination. Where there is more food material furnished than the secreted enzymes can take care of, or the amount secreted is below normal, cell-exosmosis fails to take place, and, as a consequence, elimination into the blood is retarded. Once in the blood, there may. again be a retardation, because the excretory material is not dialized enough to be excreted by the organs of elimination. Hence there follows a state of obstinate constipation which nothing can overcome except a treatment that reaches cell-inactivity; and, inasmuch as the real cause is a lack of enzymes, the amount of food taken into the system must be reduced to within the digestive capacity. I do not mean the digestive capacity of the stomach and bowels; for it is self-evident that there is more than enough of this digestion, or the cells and blood would not be taxed beyond their capacity.

The remedies for this constipation are fasting, resting, and water-drinking. After elimination has cleared cell- and blood-obstruction, a properly selected diet, taken in sufficiently moderate quantities not to force a recurrence of the obstruction, will bring about a permanent cure.

Where interference with elimination is of a grosser character than that which takes place in the cells--namely, in the liver or kidneys--we see stone-formation. When the excretions of these organs are rendered dializable--rendered liquefiable--the integrated stones will disintegrate and pass out of the body. In order that waste products may leave the system readily, they must be dializable; which means that waste matter must be liquefied fit for exosmosis. In the matter of gallstone and stone in the kidney, these stones are on the outside of the body, because such cul-de-sacs as the gall bladder are connected with the outside by the bowels, into which the bile and disintegrated stone can pass. Stone does not need to liquefy, for it has no membrane to pass through.

5. Disassimilation.--The liver changes nitrogenous products into urea--a crystallizable body which readily leaves the organism, favoring renal elimination.

6. Elimination is by the lungs, kidneys, skin, and bowels. By examining the excreta, it has been

found that 250 grams of carbon and eighteen grams of nitrogen are voided by an adult each twenty-four hours.

To eliminate eighteen grams of nitrogen, it is necessary to consume 500 grams of meat. To throw off 250 grams of carbon, two kilograms of meat would be required.

In a mixed diet of five parts of carbohydrates to one part of albuminous matter a perfect blend is had. Health depends upon a properly mixed diet.

7. To have all the foregoing stages of nutrition carried out properly, the mental state must be that of optimism; for the opposite mental state depresses, and inhibits more or less every process.

Fasting.--To keep food away from a man slowly starves him to death. Disassimilation continues, and it is supposed that death comes after forty per cent of the weight is lost. This may be true of those who are very thin, but it is not true of those who are overweight.

The loss of the various tissues is not equal. Fat diminishes ninety-five per cent. The organs lose most in the following order: spleen, liver, muscles, kidneys. The heart, nerves, and brain are most resistant. It has been said that the brain shows no loss from starvation.

Fat goes first; then the muscle or nitrogenous substance. When the muscle begins to go, there is an increase in the urea; albumin appears in the urine; the temperature falls, and the symptoms become serious.

Drinking water enables the one starving to live longer. Fear will cause a fatal termination much earlier than fasting and going without water; for fear inhibits elimination, if it does not also generate a poisonous toxin.

A dog, deprived of food and water, died in twenty days; another, deprived of food but given water, was still living at thirty days. Much depends upon the weight at the beginning of the fast, and the treatment during the time. If warmth is supplied, life will be prolonged.

People who take a fast to control disease must be kept warm. Chilling during a fast is very dangerous.

Unless much water is used during a fast, toxin poisoning will take place; and that, with chilling, is liable to kill the one fasting in ten days. When fear is added, death will come in from three to seven days.

The first common cause of disordered digestion is improper chewing. Next comes overeating, or eating of improper combinations.

When more food is taken than can be prepared for absorption, the food is caused to ferment because of the ever-present germ of fermentation. The result is fermentation, catarrh, or inflammation of the mucous membrane; gastritis, dilation of the stomach, diarrhea of the lienteric type; then poverty of flesh, nervousness, etc.

In those cases where too much sugar and starch are consumed (in children), gastritis, pharyngitis, tonsillitis, enlarged tonsils, adenoids, constipation, polyuria, and nervousness are common; in adults, rheumatism, glycosuria, diabetes, flatulency, headache, eczema, heart palpitation, constipation, colitis, piles, and prolapsus of the rectum.

It is hard to define exactly, or clearly to draw the line between cause and effect, when a mixed diet is being used; but it is safe to say that there will be no putrid or septic poisoning from food decomposition unless animal alburninoid is mixed in the dietary.

When animal foods are taken to excess, a severe type of whatever disease is developed may be

looked for. In children, a tonsilitis will be diphtheria or scarlet fever. Fevers will take on a typhoid or septic character. Wounds and puerperal derangements will take on septicemia.

The glands of the body--the lymphatic, liver, and ductless glands--are probably quarantine stations for the purpose of arresting and detaining septic toxins. These glands probably secrete enzymes which neutralize the septic toxins. The liver undertakes to care for the surplus protein and fit it for cell nutrition; it stores the sugar in the form of glycogen.

If the liver is out of condition, from overwork, it allows the sugar to escape. Then the kidneys take up the task of eliminating it. This is a glycosuria, caused by hepatic insufficiency. It is not diabetes proper. Real diabetes is a nervous derangement, and must be cured by restoring nerve energy.

The different acts of nutrition in man are now to be reviewed, with their perversions.

Liquefying Food

The first process in digestion is the liquefying of food. The food is ground by the teeth, and then mixed with the digestive secretions. When the individual is normal, and eats normally of a properly balanced dietary, and when everything else is normal--i.e., the mind is at rest, and the care of the body (such as bathing, rubbing, clothing, etc.) is normal, and properly adjusted to external influences--it can be said that ideal health is enjoyed. But, inasmuch as an ideal adjustment of man to his environment is obviously impossible, ideal health is a utopian dream. Like all such ideals, however, it is useful, in that it feeds ambition and rewards approximate attainments.

In every branch of life's activities the ideal is unattainable. The best is secured by endeavoring--the reward is in pursuing, not in attaining; for attaining is reaching an equilibrium where life ceases. Life is activity, growth, attaining. Health is activity, building, doing, striving, fighting against deterioration, and endeavoring to give life, or activity, to every potential of body and mind. It should be known that the possibilities potential in man are drawn upon very lightly.

When food is unfit, when it is taken in too great quantities, or when the quality is bad, or made bad by improper preparation, very complex derangements are set in motion.

When the food supplied is appropriate, but partaken of too abundantly, or when it is bad in quality or wrongly combined, and is not suitable to the demands of the individual, digestive disturbances result, Fermentation takes place; for the microbe of fermentation is everywhere. It is retrograde nature's enzyme, is omnipresent, and is for the purpose of fermenting and disintegrating the excess, defective, and worn-out material in the body. It is the function of fermentation to remove everything that is unfit, or not appropriate, for physiological digestion--life--building--growth and repair.

Life and death-growth and decay-are presided over by two elements of destruction. Life, at its beginning, has enzymes that ferment and dissolve and prepare food for integration--organization into living bodies; while death, at its beginning, has enzymes (microbes) that ferment, dissolve, and prepare surplus, waste, and worn-out material for exit from the body--to give back the elements to nature.

These two processes are at work side by side, and a study and understanding of them give knowledge of how to aid each in its particular sphere. It is a physician's prerogative to understand life and death--growth and decay; for he must lend a hand in freeing each from its particular entanglements.

When more food is taken than can be appropriated by the body, it must be got rid of; otherwise it obstructs and prevents normal operations. The germ of fermentation dissolves and fits this surplus for immediate exit from the body. **When too much is eaten continually, this microbic fermentation creates irritation, inflammation, or catarrh of the digestive tube and**

the associate, contiguous, and communicating organs.

On account of the gas generated by microbic fermentation, and the consequent distention of the stomach and bowels, dilation of the various parts of the digestive tube takes place. As a result of this distention, constipation is built, and the heart is disturbed, in that its action is interfered with by pressure on the diaphragm. All contiguous organs are pressed upon and put out of commission.

It is after intestinal fermentation is established as a habit that the reproductive organs of both sexes become functionally deranged.

The first functional disturbances set up by an oversupply of food are indigestion, dyspepsia, and sometimes diarrhea--usually constipation.

Nervousness and reflex symptoms accompany functional disturbances; namely: headaches, frequent urination--in children polyuria, causing bed-wetting; rapid pulse and palpitation of the heart; cough from throat irritation. Between insensible eructations of gas escaping from the stomach, causing throat irritation and cough, and a purely nervous cough from stomach and bowel irritation, it is hard to draw the line; but, as the treatment must be the same, an erroneous diagnosis will not prevent a cure.

Gastrectasia, or dilation of the stomach, is caused by years of overindulgence at the table. A common symptom of this derangement is the development of nodules around the second joints of the fingers, named "nodosities" or "bonehard." In subjects of low resistance, or in subjects who have become profoundly enervated, the nodules may be the early symptoms of a **developing rheumatoid arthritis.**

The kinds of food taken in excess govern the type of disease. An excess of starch, sugar, and fat--especially the starch in the form of whole grain--causes deforming rheumatism and builds stone in the gall bladder (gallstones), kidneys, and urinary bladder in the lithemic or gouty diathesis; lime is deposited in the heart and arteries, around joints, and in other parts of the body.

An excessive intake of sugar and sugar compounds--such as puddings, cakes, and pies--develops obesity. Where the intake of carbohydrates is in excess of the needs of the system, glycogen is stored, and when there is more than can be utilized, it is passed in the urine, producing glycosuria. It is the function of the liver to arrest and store sugar by dehydrating it to glycogen. When the liver is altered, the sugar passes into the blood and goes out of the body by the kidneys. Both these varieties of glycosuria are alimentary diabetes--the first cellular, the second hepatic from liver insufficiency.

Where animal proteins are taken in excess, they are taken up, but their digestion is not complete--cell- and blood-digestion flags. This nutritive perversion favors putrescence, and the building of simple catarrhal inflammations into ulcerations.

Gout is supposed to develop from defective digestion of animal foods. Alcoholics stand first as a cause of this disease, and the alcohol produced in the body from imperfect digestion of carbohydrates is a common cause of all types of rheumatism.

It was observed that digestion by the cells of the body is carried on by the aid of endosmosis and exosmosis (physical laws), but nutrition cannot be accounted for by physical laws alone. When peptones (the liquefied nitrogenous foods) pass through the walls of the bowels, the membranes appear to possess the power of dehydrating, so that peptone, as such, never reaches the blood so long as digestion is normal. In abnormal states peptone is found in the urine, causing peptonuria of intestinal origin. The nutritive materials that are carried to the liver by the portal vein are dehydrated by that organ. When the liver is diseased, however, peptones and sugar appear in the urine.

When intestinal indigestion and catarrh develop, the pelvic organs become involved; menstruation is made painful, irregular, and often too profuse; toxins are absorbed from the bowels; the lymphatics acting as quarantine stations are, in time, overworked, and catarrhal inflammation develops in the ovaries or womb, or both.

Because of a thickening of one side or the other of the womb, this organ is bent on itself, crooking and obstructing the passage or canal, causing pain when the menstrual flow seeks exit.

The womb and ovaries become very sensitive, and the downward pressure from gas in the bowels causes much discomfort.

The mucous membrane of the lower bowels takes on a catarrhal state from the constipation and gas distention. Colitis, appendicitis, proctitis, ovaritis, metritis, inflammation of the spermatic cord, urethritis, **prostatitis,** piles, and prolapsus of the reproductive organs, bladder, and rectum, are possible diseases coming from fermentation and gas distention. Indeed, a part or all of these derangements are so common that there is a procession of people, young and old, headed toward every surgical institution in the country.

When operating is once started--when, for example, the appendix is removed--the causes remain. The habit of overeating, or improper eating, fermentation, gas distention, toxin absorption, catarrhal inflammation of the intestinal mucous membrane, and lymphatic involvementall these remain to continue the discomfort for the removal of which appendectomy was performed.

Occasionally the patient has a respite from discomfort following the operation--not because of any curative effect produced by the operation, but because of the powerful suggestion often imparted by a surgical operation. Those who undergo an operation have faith that they will be cured, or they would not submit to it. The power of this suggestion holds the patient's belief for a time. If there is any discomfort following the operation, it is thought to be the consequence of the necessary mutilation, which will pass off in a short time.

After a brief, questionable rest from pain, the patient begins to complain to the doctor of pain similar to that suffered before the operation. The doctor may declare that the post-operative pain comes from adhesions; or the pain may be declared to be due to ovaritis or gall bladder disease. In due course of time the ovary or ovaries are removed, and the gall bladder is drained; or, as in the case of the late Governor Johnson, of Minnesota, operation after operation may be performed for overcoming adhesions--all to no purpose, for the cause is not removed, not even suspected.

In the case of men, the appendix, gall bladder, prostate gland, piles, and prolapsus of the rectum are attacked with the knife because of the pain produced by intestinal indigestion, catarrhal inflammation, and gas distention. Of course, each and every operation must be a disappointment; for none of the organs is pathologic to such an extent as to justify its removal. Besides, the disease is not of these organs proper, which are sensitive only because the real disease has developed a neurosis of all the organs.

Where appendicular operations have been performed, and the appendices have been found normal, the patients often remain better for a time, because of the suggestion carried by the operation; but in pronounced types of intestinal indigestion, with catarrhal inflammation of the bowels and infection of the lymphatics, there is a general sensitiveness, with periodic attacks of pain, apparently confined to one or more of the organs of the abdomen or pelvic viscera. The real cause, however, of the paroxysms of pain that pass as appendicitis, ovaritis, or disease of other organs, is gas distention, the pressure on the hypersensitive organs from gas being the sole cause. This being true, it should be obvious to every thinking person that surgery can be nothing but detrimental to those afflicted in this way.

The above is a true picture of the physical states of the great majority of those operated upon in

the past two or three decades, and those who are now on their march to a surgical hospital. It must be continued; for it is certainly obvious to the discerning, with the illumination above given, that removing any one, or a half-dozen, of these organs will not remove the disease. Removing the lymphatic system of the lower bowels and pelvis, were it possible, would not cure a derangement of this kind.

Lymphatic or scrofulous diathesis is a structural evolution of the lymphatic system favoring the development of tubercular diseases. The word "diathesis" is out of date, and "germ infection" is made to cover all diseased states once ill understood under the name "diathesis." It may be said of disease, the same as of a rose: "What's in a name?" This is true when a name carries no meaning.

Names only confuse, and help to hide from the mind's eve the true cause.

If we may look upon every child, born of well-disposed parents, as a purified lump of protoplasm with the potentialities of health and mental development normal, we can use the child as a standard of ideal health.

There are children, born of vicious parents, who are said to be born with venereal disease. It may be true; I believe that children are born with disease; but they were infected after conception.

My practice has been confined to a superior class of people, While I have always enjoyed a large private practice, it has been with those of a middle to a superior class of intelligence. The ignorant and vicious have always sidestepped me, because I require the giving-up of bad habits as a first step to a cure. Consequently, children born with venereal infection have never occurred in my practice. If they had, I should not believe that nature allowed the infection to take place before conception; for nature makes sterile all who are unfit to propagate.

Starting with perfect physical health, a child is fed too frequently, and kept from fresh air and sunshine. Many are bathed too much, handled too much, and subjected to too much noise. As a result the child's resistances--its enzymes and body defenses--are inadequate to meet the enemies of health; and the result is that a catarrhal state is developed. The child "catches cold" easily. The stomach and bowels are made sensitive, and ready to take on a state of indigestion; then toxin poisoning takes place, resulting in an effort, during the cold months, to throw off the poison by the skin and mucous membrane--gastritis, sore throat, and the exanthemata (eruptive fevers). It is a fact that the eruptive fevers--skin diseases--occur all the year around; yet their tendency is to appear more frequently in the winter, or during cold weather; whereas diseases of the stomach and bowels--mucous membrane--occur oftener in the summer, or during hot weather. Gastritis, bowel diseases, and the various eruptive fevers are a necessary sequence to feeding beyond the child's nutritional needs, and catarrhal inflammation of the mucous membrane is established as a habit. Finally resistance is broken, making the child susceptible to epidemic influences. When the heat of summer comes, it adds the last link to a chain of causes that ends in cholera infanturn. If treatment is unsuitable and the nursing bad, the child may die; indeed, many do die.

Children who get over the diseases peculiar to the teething age, carry, and further develop, enlarged tonsils, adenoids, gastric irritation, intestinal indigestion, constipation, intestinal parasitic diseases, the so-called contagious diseases, glandular enlargements, adenitis, tuberculosis, rickets, lymphangitis, scrofula, etc.

These diseases develop from childhood to puberty. Those children who are not swept out of existence will have seasons of betterment; a few will be carried by the force of development, which in a cyclonic fashion sweeps everything before it into health--and that, too, often in spite of wrong life, and a medical treatment that might prove fatal if administered at any other time in life.

These health storms, typhoons, revolutions, often sweep invalids into health, starting up without apparent cause, and carrying many victims of ill-health into physical states approximating good health. Then, if they are fortunate in having sense enough to follow proper advice, they may recover from the ill-health of youth and live to a ripe old age, enjoying life, health, and success. A few will enjoy approximately good health from early puberty to early middle life. Perhaps it would be better to say that there are a few who, through the impetus of development, will enjoy fairly robust health until perhaps the end of the first ten years of business life; then, because of neglect of exercise, and the practice of bad eating, and other habits, they break down and die of acute or chronic disease.

There are others who reach middle life before they have, by vicious habits, broken down their resistance and placed themselves in a physical state out of sympathy with health's revolutionary forces. These go down and out with tuberculosis, Bright's disease, diabetes, tabes dorsalis, apoplexy, and other diseases.

There is still another class who die between fifty-five and sixty-five of kidney, heart, brain, blood vessel, and nerve diseases, because they have lost their resistance to such an extent that they fail to attract the evolutionary forces that would carry them on another decade.

We hear of disease influences, but never of health influences. The truth is that there are more epidemic influences for health than the reverse. Indeed, if man ever learns to court heatth--cultivate resistance, attune himself to the harmonies of nature--he can make himself immune to disease-producing influences.

Chlorosis is thought, by many writers on medicine, to be caused by a syphilitic "taint;" but this is no more true than the claim, set up by the same authorities, that the whole human family is tainted.

Chlorosis I have found to rest on a basis of toxin poisoning derived from intestinal indigestion. After the uterine lymphatics have taken on a state of subacute inflammation (sometimes called adenitis), painful menstruation begins to develop, and the amount of menstrual discharge grows gradually smaller, until many such cases cease to menstruate entirely. In the opposite state--**hyperemia--**the pelvic circulation, due to toxin infection of the lymphatics, causes painful and profuse menstruation; if not corrected, cystic and fibroid tumors may follow.

Chlorosis presents a catarrhal state of the neck of the womb; the mucous lining thickens up and prevents the menstrual discharge from escaping freely. The discharge is bottled up to such an extent that decomposition takes place. It is the absorption of this decomposition that causes the anemia peculiar to chlorosis. When the disease is well developed, patients suffer from oxygen starvation. Carbonic acid accumulates; digestion and nutrition are impaired, and cell renewal is almost impossible.

The blood becomes so thin that there are noises in the head and giddiness. The patient is troubled with cold feet and hands. The mind is dull and inactive. Shocks--such as disappointment in love--may be fatal. In many chlorotics, excessive venery, sorrow over the death of a near relative or friend, inability to keep up with classes in school, worry, etc., further impair the health and prevent a return to health.

Mothers who eat imprudently and worry over family affairs--mothers who worry over boys who are unruly and who are getting into trouble--build indigestion, catarrh, and toxin poisoning.

Business men who carry their business worries around with them, or who use tobacco, coffee, tea, and other stimulants, and overeat, develop toxin poisoning.

Any worry that is habitual, in one who is severely taxed in a business way, and who eats too

much, or eats improperly--for example, bread, butter, and fruit jellies, jams, or preserved fruits--will lead to a premature grave with hardening of the arteries. When excessive venery is added, nerve resistance is lost, and the ordinary fermentation changes into septic decomposition. Bright's disease, suppurative inflammations of the lymphatic glands, liver, appendix, pleura, lungs, and other parts of the body, are liable to develop. Tabes dorsalis is a common disease in those who abuse nutrition with food, work, stimulants, and excessive venery.

Those who live far away from the markets, who live on dry beans, cured meats, and an inferior quality of bread, potatoes, and a few canned vegetables, and who are shut out from sunlight, fresh fruit and vegetables (such as miners), develop a state of acidosis, and, when predisposed to tuberculosis, break down and die of that disease. Others develop rheumatism and paralysis.

Emotional disturbances derange nutrition. Fear inhibits digestion; it deranges heart action to such an extent as to develop, in time, organic heart disease.

Anger has a serious effect on digestion and the heart.

Jealousy changes the whole being. From a sweet, even-tempered person, with mild, kindly features, the jealous subject is changed into a demon, with hard, cruel features; a kind, benevolent, philanthropic nature hardens into a cruel, selfish misanthropist; a disposition incapable of causing pain to the lowest animal is metamorphosed into a hatred that can kill the thing it loves.

Envy disturbs the entire body in the same way.

The giving-way to these emotions not only disturbs nutrition and interferes with cell-development, but alters the secretions from a benign, health-imparting influence to a malignant, disease-producing influence; from a neutral or agreeable odor to a rank, offensive smell that causes disgust even in those who are bound by love to the unfortunate one whose emotions have gone astray.

The cause of insane emotions is a wrong understanding of the relationship that should exist between people. The most violent types of emotional insanity spring up between married people. There is, and has always been, a feeling of ownership among married people. This is a survival of the chattel-slavery idea; it belongs to an ignorant age, and is not in keeping with advanced civilization.

Do away with the ownership idea, and have married people stand or fall on behavior--merit. Indeed, an abiding love must rest on the everlasting bonds of respect which spring up from conduct becoming, and in harmony with, dignity and refinement.

Too often, when men and women are united in the "holy bonds of matrimony," they forget all estheticism. They are more polite and considerate of the most inferior member of society than they are of each other.

So long as marriage means license to be common, immodest, indelicate, and too often vulgar, just so long will love become shipwrecked.

Why should a man expect a woman's infatuation to ripen into everlasting love, when she discovers him to be a cad with disgusting personal habits, or vice versa?

The bonds of "holy matrimony" are not sufficient to disinfect vulgar habits. Nothing but habits of cleanliness of mind and body can keep men and women aseptic--worthy of love.

What has all this to do with disturbed nutrition? Allow the veriest swain, or professional novitiate, to answer! Indeed, marital infelicity is a common cause of intractable indigestion and chronic toxin poisoning. What can palliatives do toward curing such cases? The surgeon is busy removing complaining organs; but, much to his surprise and his patients' dismay, the same old

symptoms are back after the operation. If the surgeon had not been so material, he would have known that he had to deal with pathology of the mind instead of the body.

Women have disturbed nutrition during pregnancy. The vomiting of pregnancy is often due to catarrhal inflammation of the neck of the womb. In all cases of excessive vomiting in pregnancy the womb should be examined; if congested, scarification of the mouth and neck of the womb, allowing a little of the surplus blood to escape, will relieve the tension and the reflex irritation. Often one or two treatments will correct the vomiting. There are cases of vomiting that cannot be controlled short of dilation of the mouth and neck of the womb.

The real cause of morning sickness harks back to overeating, fermentation, toxin absorption, and the concomitant causes. It is hardly necessary to spring an Irish bull by saying that people who are well will not be sick. However, the best writers on the subject of disease write much about the diseases of pregnancy, of change of life, of teething, etc., etc. In fact, it is necessary to have an undercurrent of toxemia, and, without this undercurrent, disease cannot develop. Indeed, toxemia is the only disease to which flesh is heir. Medical nomenclature clothes the various symptoms with individuality, but they are no more basically individual than are the limbs of a tree.

Diseases were clothed with a vague, uncertain specificity before bacteriology stamped them with an assumed individuality satisfying to the profession. I say "satisfying" advisedly; for the profession is so sure it is right that in all diseases where a germ has not been discovered to account for it, one is assumed to exist, and, as in infantile paralysis, all care, nursing, and treatment are in keeping with this assumption.

The nervous system must be normal, or nutrition will be interfered with.

Loss of sleep, overwork, excessive venery, overworked emotions--anything that uses up nerve energy--lower the digestive and assimilative powers, and also lower the power of the organism to organize its defenses--its enzymes. Hence, an amount of food that could be eaten and utilized by an organism in health would be too much, and would cause toxin poisoning, which would further enervate, and create nervous derangements.

Those in the habit of using coffee, tea, tobacco, alcoholics, or other drugs will find that these stimulants have a much more profound effect on them when, from food poisoning (toxins from fermentation) and lowered nerve energy caused by irregular daily life, their resistance is lowered.

Where the enervation is great, elimination is inhibited.

Urea.--The amount of urea excreted by a healthy adult thirty-five to forty years of age is about 500 grains (32 to 33 grams). A child five years of age secretes 180 grains (10 to 12 grams). In hysteria the amount may fall very low--sometimes to 35 to 50 grams. When this takes place, nutrition is almost at a standstill. Hysterical women can refuse nearly all nourishment without getting thin.

The elimination of phosphates is affected by hysteria. After an attack, the earthy phosphates increase and correspond to half of the phosphoric acid, whereas normally the proportion of earthy to alkaline phosphates is as one to three.

Drugs acting on the nervous system cause disassimilation. Mercury and iodid of potash pervert cell life; and where cells are broken down, sclerosis follows, and then the diseases peculiar to hardening of the tissues--tabes dorsalis and arteriosclerosis.

Drugs like those above mentioned spend their influence on organs which are most enervated. If the nerve centers have been outraged by a lascivious mind and excessive venery, such drugs as those that are given for syphilis will cause such disassimilation of the great nerve cells that spinal sclerosis will follow; and this change will be ascribed to syphilitic infection, when the

truth is that the sclerosis is due to the treatment. All secondary symptoms are due to lesions of the connective tissue, brought on by celldestruction from drug action--not from syphilis; for that disease spends its force on the surface of the body

If the vulnerable organ should be the kidney, the epithelium would be first affected by the drugs; or if the liver, the biliary cells would be affected by the drugs.

If the mucous membrane should be catarrhal, mercury causes ulceration.

Gall-stone is very common. The foundation is undoubtedly laid, in many cases, by mercury; first enervation from the thousands of influences which use up nerve energy, then toxin poisoning, which ruins the body's defenses. With this basis, chronic organic disease can be built by any habits or treatment that will cause disassimilation of the cells of the most important structure of the weakest organ of the body.

The seat of the primary lesion of all toxic poisons is in the highest organized cells. If a poison spends its force on the nerves and brain--as morphine, alcohol, and other drugs do--the disease will be of the brain and nervous system.

Morphine produces emaciation and morphinomania; alcohol often produces obesity and alcoholism, rheumatism and gout.

Lead disturbs the metabolism of proteids and causes an accumulation of urea, and rheumatism develops.

In those who are poisoned on starch and sugar, when the habit of taking too much is discontinued, and the intoxication and its influence are overcome, loss of flesh will be marked; but if proper habits of eating are adhered to, a normal weight will be restored as soon as physiological adjustment can be reestablished.

Constipation, with its infection, often causes great poverty of flesh; but, when overcome, fatness may follow.

The habit of overeating not only creates catarrhal inflammations and the toxin poisoning described, but in those who have great digestive power it causes plethory--full habit--and great strength for a time. A time comes, however, when the organism begins to go down, obesity takes the place of muscle and strength, and **rheumatism,** "gout, lithemia, oxaluria, or the formation of renal, vesical, and hepatic calcule" (stone) are established. Biliousness, or congestion of the liver, with engorged stomach and intestine, with the accompanying symptoms--namely, constipation, heavily coated tongue, bad breath, foul odors from the body and bowels, piles, prolapsus of the rectum, colitis, appendicitis, engorgement of the ovaries and uterus--are developed; and, when toxin poisoning is added, the usual pelvic diseases follow, including tumors.

The secretions are altered; the urine becomes overloaded with salts, sugar, albumin. The overstimulation at last ends in enervation; then comes sluggish elimination, with headaches, fatigue, lassitude, chronic tired state, drowsiness, mental stupor, apoplexy; and the linking of this diseased state with the state described before, coming under the head of chronic intestinal toxin poisoning, all together completes a vicious circle or chain, the links of which furnish the cause of all diseases.

The foods that feed this state are the carbohydrate and nitrogenous foods--the starch or sugar, and the meat or protein. When these staple foods are eaten in a refined state, with the tissue or building salts left out, or the foods that furnish them--namely, raw fruits and vegetables--the body starves for the salts, and disease must follow.

Few people in the centers of civilization starve to death from lack of food. They have food enough, if it only were the proper kind.

Many people eat what may be seen in the bakeshop windows. These windows contain what the masses want. This starch, fat, and sugar are eaten to the exclusion of fruit and vegetables, and the result is acidosis--scorbutus--ill-health, dull mind, and early death.

It has been the fashion in penal institutions to punish the refractory by placing them in solitary confinement and limiting their food supply to bread and water. Nothing more stupid could be done. If it is the institutions' desire to make the criminal or insane more criminal or insane, no better method could be adopted. But if the institutions exist for the cure of these invalids, they should be put in well-aired and sunlighted rooms, with the comforts of reading matter and a good bed, with fresh water and apples, keeping bread--one of the causes of their insanity--away from them.

Fresh fruit three times a day, with wholesome environments, will start these incorrigibles on the road to recovery. Then, if they are fed properly afterward, they may be cured, with a prospect of staying well.

Tumors or neoplasms are allied with infection. Without toxins, and obstructions to the free circulation of the blood, there can be no tumors developed. The cure for tumors means the correcting of toxin poisoning and freeing the circulation.

All the nutritive changes we have gone over are caused by external influences. These changes are not transmissible, but there is no question but that children born of parents whose nutrition is perverted are more sensitive to like influences than those who are born of healthy parents.

The victim of alcoholism will beget a child with a sensitive nervous system.

Abuse to nutrition may extend to sterility. Any stage short of sterility is stamped on children as a potentiality for taking on perverted nutrition far more acute than normal, but not a state that cannot be resisted, and even improved upon after birth. Nature puts the stamp of sterility on the positively unfit.

Disturbed Nutrition

Auto-intoxications are imminent under ordinary conditions--when health is normal.

In that state known as health, assimilation is approximately balanced with disassimilation.

The disposal of waste--of the catabolic products--is as necessary as the proper assimilation of the anabolic products.

Man is nearest an ideal state of health when his digestion and assimilation are almost balanced with his disassimilation and elimination.

Health is that state of man's body and mind that oscillates between near-health and near-death.

Disease is health's thermometer, so to speak, which marks the degrees of departure from an assumed ideal state of health to complete loss of health.

Disease, per se, is non-existent. The state of the body which we call disease is nothing more or less than the degree of departure of health from the ideal standard.

The cause of the departure may be any influence that increases, decreases, or perverts nutrition.

In previous articles cellular nutrition has been gone over; the causes of increase, decrease, and perverted nutrition have been cursorily referred to. Now it is necessary to give a thought to the consequences of inhibited elimination of the waste products of metabolism.

Auto-intoxication.--When there is retention of waste products in the system, the phenomenon is called autotoxemia.

The waste products are all toxic. They are eliminated by the different emunctories.

The bile is not entirely an excretory product; it serves several physiological needs. First of all is its action on the bowels. It is nature's laxative. When its elimination is interfered with, the liver becomes diseased. When carried into the bowels as it should be, it is taken up by absorption and used over; after which it is excreted by the skin, lungs, and kidneys.

The skin eliminates the fatty acids and other toxic substances. The lungs carry off water, carbonic acid, and volatile substances taken in with the food. For example, when onions are eaten, the volatile substance is thrown off by the lungs, skin, and kidneys, as evidenced by the breath and the strong odor from the urine. Asparagus causes the urine to be offensive for several hours after that vegetable has been eaten.

The solids in the bile are thrown off by the kidneys. Before this can be done, however, the solids must be rendered soluble. The nitrogenous products must be converted into urea.

The liver assists the kidneys by preparing different substances for excretion.

All organs of the body are commissioned to furnish enzymes for the purpose of preparing all solids within their jurisdiction for assimilation; in other words, rendering the solids dializable. This is necessary, or the system would become fatally clogged up. In this, bacteria become allies of the enzymes.

Blood.--The blood has enzymic properties to a great degree. And this is well; for the blood vessels are so numerous and so small that if the blood did not have the power to digest--render all solids dializable--deaths from embolism (obstruction to blood vessels) would be most frequent.

Pancreas.--When the pancreas is obstructed in its work, and fails to secrete its digestive ferment, sugar appears in the urine. It is thought that the primary trouble may begin with faulty functioning of the liver.

Thyroid Gland.--The thyroid gland has a secretion which appears to be necessary for keeping a perfect nutritive balance. When the gland is cut out, it is said to be followed by tetanic convulsions. Why? Because of imperfect digestion of starch; it also disturbs nutrition to such an extent as to cause myxedema (mucous infiltration of the tissues).

In suppression, from any cause, of the thyroid secretion, it is said that the administration of thyroid extract will correct the symptoms caused by the suppression. The administration of too much extract has been known to kill.

Trembling and albuminuria are symptoms of excessive use of the thyroid extract.

In some cases of obesity and albuminuria it is thought that there is a suppression of thyroid secretion.

Suprarenal capsule has a function to perform in nutrition. Suppression of its secretions gives rise to melasma (dark discoloration of the skin), or bronzed skin. Addison's disease is a tubercular infiltration of the capsule. Symptoms: skin discoloration, progressive anemia, and asthenia, ending fatally.

Testicles and Ovaries.--The removal of these organs in young subjects is followed by defective development. Boys remain boys; they fail to develop; their hair is thin and lacking in full development. In animals, the brain is smaller in those that have been mutilated.

Toxins in the Tissues of the Body in Standard Health.--As has been made plain in previous chapters, ideal health is a utopian dream; for the most perfect state of health which it is possible to attain carries a given amount of toxins in the blood and tissues.

Disassimilation means the breaking-down of cells; the result is the accumulation of debris, or waste, which is toxic, and it must be removed from the body as soon as possible. The blood contains a quantity of waste. The organism is adjusted to a reasonable amount of this poison--it is necessary, for it stimulates to action. But when elimination is checked and an oversupply is retained, then excessive stimulation becomes disease-producing. All parts of the body contain poisons. When nutrition is best, there is a balanced state of unorganized and organized ferments. Agreeing with what I have often said, health is only an approximate state. The body at best--under normal conditions--is a laboratory for building tissue, and necessarily becomes the receptacle of the waste and by-products, which are poisonous. An over-supply of toxins is liable to occur at any time from almost any indiscretion.

An extract of the tissues of the body will kill, if it should find entrance into the blood. When elimination is slow, the tissues carry more toxins. Exercise is necessary to force elimination.

It requires about one-fifth as much of liver as it does of muscle to furnish an amount of poison necessary to kill. Then it must be injected into the veins, or it cannot do harm.

Toxicity depends mostly on the nitrogenous matters.

The Toxicity of Urine.--An adult in health passes approximately three pints of urine in twenty-four hours. The poisons contained in the urine come from the food fermentation, and the waste products of tissue building.

Urotoxy.--A term invented by Bonehard to denote the standard of toxicity of the urine necessary to kill a kilogram of living substance. In order to find the toxicity of urine, inject a representative specimen into the veins of a rabbit, allowing it to enter at a uniform rate. When the animal is dead, the amount of urine necessary to kill should be divided by the weight of its body. This gives the dose necessary to kill one kilogram, or two and two-tenths pounds.

It is said that a man weighing one hundred and forty pounds secretes enough urine in fifty-two hours to kill him or kill his own weight.

The poisons in the urine, if not eliminated properly and if retained in the blood, cause many symptoms, a few of which are: sleepiness, headache, eczema, spasms, coma, overworked heart, arrested heart action.

The toxicity of urine may be inhibited by reducing the amount of potash salts taken in. A milk diet reduces the amount of poison in the urine; moderate exercise does the same. But if exercise or work is pushed to the point of great fatigue, the urine becomes loaded with the toxins.

The bile, gastric juice, pancreatic juice, and sweat are all poisons, to a greater or less extent, when injected into the blood. It is common knowledge that the expired air is poisonous. Investigators have found that in expired air there is a poison similar to ptomains.

It is reasonable to believe that the expired air must vary in keeping with the individual. The person who is living normally certainly cannot pollute his expired air, as one does who eats and lives in such a way as to keep his system poisoned with the toxins absorbed from a chronic state of intestinal putrefaction. This must be true of every other natural excretion of the body.

If the excretions of the body under normal conditions are toxic, then this toxicity must vary as health declines.

Auto-intoxication varies from the amount that exists in the physical and mental state known as health, to the amount that causes death. All the degrees between these extremes are states of

health.

To make my meaning clear: Alcohol is not a disease; it is a distillation from fermented grain--from starch. Grain, starch, bread, and alcohol are not diseases. If a man in health (standard health) takes small portions of alcohol, frequently repeated, he will gradually lose his power of coordination of mind and body. This gradation from full bodily control to a helpless lump of protoplasm is not disease; it represents different states of health. If the drunk man is diseased, what is the disease? There has been no entity added or generated. As soon as the alcohol is eliminated, the man returns to his former state--not suddenly, but gradually as he departed. If he eats grain, starch, or bread beyond his assimilative capacity, he develops certain symptoms of poisoning. Is not the man's state the same as that of his normal being, plus overeating? Surely nothing has been added--no entity has gained entrance; hence, if the drunk state, or the food-poisoned state, is a disease, then what is disease? Certainly not an entity, but a state of health brought on by any influence that increases, decreases, or perverts the state of man recognized as health. There is no such thing as disease per se. "Disease" is a word that should not carry other meaning than that a sick man is one whose health standard has been lowered by some external or internal influence which has disturbed nutrition.

If the influence is continuous, that organ on which the stress falls will take on functional, and later organic, change. Suppose the liver is the organ and is made to enlarge--is it rational to give special treatment to the liver? Is enlargement of the liver, or is hardening or atrophy, per se disease? Certainly not. The cause lies back in nutrition; the liver enlargement is merely a symptom.

The reader may extend this analysis to all the organs of the body; for it applies to all. The chronically alcohol-poisoned develop enlargement of the liver. The alcoholic poisoning is the cause. Possibly the enlargement has been brought about by the consumption of too much bread, starch, or sugar. Should the liver be taken out, or massaged, or drugged? Why? Would it not be rational to remove the cause, and allow nature to take care of the effects? Apply this theory to all organs and parts of the body.

Enervation is the principal cause of auto-intoxication, and it is sequential to overstimulation and any influence that uses up nerve energy.

When the body is enervated, functioning, both of secretion and of excretion, is lowered, which condition interferes with nutrition and causes a retention of excretions, resulting in autotoxemia.

Constipation is a common source of toxin poisoning. A few of the symptoms due to this poisoning are: headaches; a feeling of exhaustion; indeed, in chronic constipation is to be found the cause, or auxiliary cause, of about all the diseases caused by toxins.

Toxemia, irritability, monomania, delusional insanity, mania, epileptic convulsions, colitis, appendicitis, and many other symptoms, are brought on, directly or indirectly, by constipation and putrefaction in the lower bowels.

Overworked Organs.--It is obvious that overworked organs must fail to perform their functions, A stomach abused to the point of developing dyspepsia favors the development of poisons from food. An excessive intake of fat--butter, for example--favors the development of skin diseases. In nursing babies too much butter-fat in the milk causes deranged digestion. So much alkali is required to emulsify the fat that, unless the child can take fruit, a state of acidosis--scurvy--may develop.

When too much nutriment is carried to the liver, the hepatic cells are altered. If too much sugar is consumed, the liver fails to act upon it well, and the kidneys are forced to do vicarious work for the liver, by carrying out of the system sugar that cannot be utilized. The liver fails to act on the nitrogen, and the amount of urea is diminished.

Jaundice is caused by toxin poisoning, or by a weakened liver function from overwork or from obstruction of the bile-duct.

Cancer, hydated cyst, stone, catarrh, etc., are the results of years of wrong living habits-except the hydated cyst. This derangement is supposed to be caused by a parasite furnished by dogs.

An overworked liver and underworked lungs force extra work on the kidneys. When kidney derangement is to be treated, as auxiliary treatment the lungs and liver must also receive attention. If they do not, it should be obvious that failure to cure the kidneys must follow; for causes must be removed.

Icterus, or jaundice, is a toxic infection caused by an overworked liver, bringing on liver insufficiency.

Auto-intoxication from Enervated Skin, Lungs, and Kidneys.--The lungs throw off poisons--eliminate the volatile substances; but probably their greatest role is that of neutralizing poisons, such as tobacco, volatile drugs, and toxins from fermenting foods. Their action is not experienced unless respiration is normal and a sufficient number of red corpuscles are found in the blood. Breathing may be normal; but in anemia, dysemia, and chlorosis, oxygen starvation is experienced, and certainly there must be a failure to neutralize poisons which depend on a sufficient amount of oxygen.

The skin eliminates volitile substances. An animal varnished, shutting off elimination and radiation, dies in coma. The temperature falls; the urine becomes scanty; albumin and blood show in the urine before death. The same occurs if an extensive burn is suffered, or if the skin is covered by a disease.

To a certain degree the functions of the skin are inhibited by heavy underwear. It is a common thing to have consultants come in the winter wearing two or three heavy undershirts. In spite of this, they invariably complain of feeling chilly. The fact is that they dress so heavily that they suffer more or less as the varnished animal--namely, from suppressed skin function. Such subjects cannot be cured until they are rid of their bad habits--especially that of overdressing. These patients are always surprised to find that they are more comfortable in every way with the thinnest gauze than they were with all the clothing they could pile on themselves. The skin is a protector; when pampered and spoiled, it goes out of business.

Uremia is caused by the kidneys endeavoring to do vicarious work for the liver and skin.

Strong condiments, alcoholics, and toxins generally overwork the kidneys. When these organs are long overstimulated by overwork, they flag; and if they fail to carry off the urine--if they fail to separate the urinary elements from the blood--the excretion will be retained and uremia will be developed.

Lactic Acid Poisoning.--This poisoning takes place when breathing is shallow, or when from any cause there is oxygen starvation. In gastro-intestinal affections and diabetes this acid accumulates. This is the cause of so-called growing pains and polyuria in some children.

Acetous Fermentation.--This fermentation causes acid stomach, rheumatism, headaches, nervousness; in children, coughs, colds, enlarged tonsils, adenoids, etc.

Acetone or Ethy1diacetic or Acetylacetic Acid Poisoning.--This acid causes irritability. Unless controlled, it may lead to insanity. The breath is strongly that of ether or chloroform.

If this acid is suspected, a drop or two of perchlorid of iron should be allowed to run down the side of the test tube into the urine. The iron being heavy, it will go to the bottom and turn a brownish-red color.

Other acids are formed, but all those developments come from auto-intoxication, and will

disappear when the errors of life practiced by the patient are corrected.

We should get away from belief in certain diseases; for excesses of all kinds pervert nutrition and interfere with elimination. In this may be found both cause, effect, and cure.

7. Diatheses

Bad habits of speech and language are formed, as well as other bad habits. I have been in the habit of using the word "diathesis" in a reckless and meaningless sense. My only excuse is that I learned it early in my medical education, and continued to use it in the belief that my meaning would be understood better than if I should undertake to reform my language. Time has taught me to believe that truth can never be taught by fallacy, and so long as expression is fallacious it will hold thought to its dead-level.

The meaning attached to "diathesis" has varied. The general and prevailing idea has been that there are a tubercular, a syphilitic, and a cancerous diathesis. Since bacteriology has become the headliner on the medical vaudeville stage, and has been handing out "specific" etiology, the idea of diathesis is considered painfully deplorable. Notwithstanding the deplorability of the diathetic idea, the germ-theory advocates talk glibly of a universal syphilitic taint, and have appointed Wassermann to censor all suspects. After a blood test, if Wassermann nods assent, the doctor proceeds to medicate specifically; if he shakes his head in dissent, it is not final--oh no! The taint is suspected, and the victim is dismissed for a few months on suspended judgment. Like Victor Hugo's Jean Valjean, he must return and stand trial again and again. There is no hope of his ever being free from the sleuth hounds of persecution and prosecution. Neither the medical Sherlock Holmes' nor their victims suspect that the continual hounding builds in time the positive Wassermann reaction for which they are looking.

Taint, like diathesis, is never overcome; so what is the advantage of changing terms, if both carry an eternal fiat?

Diathesis, with a few, means a morbid temperament; and this definition is better than others. Hippocrates was nearer right than the mass of authority since his day. He declared that there were a diathesis of health and a diathesis of disease. But, as health and disease are two different phases of one state, there could not be a diathesis of health or disease; for neither is entitative--both being states.

Health and disease are different states of one and the same being. Perhaps the two states cannot be better defined than by saying that one is optimism and the other pessimism. One person believes in health and knows intuitively that it is his for the asking; another person believes in disease--believes that it is a heritage vouchsafed to him by divine providence.

To the discerning in physical as well as psychological health phenomena it is so plain that he who runs may read the truth; namely, that mind is the court of last appeal.

When the mind declares for health, health, and all that goes with it, will be realized. When the mind declares for disease, disease, and all that goes with it, will be realized. It should not be understood, however, that the mental declarations referred to are meant to be passive assumptions. Indeed not! The mind that declares for health believes that health is potential in life., and that, if the proper efforts are put forth, it can be realized. To make a homely illustration: Sugar is a potentiality of the sugar beet; but without effort--intelligent effort--sugar can never be a realization. Again, mind is a potentiality of brain; but unless the proper efforts for development are put forth, mind will not be realized. Passively to assume that health is positive and disease negative, and that by assuming the positive idea the negative must disappear, is self-delusion. Simply to assume that health is imminent, and will appear when its imminence is acknowledged, is pure, unadulterated delusion. Health must be the realization of properly adjusted means to ends. This state may be brought about fortuitously or by intelligent effort. It is not well, however, to trust to chance.

A belief in disease--a belief that man will be ill in spite of his best endeavors--is fatalism. Germs are everywhere, and that man cannot escape the disease they create is the attitude of the medical mind today. Watch the priests of this belief in convention assembled. Their wise deliberations are carried on in a cloud of tobacco smoke. One of their gods--namely, Lord Nicotine--goes before them "by day in a pillar of cloud.. and by night in a pillar of fire," in their search after truth. These priests of modem medical science are protected by their gods of sensuality, who move before them in pillars of smoke, fire, booze, and food--eating to keep up their strength. These gods do not abandon them "by day . . . nor by night, from before the people." And their constituencies stand for it. Great are the people, Selah!

As society stands today on the subject of health, the professions of religion, law, and medicine have declared for disease. And they should rejoice at their success; for disease is universal. Jails, penitentiaries, insane asylums, alms-houses, hospitals, sanitariums, sanatoriums, and, neither last nor least, the World War, all declare for the god of disease.

Only those with a philosophical comprehension will understand the significance of the above indictment. Those who have the proper understanding will know that to right all this world of error--disease--and its cause, will require much time; for health must be returned as it has been sent away-namely, by the slow process of evolution.

Is it not a fact that fear has been taught from the pulpit for ages? Fear of death, on account of the hell beyond, has caused a fear and belief in disease, because disease precedes death. Medicine has taught, and is teaching, with all the vehemence of sordid selfishness or stupid superstition, that disease is inevitable, with no escape by a route that is fraught with as many subtle causes for developing disease as there are schemes for immunization. All modem plans of immunization, except sanitation, are disease-building.

And what of law and order? It dare not take one step which is not squared on medical superstition. As much as it boasts of its erudition, and affects charity for the mental shortcomings of its weaker sister, medicine, its jails. penitentiaries, electric chairs, and insane asylums are built and filled on the authority of the preacher and the doctor, who censor the moral responsibility.

Our government gets its ethical eyes, ears, tongue, and opinions from doctors (medical dogma). Only a few months ago I saw a confidential letter from the Bureau of Foreign and Domestic Commerce of the Department of Commerce at Washington. The letter was for the use of the morning papers of Monday, March 19, 1917, and for the benefit of proprietary-medicine men, calling their attention to the rich field that China now offers for education in the patent medicine line. That country must have dropped back rapidly; for not long ago--twenty- five years ago--all our cities had skilled Chinese doctors. Is it possible that the medicine men of this country have run away from Drs. Sam Lang, Hooch Cooch, Ham Fat, and Wun Lung in so short a time?

That the readers may know with what zeal Washington is endeavoring to enlighten and benevolently assimilate the Heathen Chinese medically, I quote the last two paragraphs of the confidential letter:

> "Through judicious and persistent advertising, the natives are gradually being educated to the necessity of paying some intelligent attention to their ailments, and are responding remarkably well. For this reason it is not difficult to introduce a good article (proprietary drug) at a reasonable price, if supported by the right kind of advertising.
>
> The Bureau's report is devoted chiefly to sales methods and advertising, and the material presented on these subjects is new and important. Copies of the bulletin, which is entitled "Proprietary Medicine and Ointment Trade in China," Special Consular Report No. 76, may be purchased for five cents from the Superintendent of Documents, Washington, or from any district office of the Bureau of Foreign and Domestic Commerce. It contains twelve pages."

If, as prophesied by wiseacres, China is to be the future hope of republicanism, civilization, and the highest enlightenment, and if she is to pattern after the republicanism of today, it will be a case of "Hope long deferred maketh the heart sick." When in our imagination we see the present four hundred million Chinese, and the billions of their progeny that must follow before they can arrive at the stage of adopting even our medical and ethical superstitions; and then when we think of how long it will take the Chinese republic to give up the joy of forcing every other country to bow to it commercially before its ethics is evolved to the point of adopting the principle that in building others we build ourselves, hope is certainly deferred to such an eternity of waiting that it might as well die; for the realization is not for us nor our posterity.

It is not reasonable to believe that a people will escape the superstitions of the country from which they derive their inspiration. Obviously, then, the immediate future offers little hope for the retirement of disease--building beliefs and customs.

It is true that drugs have gone out of favor very rapidly in the last fifteen years, but the fundamentals on which health rests have not changed to more rational principles. Indeed, the medical mind has laid hold of bacteriology, which is a much more elusive delusion than any, if not all, of the profession's previous theories concerning etiology. With a new theory of causation, real cause, which should be largely intuitive--planted in the consciousness of man by the law of self-protection--is no longer of any use. Literally translated, the new law of cause and cure reads: Man may do as he likes; his acts count for nothing; if he is ill, a microscopic germ has attacked him, and the cure must be accomplished by a wise use of the cause. According to this theory, cause of disease is specific and entitative, and the cure and prevention must be specific and entitative. This being logically true, there is no excuse for the failure to cure disease, as is only too evident on every hand.

Modern medical science declares that disease is caused by a specific entity. If this declaration were true, therapeutics should be specific, and so certain that there would be no chance for disease to get a foothold. Certainly quacks and empiricists would have so little success, compared with established medicine, that no laws would be required to keep them from selling their inefficiency to an innocent and confiding public.

The germ theory is just one other false promise of vicarious atonement--a promise of immunization from the effects of broken law. If the offender will believe, and have a priest of the faith vaccinate or inject the immunizing agent (Savior) into his blood, he will be cured of all his sins.

With this superstition ingrafted on church and state, and even accepted by liberals, or those who pride themselves on having evolved out of superstition, what possible chance has a rational scheme of cause and effect--a rational interpretation of health--a real Philosophy of Health?

Before the nutrition of man's body can be advanced to a stable type--before man can build a state of health that will be dependable and allow him to develop his full efficiency--superstitions of all kinds must give way to truth. This is the truth that will make man free. When will it come? When!

Meanwhile we shall be busy with our pick and shovel, doing what we can toward leveling this mountain of error that stands between man and his health and normal development.

Probably apologies are due for such a lengthy digression from disturbances of nutrition. But is it possible to digress from the subject of nutrition when showing up fallacy? It is to be hoped, however, that this digression will be found potentially laden with enough side illumination on subjects the bearing of which on health is not well understood, to justify the liberty--or perhaps I should say outlawry committed against the writer's art.

To resume the subject of diathesis: It appears reasonable that a continual increase or decrease of physiological functioning must modify structure to correspond; and when structure is

changed from the effects of use--continual functioning--then it is transmissible, and not before.

The athlete can transmit as much of organic change as he has brought about in his nervous system. Not his muscles; no, he transmits nervous change--a potentiality--an ability to become an adept in athletics.

Organized skill transmits potentiality. Organized skill means that nerve- and brain-cells have taken on a memory that is transmissible in potentiality. A Webster transmits potentiality of brain. But such transmission does not necessarily mean that his progeny will be above mediocrity; for brain potentiality may be the only transmission. The nerve centers that furnish will power to work, concentration, capacity for continuous effort, may have been abused in the senior Webster to the point of degeneracy, and therefore the young Websters lack power to labor enough to bring out their mind potentiality.

The rule is that the masters in art and science do not leave children who represent them. One reason, perhaps, is that great skill comes to progenitors after families are begotten; and another reason is that great skill is the precursor of dissolution.

Great composers are near death physically when they reach their zenith. Is it strange that death should sing? Death should be the lowering of the curtain on the stage of life, at the close of the most skilled performance.

It would be strange for a Mozart or a Mendelssohn to transmit. But not so with great singers, or interpreters of their art; for the former are creators, and pay with degeneracy for their creative skill--in other words, they are consumed by their production; while the latter simply digest and function music, and may develop a transmissible ability to enjoy and reproduce.

Singers, as a rule, are not producers. A producer must climb the ladder of experience with educated faculties; and if he will give ear to the music of the spheres, he may be honored with a message to convey to his people before he dies. Those who enjoy what he brings may transmit the ability to enjoy to others. But the producer, the creator, pays with his life for his power to produce--and degeneration is not transmissible.

Brain is developed by thought. When a change in the structure of the brain is established from functioning, such change is transmissible.

Structural change from injury is not transmissible; for the change is not represented in the nerve centers.

The whole nervous system must be occupied more or less, directly or indirectly, in order to cause a structural change that is transmissible.

At conception, man has passed nature's quarantine and enters life with a clean bill of health. He may not be born in health; for, from conception to birth, he has time for vicious habits of parents or society to cause him to be born in ill-health.

Nature inhibits, and puts the stamp of sterility upon, the unfit--the degenerate. Conception means fit for birth. But each individual born brings into life with him family predispositions.

Disease is non-existent per se. Impaired health--a lowered health standard--is what we call disease. We cannot inherit disease; we do inherit predispositions, and these we call diatheses.

Diathesis means an inherited tendency to take on certain forms of disease. This tendency is divided into general and special. The general diatheses are scrofulous, gouty, and neurotic; the special diatheses are of the various organs of the body.

Because of the manner of living, habits, etc., certain organs are made to bear more of the burdens of organic life than others. If the extra work is uplifting--meets the approval of nature's

health censors--the transmission will be in keeping; if the overwork is organically vicious, the transmission will be in the nature of a diathesis; which means that the practice of ancestral habits will cause an early breaking down, and disease peculiar to parents will develop in children when the habits of parents are adopted.

The tobacco habit of parents will show in children as a type of nervousness with lowered resistance. The children of inebriates are born with the nervous diathesis. Children born of parents who suffered from stomach, liver, kidney, bowel, or brain diseases inherit a diathesis to correspond. If the children fall in with the habits of life peculiar to their parents, they will develop similar organic derangements; if they take up other habits of life--habits and customs which throw the weight of their enervating influence on other organs--then the predisposition--the organic diathesis--will not manifest, and perhaps will never have heavier burdens laid upon it than it can bear. However, if the organism becomes generally broken down, and enervation and autoxemia become pronounced, then the organ with a diathesis may lend its influence in complicating the case.

Organic diathesis is the only way to explain why people develop different organic diseases--why one develops a skin, another a bowel, a heart, a stomach, a liver, a lung disease, or a disease of some other organ of the body.

This is the only rational explanation of the fact that one man may drink barrels of whisky and continue to live, while another may take on liver disease, or develop an alcoholic neuritis, and die in early life from only a few years of tippling.

The man who has a liver diathesis develops liver hyperemia soon after developing the alcohol habit, while the one with the nervous diathesis develops neuritis in a short time after taking on the drink habit.

Achilles had a vulnerable heel, and most people have a vulnerable organ. This we call. predisposition or diathesis, Knowledge of predispositions is valuable to parents; for, if they act upon such knowledge, they can educate their children into a safety health knowledge.

A general survey of the field of medicine justifies one in declaring that there are scrofulous, nervous, and gouty diatheses, which are constitutional, and the organic diatheses, which are special.

Scrofulous--Adenitis--or Tubercular Diathesis.-- In the light of the truths set forth immediately precedingnamely: that all transmissible alterations must be organized in the nervous system--the subject of diathesis can be understood to better advantage, Scrofula--adenitis, or tuberculosis--is an organic change in the structure of the lymphatic glands. The cause of the change is chronic toxin poisoning. The special toxin is the alcoholic or acetous from sugar and starch. This causes a chronic catarrhal or inflammatory state, which defined means lost resistance--an enervated state. In this state the body fails to adjust itself to heat and cold; the radiating power of the skin is disturbed, and the mucous membranes are made to do vicarious service. This overworks or over-stimulates, and, as a consequence, the membranes exude--secrete an exaggerated quantity of mucous.

The hypersecretion of mucous serves a double purpose: that of excretion and, by coating the mucous surfaces, that of preventing the absorption of poisonous toxins. In this the lymphatics assist; for one of the functions of these glands is to arrest poisonous toxins and neutralize them. When the glands are forced to do excessive work in this line, they take on a state called adenitis or lymphangitis--a catarrhal state of the lymphatic glands. Like the mucous membrane, the lymph glands are made exceedingly sensitive to the influences of the toxins developed by putrefaction of animal proteins.

Characteristics of the Scrofulous Subject.--Scrofulous children are often very good-looking. The skin is white, soft, and beautiful; the eyes are adorned with long, exquisitely curved, and

flowing eyelashes; and the brow is mounted with a splendidly curved line of hair to match the eyelashes. The legs and arms are plump and prettily formed; but the flesh is soft and flabby, and, when youth is past, the flesh of such subjects sits on their bones much as a saddle fits a sow. The nose is often large and broad; the hair of the head long and beautiful in texture.

The young scrofulous subject, at or even before puberty, is troubled with acne, and often most beautifully featured young women and young men develop the most disgusting types of "acne vulgaris." Girls develop leucorrhea, and are often sexually precocious. Boys develop sex-neurosis.

These children have enlarged tonsils, adenoids, and enlarged submaxillary and cervical glands.

Slight inflammation of the eyelids is common. Often the edges of the eyelids are red, and discharge a secretion that glues the lashes together slightly during the night.

Glandular inflammations, that come and go, are common. When the glands once suppurate, they are inclined to repeat. It is hard to say when they are cured, as they appear to recover fully, but a week of indiscretion in eating is quite enough to start up the inflammation again.

Scrofulous children develop the first symptoms of catarrh soon after birth. The very bad habits of frequent feeding--every two or three hours--and giving sugar and starch, produce catarrhal symptoms. A cold is the first symptom; and, if errors of diet are continued, glandular involvement soon follows. Tonsillitis and adenoids ensue as a matter of course, and then all the diseases peculiar to childhood, in sequential order. A large percentage of these children die before teething is finished. Those who do not, have a history of many sick spells, besides the regular diseases of childhood. Those who have the diathesis most profoundly established, and whose anatomical construction favors the development of pulmonary tuberculosis, will go down with this disease about the end of the development period.

The age when bodily development is greatest is the most important age in life. This is the age when resistance to inherited tendencies is held back. If understood, and rational means were adopted for overcoming these tendencies, many who now go down and out with scrofulous diseases would improve on their ancestral stock by giving evolution a chance to bring out previously suppressed potential energies. Inherited diseases, or inherited predispositions to take on disease, mean ill-balanced anatomical construction; and defective construction must mean defective functioning. To illustrate: Environments and habits which neglect lung development and cause under-development predispose to tuberculosis in scrofulous subjects, but in those who have the nervous temperament unduly developed, brain diseases, insanity, or some form of nervous trouble will be developed.

In those cases where bone development falls below ideal physical construction--where eating habits, or geographical location, fail to supply material for proper bone development, or where drugs have been used which derange the nutrition of the bone--tubercular bone diseases may be looked for, such as caries; also tubercular inflammation of the synovial membranes, burse, and membranes of the brain.

The scrofulous diathesis is a constitutional state favoring the development of inflammations of all kinds.

In just what way a given scrofulous subject will be afflicted will depend on, first, his anatomical build; secondly, his habits; and, thirdly, his domestic and civic environments.

He may develop tuberculosis of the lungs when construction favors it, and the eating and other habits develop the necessary toxin poisoning.

If the most vulnerable point be the liver, heart, lungs, kidneys, skin, bowels, brain, or parts of less importance, indiscretion in the indulgences of appetite and passion will turn loose the sleuth

hounds of toxins, whose business is to seek out the most vulnerable gland or organ in the body, and there set up an inflammatory state, the severity of which must depend upon the bodily resistance and the continuance of the exciting cause.

The cure should be obvious to the most stupid; namely, to build up lost resistance by rest, and to correct the sensuality.

It is obvious that the state of resistance--the state of enervation--must range from one nearly normal to one of almost no resistance at all. The question of cure, then, must be a question of determining to which class the patient belongs. If to that of lowest resistance, the possibilities of recovery are nil. A perfect treatment will secure the most comfort and the longest life possible, but no cure. Not so of the type representing almost full resistance. Those in this class can be cured when in the first stages of almost any disease, by simply correcting their daily habits.

It is quite obvious that physicians whose experience is confined to large clinics filled with charitable subjects--patients of the ne'er-do-well type, the unsuccessful and scrofulous types--will have quite a different opinion, as to the curability of most chronic diseases, from that of the physician whose practice and experience have been confined to a more successful and higher physical type of people. There are two classes of patients who have low resistance. The first comprises charitable cases, found in county hospitals and public clinics. The second class is composed of the overindulged, pampered, and spoiled who have gone the pace--lived such a sensual life that an otherwise good constitution is reduced to no resistance whatever. The former class cannot be brought back, because the degeneration is too complete. The latter class cannot be brought back, because habits are more powerful than the will. Add to these hopeless cases a treatment that is degenerating, and then a consuming fear, which is commonly imparted, and there is reason a-plenty for building the pessimism of the average professional man.

Those physicians who look upon syphilis as one of the most dreadful diseases on earth have gained their experience by seeing and treating scrofulous--syphilitic--subjects of very low resistance. They have made the mistake of breaking down what resistance the patient had left by mercurialization, developing a scrofulo-syphilo-mercurial type that cannot be cured because of the physical degeneration which existed before the syphilitic infection. The force of these statements will be better understood if through the mind's eye there may be contrasted the scrofulous subjects, from the most resistant type to the type too low to throw off disease, with a non-scrofulous subject who, when in full health, cannot be infected.

The immune people--people who have no scrofula, and who fail to take on disease, no matter how much exposed they are--resist infection from specific diseases until their habits of life lower their resistance; then they frequently become infected.

Scrofulous subjects should be in the open air and sunshine as much as possible; and, if they desire comfort and a reasonably long life, they must be moderate in all things.

Gouty Diathesis.--This constitutional derangement--nutritive perversion--favors the development of arthritis, herpes, gout, inflammatory rheumatism, neuralgia, stone formation, and all skin derangements of a nervous type.

It is the vital temperament that takes on these diseases when toxin-poisoned.

The gouty diathesis belongs to the mental temperament.

The peculiarity of the gouty diathesis is that, as the intellect develops and becomes predominant, nutrition grows correspondingly poorer.

The scrofulous subject is slow and sluggish; he has soft, flabby muscles, cold feet and hands, with oily, doughy skin. The gouty subject is nervous; his flesh is firm, his skin dry, his hands and feet dry and hot. The skin of the body is inclined to be dry, and often sheds a scurf that will make black underwear quite white from the amount thrown off.

The gouty subject may be very lean, and he may be quite stout or fat. His hair may be thin, but seldom, if ever, to be compared in thickness, softness, and beauty with that of the scrofulous subject.

The gouty subject loses his hair early and becomes bald young. Great beards belong to the scrofulous diathesis.

The gouty subject is inclined to be melancholy, but he is often a comedian. He is bright, intellectual, witty, sharp, but in disposition more sad than otherwise.

The young gouty subjects suffer much pain in their sickness. They have headache, and are often sent to bed on feast-days, because of the bad effect that the excitement of preparation for the day has upon them. The scrofulous subjects go to bed the day following the feast, because of the overindulgence.

While yet young, the gouty subject often becomes asthmatic. In middle life and beyond, if out of health, he will have a wheezing in the lungs--sometimes a bronchial asthma. Heart asthma belongs to the gouty.

In babyhood convulsions are common. The babies of the gouty diathesis are nervous; when quite feverish, there is a tendency for congestion of blood to the brain, bringing on convulsions.

The gouty are inclined to have dyspepsia, headaches, constipation, piles.

The gouty are very fond of sugar and eatables made up of sugar, starch, and fat. Such eating often leads to enlargement of the liver.

Eating too much of rich and highly seasoned foods causes the formation of toxins of the fatty, acid type. The absorption of these toxins causes the asthma and bronchial irritation mentioned above, because of the elimination by the lungs; the breath is made offensive; the odor from the skin is bad; the skin becomes eczematous, because of the material eliminated by it.

Nutrition of the cells is perverted, and elimination is imperfect. This changes the fluids of the body.

Sugar in the urine of the gouty indicates that it is not consumed, but remains in the blood. This is the diabetes of the arthritic.

The gouty subject digests nitrogenous foods badly; hence there is present in the urine an excess of phosphates, uric and other acids. Oxalic acid helps in forming stone in the liver and the kidneys.

The gouty and scrofulous diatheses are sometimes mixed. In such case there must be a mixed pathology.

The gouty subject may develop an asthma, if the lungs are the most vulnerable organ; headache or migraine, diabetes, stone in the liver or kidneys, whichever of these organs happens to be the least resistant.

The gouty diathesis differs from the scrofulous in that tuberculosis is not likely to develop in a gouty subject. If it does, the disease is not inclined to develop a severe type, and it has a tendency to take on a spontaneous cure--take on a fibrous character, which is curable.

To sum up: Health is divided into good and bad. Health, then, is a generic term representing two states of the body, which are ill-defined except in pronounced types. These we call health and disease, which are species of health. The species disease is divided into races or diatheses, and diatheses are organized predispositions.

The scrofulous and gouty diatheses have been developed by influences continued long enough to change the fundamental cell structure. When the structure is changed, the function must be in keeping.

Gouty diathesis means that part of the human family has been subjected to influences which have produced a physical state functioning in a given manner under normal influences. When under abnormal or disease-producing influences, diseases are all linked together, taking on like nutritive changes.

All diseases developing under the influence of the scrofulous diathesis have a like basis, and must receive the same general treatment.

The same is true of the gouty or arthritic diathesis.

8. Heredity

"The fool inherits, but the wise must get."

The fool inherits. Indeed, the man who waits for a dead man's shoes is waiting for an empty inheritance; for the only inheritances worth while are our static possibilities, which are racial, ancestral, and parental.

The wise man cannot leave wisdom, but he does leave mental potentiality. But if his children succeed to a like wisdom, they must buy and pay for it as he did. The only advantage the children have over their parents is that they may see a little more clearly, and inherit a greater attention and a more persistent purpose. Yet they may not inherit industry. Power for work may be exhausted in the parents.

Indeed, children from wise parents may fail altogether in accomplishing anything; for they may be rendered impotent because of unwise care. When the habits of children are forming, they may have an abnormal conceit, selfishness, envy, jealousy, irritability, or hypocrisy developed that will more than offset any intellectual potency inherited. Careful training at the proper time will overcome these undesirable traits.

We inherit nothing except genus, species, and race. Even racial proclivity may be overcome in a few generations by change of environment; but much sooner by amalgamation.

To wait for money is to refuse to develop talent for securing it. To wait for talent to develop is to wait in vain; for we inherit only potentiality, which is an empty inheritance without cultivation. We inherit potentialty--not disease or affection.

The vital force, or vital energy, of the teachings of a generation or two ago has now given way to cause and effect--action and reaction--stimulation and reaction.

Man's type of body--his material construction--is fixed by heredity. He cannot get away from his genus, which is animal, nor his species, which is man. Man has many physical attributes which are as fixed as law; but his possible reactions are limited only by the variety of stimulants in his environment.

Species possess individuality, which is fixed and transmissible. Man inherits his ancestral type of body. The type has preserved its individuality throughout the ages so fixedly that men of all kinds and climes resemble each other.

The animal man has characteristics that are individual. He has two legs, and a foot on each leg; two arms, and a hand on each arm; a body which presents a front and a back; and, when he stands upright upon his feet and legs, on top of this body is a neck, and on top of the neck is a head. This is a common description of man that fits every member of the species. There are a common anatomy and a common physiology that fit every man, from as far back as man's

records run, down to the present. The chemistry of man's body is the sameyesterday, today, and forever.

The first step--evolution--out of the common, universal clay type is into races.

Naturalists are not at one in their division of mankind into races. Cuvier classified men into three races; Agassiz divided them into eight races.

A common classification is into five races; namely: the Caucasian, or white, race, to which belong the inhabitants of the greater part of Europe and western. Asia; the Mongolian, or yellow, race, to be found in Tartary, China, and Japan; the Ethiopian, or negro, race, which is found in Africa, Australia, and Papua (New Guinea and other Pacific islands); the American, or red, race--the Indians of South and North America; and the Malayan, or brown, race, found on the islands of the Indian Archipelago. Recent writers place the Malay, Indian, and Mongolian together.

Races divide into nations, peoples, tribes, and families.

Each departure from the common stock of species shows a specific difference. Each race has a personality all its own. The Caucasian race has a specific personality that differs from that of all other races. These differences are brought about by mechanical, physical, chemical, and psychological agents. The changes are brought about slowly. So strong is the force of physical heredity that it takes many generations to evolve into and out of the Roman nose, the potato lip, and the almond eye. Psychological changes move as slowly, if not slower. Look at our religious, medical, and legal superstitions!

Each subdivision of each race is marked by distinguishing characteristics.

Those with a cosmopolitan acquaintance can distinguish the nationality of the people whom they meet in their travels. If their education has been extended to a full familiarity with the inhabitants of any one country, a distinguishing difference will be found in those who have been confined to a limited section of that country.

Every country has its educated or intellectual, intelligent, and ignorant classes. These are not distinctions without differences. Intellectuality does not always mean intelligence; intelligence does not mean intellectuality, neither does it mean ignorance.

In our country we have a North and a South, an East and a West. The people in these four divisions have distinctive characteristics. 'There is a type called the "westerner," who is distinctive and unlike the "down easterner." And there is a westerner who is cosmopolitan in personality, and who is typical of all other cosmopolitan types.

These differences are brought about by intelligence, travel, and food. Causes for varying types of man at the beginning are certainly geographical, climatic, and food, as well as physical, influences. Climate and food are type-builders.

Psychology should not be left out of the list of causes of type-building. From now on this subject will hold a conspicuous place among causes that make for individuality.

Religion has stamped its influence on the face of humanity. A close student of physiognomies can read the ancestral type of religion in the faces of humanity today. This shows what part the mind has played in molding the body.

When we consider that a fixed physical development can be made to function in such a way as to change the individuality, we are ready to believe that there is nothing fixed from a hereditary standpoint, except the elements and genus or type, and the possibilities of types. The possible types into which the elements may be molded are infinite. This being true, it should be easy to see that there is little which is bound to the hard and fast lines of heredity, and that heredity, outside of genus and species, is more an accident than a well-ordered plan. If a child takes after

its parents, it will be due to postnatal, rather than to prenatal, influences. On this subject I have experienced a most radical change in belief in the past twenty-five years. I certainly hope I am not retrograding.

An adopted child from a criminal family will show as much advance in a good family as a child from a good family will show degeneracy when brought up in a bad family.

As function precedes structure, it must be obvious to the mentally discerning that a change in function must be followed by a change in structure.

But when does a change in function take place? Only when function is changed. We may profess a change in belief--we may preach our belief--but if we do not live it, we do not function it; hence there is no structural change. We may believe in diet as a remedy for all our physical and mental defects, but if we do not live our beliefs, we do not reap the benefit of our beliefs.

We see the proof of this in so-called criminals. They are put in reformatories; they are made to conform to the laws of reform; they talk it and act it, but do not think it; hence no structural change takes place, and, when the acid test comes, they are found to be the same.

When the Mongolian takes up his abode in our country, and proceeds to establish the habits and customs of his native country, and lives them daily, he continues to function Mongolian-like, and builds a physical structure to match. If he leaves Mongolia behind, and thinks, eats, and lives the American life, his structure changes to agree with his change in function. The physiognomy of structure is what I mean; for, as a matter of act, a real change of the fundamentals of genus requires much time and many generations. The foreign-born citizen who lives the life and thinks the thoughts of his native country never becomes a citizen in love and sympathy; he remains an alien to his adopted country so long as he lives.

It is impossible to amalgamate and assimilate disagreeing functions. Universal amalgamation will follow universal like functioning--like sympathies.

In matters of religion, we often see orthodoxy affecting reform--pretending liberality; the leaders struggling to reconcile their old beliefs to new ones, even going so far as to compromise on strong differences. Among the lay orthodox many live, act, and talk in such a way as to make it appear that they have experienced a change in belief. But there is really no change; for below the surface they function orthodoxy, hence preserve a structural physiognomy to correspond.

A pretended belief will bring no change. Belief must be lived; then a change in structure that is potentialized. follows, and this is inheritable. But please understand that it is inherited as a potentiality, which, if it be cultivated, may develop, but which may never arise as a material attribute.

When organs function crime, it is because the stimulation which causes the functioning calls out this particular effect. Change the stimulation, and we change the functioning--poisoning; for whatever toxins there are in the system cause a functioning to correspond.

Crime--Cause of

Crime is a disease brought on by bad habits. It is made up of such elements as a sluggish liver, brought on from overindulgence in alcoholics; or too much sugar, fat, and starchy foods. Such habits bring on discouragement, amounting to pessimism and a reckless indifference to consequences. These consequences may be reversed in the same subject, showing that good and bad depend on the kind of stimulation used in exciting reaction.

The intoxication from starch poisoning causes the building of pessimism. Gloom leads to recklessness and a desire to be thrilled by new sensations. Normal sensation is dulled when starch poisoning is pronounced, and common appeals, such as good advice from parents or guardians, have no influence.

This dulling influence extends so far as often to strike a withering blow at the fountain-head of intelligence--namely, attention. The power of attention--power of continuous attention--is the secret of intelligence and intellectuality.

The Influence of Toxin on Mind

A brain rendered dull by the toxins of indigestion, or from intoxicants of any kind, loses its power of attention; hence an otherwise bright mind is consigned to ignorance or crime, or both. If the child is idealistic, the toxin drunkenness may cause it to dream fanciful or grotesque daydreams. If the sensual elements of its nature predominate, its dreams may be such that, when materialized, they are called crimes. Toxins acting on the brain cause it to objectify in keeping with its type of thought; and the type may be sensual or not.

When attention is capricious, irregular, or spasmodic--in a word, when it cannot be sustained--knowledge must be fragmentary. Such a mind cannot be philosophical. It may be scientific, but it cannot be depended upon to work out the relationship of fundamental principles. The unity of all things is beyond the mental horizon of all who cannot build a reliable attention.

Importance of Attention

Nothing but the organizing effect of sustained attention can build for the future--can build for transmission--heredity; and this legacy is potentiality only.

Food poisoning is always marked by sluggishness of the brain as well as the other organs of the body. Every organ is represented in the brain, and the reactions from the impulses--be the stimulation from food or whatever the cause--will be in harmony. If the brain is made brutal by toxins, its functions will be in keeping.

The toxin-poisoned--the inebriate--acts from the promptings of his grosser sensations--his animal nature.

Change the life, and the functioning changes. Remove all influences that cause an undesirable reaction, such as toxin poisoning, and we see a desire for the good and a desire for the best supplanting a desire for the bad and a desire for the worst.

This being true, the atmosphere of despair thrown around people because of the general belief in the heredity of depravity should clear up, and hope and intelligent action should from this time on manipulate the scales of justice, wisely placing the blame for crime where it belongs.

Society must become intelligent enough to direct and control the functioning of its sick members--the sick in mind (the criminal) and the sick in body (the diseased). And, as function is the author and builder of structure, society must perfect criminal man, if he is ever perfected--must cure man, if he is ever cured-for nature executes the unfit.

Degeneration Is Not Transmissible

Wrong life, causing wrong functioning, is disease. All crime is disease. If continued, it ends in degeneration. Degeneration is not transmissible. When a man becomes an organic criminal--when a disease becomes organic--the God of Genesis steps in and declares: "Thus far shalt thou go, but no farther!"

Genesis means creation. It means that old things have passed away and new things have come into existence,

Birth and death are antithetical. The one comes into life; the other passes out with its infirmities.

What a hell life would be, if all the imperfections of parents could be visited upon children!

Why Criminals Do Not Reform

Why is it apparent that crime and criminals herd together? Why do not more criminals reform, if crime is functional and not organic? Because they continue to live in the same way. After they have served a term, they know no more of correct living than they did before; for in prison they are fed haphazardly. Perhaps the limited supply of a very plain food is all the benefit they get in the line of diet. Thus they return home to their heavy, gross eating, toxin poisoning, and the depressing effects of being pointed out as ex-convicts, and too often hounded about the country by petty officials of the law, who appear to take a delight in branding them as criminals and setting all the dogs of gossip howling at their heels.

It is difficult to say which is the greater criminal--society or society's victim. Truth declares that they are related as cause and effect.

There is little chance for a bad man to reform; for the undiscovered bad man in every community appoints himself a committee of one to see to it that the ex-convict gets what is coming to him.

Ignorance makes man a criminal, and ignorance keeps him a criminal.

The good and the bad in all mankind are purely functional. If we react good, it is because the shock that caused the reaction was good, and vice versa. We must get away from the ancient and should-be past belief in the entities good and bad.

We are; and the fact that **we are** is proof that **we are fit;** for otherwise we should not have passed through the portals of life. Inasmuch as **we are,** and **are fit,** our functioning will be proper if the cause of our functioning is censored properly and the right stimulation is used to bring about the reaction (functioning). Our reactions are just what they must be; for they are in keeping, and under the guidance of the laws of cause and effect.

If we would have ideal effects, we must bring them about through ideal causes.

Who can be so childishly silly as to expect figs from thistles--good from bad training? So long as the fundamentals of our ethics are false, when will the superstructure become true and ideal man-building?

Man is man. He is a microcosm--a duplicate of the macrocosm. He is neither good nor bad. He acts and reacts on his environment in kind. If he can so shape the impulses which cause him to react as to build good--the truth--he will soon function truth.

If the influence that causes him to react is good, beneficent, and worthy in every way, his reaction will be in kind. If the influence is bad, selfish, and unworthy in every way, his reaction will be in kind.

The idea of heredity-meaning the inheriting of good and bad--with all the disqualifying, soul-stifling, and health-destroying beliefs and customs that have grown up about this belief, should be given up--should be discarded; for it is a disgrace to this age, and belongs with the devil--with demonology. Indeed, it is one of his majesty's children. In the place of that fallacy should be put man in a state of neutrality. Man should be recognized as an unmoral being who is capable of being molded into truth or fallacy--law-abiding or criminal, loving or hating, healthy or diseased, wise or ignorant. It is all a matter of teaching.

To sum up the foregoing, let us assume that when a child is born it comes with a clean bill of health. I mean health; and the word includes what is ordinarily understood as health of mind and body, free from crime or criminal nature. When a child is born with venereal infection, the infection has taken place since its conception.

The Possibilities of a Child

A child at birth is a highly sensitized lump of protoplasm--human clay--which is made up of cells. A cell is composed of a central spot, or nucleus (small nut), and a body. This cell is the protoplasm out of which the human body is built.

At birth a child is an undifferentiated lump of protoplasm, possessed of ancestral form which binds it to its genus, which is animal, and species, which is man. It is no more a thinking man than the young sprout or twig is a tree with developed fruit.

The lump of protoplasm is potentially a human being. Whether it is to develop ideally or not depends upon the artificer--home and society.

A lump of potter's clay has all the potentiality needed to be brought into the most exquisite forms; yet, if it falls into the hands of a bungler, it may end in some grotesque shape with neither order nor reason.

If there are few expert artificers in the field of art who can send out perfect specimens, when in the privacy of their studios they may try and try again, we certainly should not expect that people without the slightest knowledge of man-building could mold a lump of human clay--protoplasm--into a perfect human being. Indeed, should we not expect just what we see-namely, nearly every finished product misshapen in some way?

If the molding is started wrongly, it may be gone over and covered-up; but the scars are left.

Why should the majority of human beings know how to rear children successfully, when they have but little common-sense in matters of far less importance?

The bungling work of stupid parents and teachers is charged to Providence. That a child inherits its faults and failures is accepted by law and society; yet that same law and society give themselves the double cross by holding the victims of heredity responsible for their inheritance.

When the best intellects of the day confuse facts as they do, what hope can we have that we shall ever evolve out of our chaotic state?

If children evolve undesirable traits, is there not more prospect of bringing about a reform with beliefs and actions based on the hypothesis that every child is a new and perfect being at birth, than by acting on the old hypothesis that they are cursed before birth by an inheritance out of which they can never be trained?

If training is worth anything, it should be started at birth. What kind of training can a child get at the hands of a father and mother who lack training, and whose stockin-trade is a lot of bad habits, kept at white heat by a cultivated sensualism? When the offspring of such unions go to the bad, it is from inheritance! Is that so? Then training has nothing to do with these degenerate children?

We must accept or reject the idea that children can be taught. If we accept it, then we must not excuse our failures and charge them to Providence.

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5. Nervous Reactions

As had been stated before, all acts of the living body are reactions. Every movement of our bodies, either voluntary or involuntary, is a reaction--the result of shock or stimulation--and is aroused by an external cause. Voluntary movements are directed from the mind--the mind wills the movement. Voluntary movements may become so automatic that it is difficult to distinguish them from involuntary movements. For example, the players on musical instruments seem to perform without thought. They read music, and their fingers find the notes on the instruments without hesitation and without a mistake--and that, too, so rapidly that it does not appear to be possible that the acts can be the results of mental deliberations.

The same may be said of reading. The person of educated mind will take up a book in which its author sets forth new and novel ideas regarding an old subject, or perhaps presents new ideas, or ideas contrary to those of convention; and almost instantly, without apparent time for analytical thought, the author's premise is interpreted and compared with the fundamentals of knowledge, and the book and its author are placed where they belong. False or true, the reasons for either are forthcoming and final.

The mind becomes so familiar with the foundation of knowledge that it detects an error on sight; yet it does reason, but with lightning-like rapidity, or, what is more true, with the rapidity of thought.

Every act (and thought is an act) is a reaction from an external stimulation. The effects of stimulation are of two kinds. In some the full reaction may take place at the point of stimulation; others, more complex, cause multiple reflex actions. The impulses are sent to the center from the surface terminals by the centripetal (afferent) nerves, and the irritations are reflexly sent from the center over the centrifugal, or efferent, nerves.

The afferent nerves are the nerves of general sensation; also of special and visceral sensibility. impulses of an irritating character imparted to those nerves result in changes of a psychic, sensory, motor, vasomotor, secretory, or trophic character.

Psychic changes may be produced by fear, anger, happiness, etc. Fear may be caused by a telegram conveying bad news; anger, by anything capable of producing anger.

Sensory changes may take place. For example, if ice cream is eaten too rapidly and the stomach is chilled too suddenly, intense pain or severe frontal headache may result, which will pass off as soon as the nerves of the stomach are relieved from the irritation of cold. Headaches are often the result of indigestion, constipation, etc.

Motor changes take place when toxic or other stimulation has become habitual, until tabes dorsalis or other forms of degeneration manifest themselves.

Vasomotor changes occur when alcoholics, tobacco, coffee, or other chemical toxins are used over a long period of time; or when constipation of long standing has caused systemic infection by forcing absorption of the toxins of putrefaction. Sclerosis, or hardening of the arteries, is a vasomotor change.

Secretory changes are produced by many forms of irritation. Pronounced pain, anger, or fear inhibits secretion, stops digestion, and causes poisoning by modifying the fluids of the body. Pleasant thoughts, renewed hope, or success revive secretions and excretions, and transform the invalid into full health.

Trophic or nutritional changes are caused by any and all influences that irritate, depress, or pervert the nervous system. Any influence that puts the mind at rest will improve digestion,

establish secretions and excretions, and transform the invalid into health. Those who have cultivated a fear or worry habit must be cured of the habit, after which they may continue in health.

An irritation may spend its force locally, as an escharotic (caustic) may cause an ulcer without awakening reflexes. The sun may burn the skin brown without causing a reflex irritation.

A poised mind may be abused--subjected to abuse that is looked upon as insulting--without having its equilibrium disturbed.

A local irritant may cause a sensation at the nerve center, which stimulates a motor impulse, and the part injured will instantly be removed from the point of irritation.

An irritation may cause a multiple of reflexes. A fright may cause vomiting and purging, a chill, headache, heart palpitation, and other vasomotor changes, as well as perspiration. An injury may cause many--or, if severe, only a few--reflexes.

A simple reflex is produced where the impulse from the point of irritation passes to the nerve center and back, or passes to a multiple of points.

Stimulants which act as builders of disease must be continual. For instance, tobacco, when first used, causes great prostration and vomiting. The nicotine is absorbed in the mouth; it enters the circulation and is distributed to an parts of the body. If the boy or man, at his first experience, were no larger than a cat or a kitten, the amount of nicotine required to prostrate him temporarily would be sufficient to kill him. His size is what saves him. The fact that the boy does not die is no proof that nicotine is not a rank poison.

The continuous use of nicotine establishes a toleration, but at the cost of a slow and continuous loss of nerve energy.

Those of low vitality, brought on from chronic tobacco poisoning, break down and die of some form of acute disease. No one ever suspects the truth that, if they had been possessed of the energy they have wasted on stimulants, they could have survived the disease.

This truth is not known, and will probably be disputed by the world of tobacco-users. But it is simply a matter of mathematical calculation. Tobacco is a poison. It uses up nerve energy, It requires nerve energy to resist shock, and, if a given shock is too great for the amount of energy possessed by the injured man, he will die. If he had been possessed of the amount thrown away on stimulants, he would have had enough to withstand the shock.

This is true of any stimulating habit. The inebriate, or the individual with used-up nerve energy from other stimulants, will go down under the influence of a disease that otherwise would not cause death.

The nicotine poison affects the mind by dulling ambition; it affects the sensory centers, and causes more or less loss of taste, smell, sight, and hearing; the vasomotor system is deranged--the heart is overworked, and the arteries are hardened; the trophic or nutritional system is deranged, and the subject loses weight--or, on the other hand, obesity may develop.

So long as man has the balance to the good, he can boast that his habits are not injurious to him. But what about sickness and the death-rate between thirty and sixty-five years of age? Why do more than twice as many men die between thirty-five and forty-five as between twenty-five and thirty-five, and nearly three times as many as die between forty-five and fifty-five? Because the ten years from thirty-five to forty-five is where man comes to the parting of the ways of life. He must let up on his habits or die.

Why should men in the prime of life be prostrated and die of acute disease? Lost resistance is the answer. What causes lost resistance? Persistent, excessive stimulation.

Acute disease cannot down a normal man.

When prostration comes, if a little of the wasted energy could be restored, it would make recovery possible.

To restore lost power reestablishes immunization.

When threescore and ten comes, if habits have been such as to conserve energy, life will be prolonged, and the sane and rational faculties will make the enjoying of life possible.

People who are healthy are normal, and normal people have the faculty of enjoying, be they twenty or a hundred and twenty years of age. Disease is what ruins life; for it means discomfort in mind and body. To enjoy, one must hold the right perspective of life; and this is impossible for those who are drunk--toxin--poisoned.

Dotage and driveling belong to disease--not to old age. Nature never makes a clown of old age. Man builds his own grotesqueness.

The lay reader must keep in mind that shocks of every kind are stimulating, and that stimulation to the point of awareness is overstimulation; and, when this is persisted in, organic change (degeneration) sets in; then the output of sensation is abnormal, and means mental and physical disease.

This is why men in the prime of life become prostrated with acute diseases, and die, or develop such chronic diseases as tabes dorsalis, diabetes, Bright's disease, arteriosclerosis, heart disease, epilepsy, et al.

There is but one reason for disease, either of an acute or of a chronic character; namely, lost resistance--enervation--from habitual overstimulation.

Tobacco, alcohol, coffee, tea, overstimulation from food, wrong food mixtures, sensuality, lasciviousness, overworked emotions, misanthropy, a life of selfishness and dishonesty--any one of these stimulants, used continually, lowers nerve resistance, causing man to become vulnerable to unusual shocks, and at last to the usual shocks of his environment.

The difference between health and disease--between a normal state of resistance and enervation--is that health, or normal resistance, reacts and readjusts from unusual stimulation or shock, and is so adjusted to local environment that its stimulating effects are not noticed--they are subconscious, as they should be if ideal health is desired; while disease is that state of health marked by lost resistance, with little power to react.

A man is not old until the stimulating effects of his environment are too shocking for him--not until he loses his reacting and readjusting power.

Reaction is the body's protector; pain is an educator, a protector. When we listen to the voice of pain--the call of reason--and remove its cause, we conserve our powers and lengthen our lives.

If fear of disease and death is the stimulant that is using up resisting power, then the cause of fear must be removed. If the cause is the bad habit of consulting doctors who frighten--who cause fear--but who do not impart an antidotal knowledge, then such doctors should be avoided.

People should be shown the danger they are in because of the life they are leading, and then have a way pointed out to them that will lead to health. But brutally to tell the sick what their disease is, and then to add that recovery is doubtful or impossible, is quite enough to convert a curable disease into an incurable one.

When all the people shall know that the making and the curing of disease are in their own

hands, then schools for teaching health will be more popular than drugs, vaccination, and surgical vandalism.

It is worse than childish to declare that teaching people to live carefully, eat carefully, and be prudent about the care of the body is disease-building. As well declare that education should be condemned, because, when full and well rounded, it too will cure the ignorance that leads to disease.

Nothing bad can come from teaching children that they must not handle guns, or that, if they do, they must be careful lest they kill themselves; that, for the same reason, they must avoid poisons; that food is body-building, and needed to keep well and happy, but that, if too much is eaten, or wrong combinations are made, disease, and even death, may result. Surely nothing wrong can come from telling young people that all their joys and pleasures may be turned into disease and death, if indulged in until resistance is broken.

Forewarned is forearmed. Disease and premature death come from ignorance, or possibly from the fact that habit is established before knowledge of its danger is acquired. Degeneration is established before cause is removed.

Knowledge will not save all; but it stands a better chance to save if it is taught before habits are formed.

Fear is an offspring of ignorance. Relief from fear is wonderfully curative and health-conserving. If fear is the sole cause of a given disease, then a full cure will follow when fear is removed. But if fear is simply a complicating cause--if fear, and the derangement that caused the patient to seek a physician in the first place, have been allowed to run on until enervation is so profound that one or more organs have lost their power to function physiologically--then to remove fear does check the speed of the patient's decline, and cause a feeling of mental and physical betterment which is often interpreted as a cure. Unfortunately, however, the original causes--namely, stimulating habits, and their effects (enervation), plus perverted organic functioning--still exist, and that, too, without the warning voice of apprehension and discomfort to guide the victim away from danger.

Suppose a trophic (nutritional) change has taken place to such a degree that sugar or albumin appears in the urine--what is to be done? Remove fear? Yes, fear, and every other cause of overworked reactions, must be removed, and then the slow march back to a restored resistance and nutrition will be made.

What can treatment directed to the organ do? What can removing organs do? Nothing. They are only servants of the master--nutrition--and, like all good servants, do whatever menial service is placed upon them. The master of the show is nutrition, and he does good work so long as he is supplied with sufficient food and nerve energy.

Pain and discomfort should be mentally suppressed and ignored, but not until their significance is understood and a well-directed plan for removing their cause is inaugurated.

To stop pain with drugs, or to ignore it, is not removing cause. Those who are wise will remove the cause; then palliatives will not be required.

Nervous reactions are necessary; they are constructive; it is only when excessive that they become destructive.

Exercise, up to a given point, is necessary for developing the greatest nutritive efficiency.

Exercise to the point of abuse overstimulates and becomes destructive. The first effects of stimulation are that the heart and blood vessels respond to extra work; the glands take on increased functioning; the mind becomes more active; the entire body responds; secretions and excretions take on renewed activity, and nutrition approaches the ideal.

This type of stimulation--exercise--is not an unmixed good. When pushed to excess, we see the common result of any form of overstimulation--namely, enervation. The athlete barters a long life for a short and active one.

The sensualist deliberately yields a long, sane, comfortable, and pleasurable life for a bacchanilian feast and the hell of repentance.

Reactions must not be pushed to the point of excess. If they are, nutrition is impaired; and that means that the whole organism is impaired, leaving the brunt of all future shocks to fall upon the weakest organ of the body. If that organ happens to be the lungs, tuberculosis, bronchitis, asthma, or pleurisy will be the headliner, or principal feature, of the pathological play on which the curtain of life will fall. If the vulnerable part of the body happens to be the bursal membranes, deforming arthritis (rheumatism) will take the front of the stage of life. If the kidneys, heart, liver, or other organs happen to be the vulnerable points, the type of disease will be one peculiar to these organs.

This should furnish a key to how it is possible for many unlike diseases to spring from the same cause. Is this fact so very wonderful, when we remember that all the different organs of the body--all the different tissues of the body--with their many varied functions, are all built from the same food? And the mode of treatment is so simple that it should be obvious to even a child mind; namely: if overstimulation--if shocking by any form of stimulant--has worn out the reactive powers of the system, and enervation is established, a cure must consist of conserving energy by avoiding shocks of all kinds. Rest--physical, mental, and physiological--is necessary. In established diseases, all foods must be given up for a time; certainly exercise of all kinds; and the mind must be freed from worry. To inaugurate such a treatment requires educated skill. Even if a child mind knows that the treatment must be rest, great skill is required in knowing what to eat, when and when not to eat.

Sensual pleasures of all kinds become enervating when indulged in to satiety. When they are, then it is that "life's apples turn to dust;" then it is that we see the "dregs" in the "wine of love," and know we have "bartered life's bread for a crust, and a draft that is as bitter as brine."

The discomfort of excess--overworked reaction--may be pushed so far that the warning voice of frequent crises is lost; after which the organism may be abused to the point of a fatal collapse without warning.

For example, the victim of apoplexy has the discomfort of overworked reactions early--years before the collapse. He suffers from overworked heart, rapid pulse, headache, vertigo, fullness of the head, roaring in the ears. More or less of these symptoms he will have from ten to twenty years before the final collapse. Slowly but surely a toleration for these discomforts is built. Apprehension is dulled; the "still, small voice" of self-protection is hushed; and all unexpectedly and without warning the collapse comes, and the victim is not permitted to say goodbye and farewell to his best friends. This is the price we pay for ignoring warning.

Food is a stimulant, and necessary to the building of body and mind. The stimulating effects of food are necessary to secure digestion and assimilation. Nutrition depends upon the reactions stimulated by food, as well as upon the building material furnished by the food. This being true, it must be obvious to a thoughtful mind that too much food, or food too highly stimulating, must frustrate the object of food by causing too much reaction, ending in enervation. Overstimulation from excessive eating is the commonest cause of disease.

Stimulation is necessary; for reaction must be continual. Without reaction there can be no heart action; breathing must stop; metabolism ends; in fact, life goes out.

Stimulation, like every other need of life, is good up to a given point; then it becomes bad. Again we are reminded that every good is linked to bad, which is educational and a test of worthiness to survive.

Indispensable stimulants are those which carry on their work subconsciously. All that is necessary to carry on vital action can be supplied without creating enough reaction to receive conscious attention. It is when reaction arouses consciousness that the stimulation is excessive.

The intensity of reactions increases, as does the excitability of the centripetal nerves-the nerves carrying impressions from the surface to the centers. For example: The nerves in the skin over a boil, an inflamed joint, or a blistered surface create central reactions, noticed in general nervousness.

The reaction is greater when the part irritated is naturally sensitive; for example, the eye, the ear, or the tongue.

Heat increases the excitability, while cold diminishes it.

A body made too warm by overheated houses, overclothing, too heavy underwear, is made too sensitive. This is a form of overstimulation that leads to enervation; following which, catarrhs; of any and all mucous membranes develop. When toxin poisoning is added, sensitiveness is diminished. This is a conservative measure; but, like all other good things, it becomes destructive when pushed too far.

An organ rendered less sensitive from overstimulation. is also rendered less efficient in carrying on its regular functioning; hence, when a cure is desired, the cause of its overstimulation must be removed, and, until time is given for a normal reaction, the organ must not be forced into a functioning which it is not able to perform. A season of rest is nature's remedy for all exhaustions following overstimulation. In this matter nearly all systems of healing are based on theories of cure that work in just the opposite way. When the organs where reflex action ends are badly altered, very grave symptoms are developed by stimulation of the peripheral or afferent nerves.

Chronic irritation, inflammation, and the accompanying organic enlargements from overwork, or from rheumatism, cause the organs to be sensitive to reflex stimulation.

In the case of myocarditis, or rheumatism of the heart, an impression--a shock-that would not be noticed by a normal heart will cause death. Heart stimulants are dangerous remedies.

On the other hand, when exercise has been neglected, the various organs of the body are weakened from lack of stimulation. Under such conditions the heart becomes so enervated that unusual exercise, such as running to catch a car, may end in collapse and death, the heart being unable to do the extra work forced upon it. Often such heart weakness has been aggravated by the use of alcoholics, tobacco, coffee, tea, and sugar. The excessive use of sugar tends to weaken muscular energy, because of its power to overstimulate.

When stimulation has been excessive-such as overindulgence of the grand passion--there may be such an alteration of the nerves of transmission--the centripetal (afferent), nerves--that sensation is retarded, or perception and reaction end in impotency. On the other hand, indulgence may be so great, from the excitability of the transmitting nerves, that the reflex centrifugal (efferent) nerves are so altered in their functioning that trembling and irregular movements, up to lost coordination, are established.

Syphilis is credited with building tabes dorsalis and paralysis; but overstimulation from the drugs used in its cure, and excessive venery, are more likely to be the cause. Excessive venery lays the foundation; then toxins from septic infection and drugs may prove to be the exciting cause.

Mental or Physical Reactions

In the foregoing it has been my endeavor to explain, as well as I can, physical reflexes, their causes and variations; also to give a hint regarding the diseases brought on from overwork and

underwork.

Nervous reactions, when expressed in the highest order, are mental or physical. All ideas, as well as all movements, have an external origin.

The spiritualistic school will not agree that our psychical nature is built from sense-impression, and that, for us to learn or know anything, we must have sensation. Our special senses are educated by external impressions. Without external stimulation, or without the sense-perception to recognize external impressions, we remain in ignorance--a state of ignorance known as idiocy.

Mind-potentiality evolves as the ages roll on. We do not inherit mind or innate ideas; we do inherit potentiality--an aptitude to understand. Probably the most potent factor in this inheritance is power of attention. With mental alertness a child will gather knowledge so rapidly that to dull pupils it will appear as though it must have inherited its knowledge.

The study habit, when once formed, is a great help to the dull mind.

Mind can never come into its own until man ceases to build physical disease. The mind of a sick man is handicapped. Habits that build disease of the body affect the mind also.

It is common knowledge that the character and type of intelligence and capacity for work are under the influence of various diseases. For instance: A deranged liver causes pessimism. Liver and stomach derangements cause sadness and the so-called neurasthenia. Genito-urinary affections produce irritability, jealousy, and a desire for revenge. Hypochondria and self-destruction are among the potential effects of venereal derangements. Granular inflammation and stricture of the urethra create irritability.

Delirium in fevers and drunkenness is a well-known phenomenon.

Psychical impressions are reflected on the body. Fear envy, and jealousy provoke excessive kidney, bowel, and heart action. Digestion is very seriously affected by worry. fear, or an unsatisfied state of the mind.

Nervous Reactions in the Normal State

In the normal state reactions vary; the conditions also differ.

Species.--The higher the species, the more powerful the reactions. Shocks, stimulations, or irritations which cause little or no response in animals, produce suffering and sometimes fainting in man. Shock seldom occurs in animals; when it does, it is always due to violent causes. This being true, why should vivisection throw any light on the management of man's diseases?

Influence of Sex in Bringing about Shock in the Human Species.--Women are far more easily affected than men.

Women are more easily affected through their emotions than men. This condition, however, is of artificial development; for the spermatozoon is more lively than the ovum, the male fetus is more active than the female, and boys are more active than girls.

Possibly the reason why women are more responsive through the emotions than men is because they have a different training. Women are protected, pampered, and kept back, and perhaps under. Men have done the world's work and the world's fighting, and that would educate them into a control over the emotions. Everything else being equal, it would be logical to presume that women should be less sensitive and emotional. They need control; for they take care of the children.

It is generally taught that the nervous system of children is feminine; that reactions are quick, mobile, and excessive; and that, as they grow older, the male becomes less reactive, until

advanced age finds the old man physically and psychically without reactive ability. This lost sensitiveness, however, can be accounted for from habits of life. Men use more stimulants than women, and indulge themselves more in every way; hence their reactions are suppressed or inhibited by overstimulation. The fact that stimulants impress the child greatly, while they scarcely affect the old man, is proof that the matter of little or much reaction is wholly a matter of education. Mind, with its auto-suggestion and imagination, builds sensitiveness.

The difference in the reactive power of races is a matter of climate, food, and education. The animal is dull compared with man, and the difference is a matter of mind. Animals differ in their reactive power, and the difference is a matter of intelligence.

In man, education should teach poise; for it certainly teaches imagination and sensitiveness, and poise is necessary for self-control.

If irritability is not a matter of imagination, after leaving the animal state, why are children of young parents more apt to react--more lively and cheerful--than children of older people? Experience teaches poise; hence reaction is largely a matter of education without experience, until sensation is dulled from satiety.

Children of very old parents lack youthfulness; they appear to continue the aging of the parents. This indicates that physical energy is transmissible, but that education and physical training leave a legacy of impotency and senility.

6. Nutrition

Nutrition is that which takes place in the body of a live, healthy animal between the time when food is taken into its body and the time when the ash resulting from the combustion of the food is excreted.

Life is the phenomenon we call nutrition, or, vice versa.

We see an automobile or a train moving with all the grace and celerity of an ideally constructed machine, and we say that its mechanism is perfect; hence its nutrition is perfect. If we see it halting, coughing, puffing, and blowing, in an effort to move, we know that something has gone wrong with its nutrition, or its mechanism. When we see the machine at rest, we know that the life of the engine is killed, The phenomenon which in animals and plants we call nutrition, and motion in the case of machinery, is life.

The power behind all activity--the power that makes activity possible--is the sun.

A machine is a synthetical arrangement of properly constructed and adjusted parts. When all parts are ready, it will not move until the sun's rays are thrown upon it by way of oil, coal, or electricity, all of which represent static energy, or stored-up sunshine.

Those who hold the dualistic idea persist in teaching that there is a mysterious force behind and on the outside of nature that causes the phenomenon we call life. They will not admit that it is the sun. Such minds are not satisfied with a simple explanation; they must have an unexplainable, mysterious, or, as Spencer declared, an unknowable cause.

It is wonderfully consoling to have faith in something--to have something that faith can lay hold of. Such a something I have. But, while I myself can get rest and comfort out of it, I realize that the majority of people cannot. I do not ask anyone to give up his beliefs for mine; but certainly no one can be injured by allowing me to try to explain the cause of life that gives me satisfaction.

Those who never have taken a peep into the world that is above, below, and beyond their unaided sense-perceptions must feel their limitations and know that there is an Infinite existence which has not been revealed to them. They are right; but they have no right to declare that it has

not been revealed to others.

The study of bones, flesh, and organs gives us an acquaintance with the animal, its mechanism and personality; but how its bones, flesh, and organs are constructed is quite another study; indeed, it is a world all to itself--a world hidden from common observation. Because of its infinitesimalness, this world is beyond the horizon of unaided sense-perception. On the other hand, the telescope and spectroscope reveal the infinitely large and distant.

To explore the regions where nutrition is going on, one must take one of the torch-lights of The Infinite--the microscope--and there will be revealed the mysterious--the handiwork of the Creator!

In the workshop of The Infinite there is a department where the rudimentary units out of which everything is made are evolved. They have but recently been discovered, and they are called electrons. For the sake of brevity, and to have a definite and inexhaustible source whence to draw a supply of electrons, we will say that the sun's rays are made up of electrons. So necessary a substance as the base out of which everything is made, should be everywhere: and certainly sunlight is everywhere.

In another part of The Infinite's workshop there is a place where cells are made. Cells are the units out of which living matter is made. The human body is made out of cells, the same as houses are made out of brick.

As stated before, we cannot observe The Infinite work unless we are aided by The Infinite's torchlight--the microscope. With this instrument we discover that the tissues of the body are made up of cells. To understand a cell, it will be well to examine some of the lowest forms of life.

The ameba is a colorless, single-celled, jelly-like, protoplasmic organism found in sea and fresh water. It is constantly undergoing changes of form, and nourishing itself from surrounding objects.

The white corpuscles of the blood perform ameboid movements--i.e., changes of form, consisting of protrusions and withdrawals of substance. (Gould's "Medical Dictionary.")

The ameba is found in mud and decaying vegetation at the bottom of pools of water. On examining a drop of this slime with a microscope that magnifies two or three hundred times, life is observed. A great variety of living forms are seen.

The ameba is the lowest type of cell-life. The structure of a cell is made up of a nucleus (a small nut) and a body which is composed of a substance known as protoplasm. In biology a cell is known as a bit of protoplasm containing a nucleus.

All tissues--nerve tissue, muscle tissue, bone tissue, and tissue of cartilage--are made up of cells. These vary in size, notwithstanding they are all microscopic. The microscope reveals the fact that there are characteristic forms of cells for each tissue; and, so far as known, all have a cell body and a nucleus.

The microscopic appearance of protoplasm is a colorless, semi-fluid substance, in which are seen solid particles, or granules. The nucleus is found near the center of the cell, and is composed of protoplasm denser than that of the cell body. The cell body may be likened to a bit of the white of an egg; but it should not be forgotten that the white of the egg is not living substance. The fertilized egg needs the sun's rays to add the missing link--to breathe into it the breath of life. The unfertilized egg needs a nucleus that is potentized with life. All the rest of the egg is body food, if you please.

An egg is not complete without the nucleus; and then, without the sun's rays, it can never take on life. This is true of the cells of a living body; for the sun's rays must be utilized to the extent of furnishing a pent-up heat of about one hundred degrees Fahrenheit, or these cells cannot renew

themselves.

Nutrition is the principal attribute of matter. The phenomenon known as nutrition is life; and this life cannot continue to manifest without the properties imparted by the sun--electrons and heat. The sun, then, is the source of all life.

Assimilation means that the cell seizes upon the nutritive materials placed at its disposal, and groups them together into an organic synthesis--a molecule--that is very unstable. In order to do this, heat, or the sun's rays, or the electrons, must be furnished in sufficient quantity. Every cell of the body is an electric cell; all are connected into a whole instrument, or battery, represented by the cerebro-spinal system; and the refined output is mind.

The feeding and the waste of this wonderfully complex electrical apparatus take place in the cells, which are microscopic bodies, and which have the power to gather the electrons from the sun, and select other elements from the food, with which to build a living organism.

Each cell is made up of molecules. A molecule is the smallest quantity into which the mass of any substance can be divided and retain its characteristic properties.

Disassimilation means that the molecules of the cells disintegrate and are reduced to simpler and more stable elements; and at the same time there is a loss of energy.

The disintegration of molecules is attended by the loss of forceh-heat or energy. This means the wearing-out of the cell; and the phenomenon is a manifestation of life, the same as the building-up. One is appropriating nourishment, the other is discarding worn-out material; and all the phenomenon is metabolism--nutrition or life.

It is well to note, in this connection, that life is the same, from the ameba found in the slime at the bottom of a pool of waste water, to the cell in the gray matter of a Websterian brain; from the lowest vegetable cell found at the mouth of the sewer, to the highest type of the most exquisite flower. All cell life is generically the same, differing or dividing into species.

The laws of nutrition are the same. The plant cell liberates force as does the animal cell, and both produce carbonic acid. The electron or carbon from the sun's rays, and the oxygen from the earth's atmosphere, meet in the cell and are united into carbonic acid, This phenomenon is not carried on in plant life to the extent that it is in animal life. The plant does not spend so much energy; assimilation predominates in plant life. The cells of **the plant feed upon** carbonic acid and water, which, under the influence of the sun's rays, unite into hydrate of carbon, furnishing vital force to animals. It was Herschel who first declared that the sun's rays are the source of all life.

In the study of cell life, four chief phenomena are observed; namely, a physical--that of taking in nourishment--absorbing--endosmosis; a chemical, consisting of organizing the material absorbed; disorganization; and, lastly, the throwing-out of the waste, which is called exosmosis.

Necessary to Cell-Building.--That these processes may be carried on properly, the nutritive material must be in a state of solution. Life is possible to the cell only when its nourishment is liquid. The cells of the human body are in a liquid medium-namely, blood, lymph, and plasma--from which they draw their nourishment.

The phenomena of cell life have been hastily gone over, and now it will be necessary to study the phenomena of cell-colonization.

Functions of Nutrition

The animal body is made up of organs. Each organ, may be regarded as a colony having individual as well as systemic attributes.

In the nutrition of an organized being there are seven successive functions, each one important. For ideal health to be maintained, they must all be carried on well.

1. Preparation of Food for Absorption.--Mastication and swallowing of food; transformation of food into a liquid state--the starch being transformed into sugar, the albumins into peptones, the fats emulsified, and all rendered liquid.

2. Absorption.--The liquefied food passes through the intestinal walls. This is what physically takes place, but in some way there is imparted to this absorbed nourishment a property that resists change--it is given resistance.

3. Dehydration.--The surplus fluid, a part of which is left behind when passing through the mucous membrane, would, if not left behind, cause elimination as fast as absorbed. Dehydration is finished in the lymphatic glands and liver. The liver has deposited in it the fatty acids, the peptones, and the sugar.

The glucose is dehydrated and becomes glycogen, which accumulates in the muscles and liver.

4. Cell-Nutrition, which has been explained before, takes place when the intestinal plasma--digested pabulum--reaches the cells. The cells appropriate the matter they want, and eject the waste, which passes into the blood and is eliminated.

In all cases of constipation that are not due to mechanical obstruction, the cause may be traced back to faulty cell-functioning. The endosmosis (absorption) and the exosmosis (organization, disorganization, and elimination) fail to be carried on ideally. One reason why this work is not carried on properly is because there are not enough enzymes generated in the system to render the food material dializable. The nutritive material that bathes the cells must be capable of passing through the cell walls; and, once in the cell, cell enzymes must prepare it for organization and elimination. Where there is more food material furnished than the secreted enzymes can take care of, or the amount secreted is below normal, cell-exosmosis fails to take place, and, as a consequence, elimination into the blood is retarded. Once in the blood, there may. again be a retardation, because the excretory material is not dialized enough to be excreted by the organs of elimination. Hence there follows a state of obstinate constipation which nothing can overcome except a treatment that reaches cell-inactivity; and, inasmuch as the real cause is a lack of enzymes, the amount of food taken into the system must be reduced to within the digestive capacity. I do not mean the digestive capacity of the stomach and bowels; for it is self-evident that there is more than enough of this digestion, or the cells and blood would not be taxed beyond their capacity.

The remedies for this constipation are fasting, resting, and water-drinking. After elimination has cleared cell- and blood-obstruction, a properly selected diet, taken in sufficiently moderate quantities not to force a recurrence of the obstruction, will bring about a permanent cure.

Where interference with elimination is of a grosser character than that which takes place in the cells--namely, in the liver or kidneys--we see stone-formation. When the excretions of these organs are rendered dializable--rendered liquefiable--the integrated stones will disintegrate and pass out of the body. In order that waste products may leave the system readily, they must be dializable; which means that waste matter must be liquefied fit for exosmosis. In the matter of gallstone and stone in the kidney, these stones are on the outside of the body, because such cul-de-sacs as the gall bladder are connected with the outside by the bowels, into which the bile and disintegrated stone can pass. Stone does not need to liquefy, for it has no membrane to pass through.

5. Disassimilation.--The liver changes nitrogenous products into urea--a crystallizable body which readily leaves the organism, favoring renal elimination.

6. Elimination is by the lungs, kidneys, skin, and bowels. By examining the excreta, it has been

found that 250 grams of carbon and eighteen grams of nitrogen are voided by an adult each twenty-four hours.

To eliminate eighteen grams of nitrogen, it is necessary to consume 500 grams of meat. To throw off 250 grams of carbon, two kilograms of meat would be required.

In a mixed diet of five parts of carbohydrates to one part of albuminous matter a perfect blend is had. Health depends upon a properly mixed diet.

7. To have all the foregoing stages of nutrition carried out properly, the mental state must be that of optimism; for the opposite mental state depresses, and inhibits more or less every process.

Fasting.--To keep food away from a man slowly starves him to death. Disassimilation continues, and it is supposed that death comes after forty per cent of the weight is lost. This may be true of those who are very thin, but it is not true of those who are overweight.

The loss of the various tissues is not equal. Fat diminishes ninety-five per cent. The organs lose most in the following order: spleen, liver, muscles, kidneys. The heart, nerves, and brain are most resistant. It has been said that the brain shows no loss from starvation.

Fat goes first; then the muscle or nitrogenous substance. When the muscle begins to go, there is an increase in the urea; albumin appears in the urine; the temperature falls, and the symptoms become serious.

Drinking water enables the one starving to live longer. Fear will cause a fatal termination much earlier than fasting and going without water; for fear inhibits elimination, if it does not also generate a poisonous toxin.

A dog, deprived of food and water, died in twenty days; another, deprived of food but given water, was still living at thirty days. Much depends upon the weight at the beginning of the fast, and the treatment during the time. If warmth is supplied, life will be prolonged.

People who take a fast to control disease must be kept warm. Chilling during a fast is very dangerous.

Unless much water is used during a fast, toxin poisoning will take place; and that, with chilling, is liable to kill the one fasting in ten days. When fear is added, death will come in from three to seven days.

The first common cause of disordered digestion is improper chewing. Next comes overeating, or eating of improper combinations.

When more food is taken than can be prepared for absorption, the food is caused to ferment because of the ever-present germ of fermentation. The result is fermentation, catarrh, or inflammation of the mucous membrane; gastritis, dilation of the stomach, diarrhea of the lienteric type; then poverty of flesh, nervousness, etc.

In those cases where too much sugar and starch are consumed (in children), gastritis, pharyngitis, tonsillitis, enlarged tonsils, adenoids, constipation, polyuria, and nervousness are common; in adults, rheumatism, glycosuria, diabetes, flatulency, headache, eczema, heart palpitation, constipation, colitis, piles, and prolapsus of the rectum.

It is hard to define exactly, or clearly to draw the line between cause and effect, when a mixed diet is being used; but it is safe to say that there will be no putrid or septic poisoning from food decomposition unless animal alburninoid is mixed in the dietary.

When animal foods are taken to excess, a severe type of whatever disease is developed may be

looked for. In children, a tonsilitis will be diphtheria or scarlet fever. Fevers will take on a typhoid or septic character. Wounds and puerperal derangements will take on septicemia.

The glands of the body--the lymphatic, liver, and ductless glands--are probably quarantine stations for the purpose of arresting and detaining septic toxins. These glands probably secrete enzymes which neutralize the septic toxins. The liver undertakes to care for the surplus protein and fit it for cell nutrition; it stores the sugar in the form of glycogen.

If the liver is out of condition, from overwork, it allows the sugar to escape. Then the kidneys take up the task of eliminating it. This is a glycosuria, caused by hepatic insufficiency. It is not diabetes proper. Real diabetes is a nervous derangement, and must be cured by restoring nerve energy.

The different acts of nutrition in man are now to be reviewed, with their perversions.

Liquefying Food

The first process in digestion is the liquefying of food. The food is ground by the teeth, and then mixed with the digestive secretions. When the individual is normal, and eats normally of a properly balanced dietary, and when everything else is normal--i.e., the mind is at rest, and the care of the body (such as bathing, rubbing, clothing, etc.) is normal, and properly adjusted to external influences--it can be said that ideal health is enjoyed. But, inasmuch as an ideal adjustment of man to his environment is obviously impossible, ideal health is a utopian dream. Like all such ideals, however, it is useful, in that it feeds ambition and rewards approximate attainments.

In every branch of life's activities the ideal is unattainable. The best is secured by endeavoring--the reward is in pursuing, not in attaining; for attaining is reaching an equilibrium where life ceases. Life is activity, growth, attaining. Health is activity, building, doing, striving, fighting against deterioration, and endeavoring to give life, or activity, to every potential of body and mind. It should be known that the possibilities potential in man are drawn upon very lightly.

When food is unfit, when it is taken in too great quantities, or when the quality is bad, or made bad by improper preparation, very complex derangements are set in motion.

When the food supplied is appropriate, but partaken of too abundantly, or when it is bad in quality or wrongly combined, and is not suitable to the demands of the individual, digestive disturbances result, Fermentation takes place; for the microbe of fermentation is everywhere. It is retrograde nature's enzyme, is omnipresent, and is for the purpose of fermenting and disintegrating the excess, defective, and worn-out material in the body. It is the function of fermentation to remove everything that is unfit, or not appropriate, for physiological digestion--life--building--growth and repair.

Life and death-growth and decay-are presided over by two elements of destruction. Life, at its beginning, has enzymes that ferment and dissolve and prepare food for integration--organization into living bodies; while death, at its beginning, has enzymes (microbes) that ferment, dissolve, and prepare surplus, waste, and worn-out material for exit from the body--to give back the elements to nature.

These two processes are at work side by side, and a study and understanding of them give knowledge of how to aid each in its particular sphere. It is a physician's prerogative to understand life and death--growth and decay; for he must lend a hand in freeing each from its particular entanglements.

When more food is taken than can be appropriated by the body, it must be got rid of; otherwise it obstructs and prevents normal operations. The germ of fermentation dissolves and fits this surplus for immediate exit from the body. **When too much is eaten continually, this microbic fermentation creates irritation, inflammation, or catarrh of the digestive tube and**

the associate, contiguous, and communicating organs.

On account of the gas generated by microbic fermentation, and the consequent distention of the stomach and bowels, dilation of the various parts of the digestive tube takes place. As a result of this distention, constipation is built, and the heart is disturbed, in that its action is interfered with by pressure on the diaphragm. All contiguous organs are pressed upon and put out of commission.

It is after intestinal fermentation is established as a habit that the reproductive organs of both sexes become functionally deranged.

The first functional disturbances set up by an oversupply of food are indigestion, dyspepsia, and sometimes diarrhea--usually constipation.

Nervousness and reflex symptoms accompany functional disturbances; namely: headaches, frequent urination--in children polyuria, causing bed-wetting; rapid pulse and palpitation of the heart; cough from throat irritation. Between insensible eructations of gas escaping from the stomach, causing throat irritation and cough, and a purely nervous cough from stomach and bowel irritation, it is hard to draw the line; but, as the treatment must be the same, an erroneous diagnosis will not prevent a cure.

Gastrectasia, or dilation of the stomach, is caused by years of overindulgence at the table. A common symptom of this derangement is the development of nodules around the second joints of the fingers, named "nodosities" or "bonehard." In subjects of low resistance, or in subjects who have become profoundly enervated, the nodules may be the early symptoms of a **developing rheumatoid arthritis.**

The kinds of food taken in excess govern the type of disease. An excess of starch, sugar, and fat--especially the starch in the form of whole grain--causes deforming rheumatism and builds stone in the gall bladder (gallstones), kidneys, and urinary bladder in the lithemic or gouty diathesis; lime is deposited in the heart and arteries, around joints, and in other parts of the body.

An excessive intake of sugar and sugar compounds--such as puddings, cakes, and pies--develops obesity. Where the intake of carbohydrates is in excess of the needs of the system, glycogen is stored, and when there is more than can be utilized, it is passed in the urine, producing glycosuria. It is the function of the liver to arrest and store sugar by dehydrating it to glycogen. When the liver is altered, the sugar passes into the blood and goes out of the body by the kidneys. Both these varieties of glycosuria are alimentary diabetes--the first cellular, the second hepatic from liver insufficiency.

Where animal proteins are taken in excess, they are taken up, but their digestion is not complete--cell- and blood-digestion flags. This nutritive perversion favors putrescence, and the building of simple catarrhal inflammations into ulcerations.

Gout is supposed to develop from defective digestion of animal foods. Alcoholics stand first as a cause of this disease, and the alcohol produced in the body from imperfect digestion of carbohydrates is a common cause of all types of rheumatism.

It was observed that digestion by the cells of the body is carried on by the aid of endosmosis and exosmosis (physical laws), but nutrition cannot be accounted for by physical laws alone. When peptones (the liquefied nitrogenous foods) pass through the walls of the bowels, the membranes appear to possess the power of dehydrating, so that peptone, as such, never reaches the blood so long as digestion is normal. In abnormal states peptone is found in the urine, causing peptonuria of intestinal origin. The nutritive materials that are carried to the liver by the portal vein are dehydrated by that organ. When the liver is diseased, however, peptones and sugar appear in the urine.

When intestinal indigestion and catarrh develop, the pelvic organs become involved; menstruation is made painful, irregular, and often too profuse; toxins are absorbed from the bowels; the lymphatics acting as quarantine stations are, in time, overworked, and catarrhal inflammation develops in the ovaries or womb, or both.

Because of a thickening of one side or the other of the womb, this organ is bent on itself, crooking and obstructing the passage or canal, causing pain when the menstrual flow seeks exit.

The womb and ovaries become very sensitive, and the downward pressure from gas in the bowels causes much discomfort.

The mucous membrane of the lower bowels takes on a catarrhal state from the constipation and gas distention. Colitis, appendicitis, proctitis, ovaritis, metritis, inflammation of the spermatic cord, urethritis, **prostatitis,** piles, and prolapsus of the reproductive organs, bladder, and rectum, are possible diseases coming from fermentation and gas distention. Indeed, a part or all of these derangements are so common that there is a procession of people, young and old, headed toward every surgical institution in the country.

When operating is once started--when, for example, the appendix is removed--the causes remain. The habit of overeating, or improper eating, fermentation, gas distention, toxin absorption, catarrhal inflammation of the intestinal mucous membrane, and lymphatic involvementall these remain to continue the discomfort for the removal of which appendectomy was performed.

Occasionally the patient has a respite from discomfort following the operation--not because of any curative effect produced by the operation, but because of the powerful suggestion often imparted by a surgical operation. Those who undergo an operation have faith that they will be cured, or they would not submit to it. The power of this suggestion holds the patient's belief for a time. If there is any discomfort following the operation, it is thought to be the consequence of the necessary mutilation, which will pass off in a short time.

After a brief, questionable rest from pain, the patient begins to complain to the doctor of pain similar to that suffered before the operation. The doctor may declare that the post-operative pain comes from adhesions; or the pain may be declared to be due to ovaritis or gall bladder disease. In due course of time the ovary or ovaries are removed, and the gall bladder is drained; or, as in the case of the late Governor Johnson, of Minnesota, operation after operation may be performed for overcoming adhesions--all to no purpose, for the cause is not removed, not even suspected.

In the case of men, the appendix, gall bladder, prostate gland, piles, and prolapsus of the rectum are attacked with the knife because of the pain produced by intestinal indigestion, catarrhal inflammation, and gas distention. Of course, each and every operation must be a disappointment; for none of the organs is pathologic to such an extent as to justify its removal. Besides, the disease is not of these organs proper, which are sensitive only because the real disease has developed a neurosis of all the organs.

Where appendicular operations have been performed, and the appendices have been found normal, the patients often remain better for a time, because of the suggestion carried by the operation; but in pronounced types of intestinal indigestion, with catarrhal inflammation of the bowels and infection of the lymphatics, there is a general sensitiveness, with periodic attacks of pain, apparently confined to one or more of the organs of the abdomen or pelvic viscera. The real cause, however, of the paroxysms of pain that pass as appendicitis, ovaritis, or disease of other organs, is gas distention, the pressure on the hypersensitive organs from gas being the sole cause. This being true, it should be obvious to every thinking person that surgery can be nothing but detrimental to those afflicted in this way.

The above is a true picture of the physical states of the great majority of those operated upon in

the past two or three decades, and those who are now on their march to a surgical hospital. It must be continued; for it is certainly obvious to the discerning, with the illumination above given, that removing any one, or a half-dozen, of these organs will not remove the disease. Removing the lymphatic system of the lower bowels and pelvis, were it possible, would not cure a derangement of this kind.

Lymphatic or scrofulous diathesis is a structural evolution of the lymphatic system favoring the development of tubercular diseases. The word "diathesis" is out of date, and "germ infection" is made to cover all diseased states once ill understood under the name "diathesis." It may be said of disease, the same as of a rose: "What's in a name?" This is true when a name carries no meaning.

Names only confuse, and help to hide from the mind's eve the true cause.

If we may look upon every child, born of well-disposed parents, as a purified lump of protoplasm with the potentialities of health and mental development normal, we can use the child as a standard of ideal health.

There are children, born of vicious parents, who are said to be born with venereal disease. It may be true; I believe that children are born with disease; but they were infected after conception.

My practice has been confined to a superior class of people, While I have always enjoyed a large private practice, it has been with those of a middle to a superior class of intelligence. The ignorant and vicious have always sidestepped me, because I require the giving-up of bad habits as a first step to a cure. Consequently, children born with venereal infection have never occurred in my practice. If they had, I should not believe that nature allowed the infection to take place before conception; for nature makes sterile all who are unfit to propagate.

Starting with perfect physical health, a child is fed too frequently, and kept from fresh air and sunshine. Many are bathed too much, handled too much, and subjected to too much noise. As a result the child's resistances--its enzymes and body defenses--are inadequate to meet the enemies of health; and the result is that a catarrhal state is developed. The child "catches cold" easily. The stomach and bowels are made sensitive, and ready to take on a state of indigestion; then toxin poisoning takes place, resulting in an effort, during the cold months, to throw off the poison by the skin and mucous membrane--gastritis, sore throat, and the exanthemata (eruptive fevers). It is a fact that the eruptive fevers--skin diseases--occur all the year around; yet their tendency is to appear more frequently in the winter, or during cold weather; whereas diseases of the stomach and bowels--mucous membrane--occur oftener in the summer, or during hot weather. Gastritis, bowel diseases, and the various eruptive fevers are a necessary sequence to feeding beyond the child's nutritional needs, and catarrhal inflammation of the mucous membrane is established as a habit. Finally resistance is broken, making the child susceptible to epidemic influences. When the heat of summer comes, it adds the last link to a chain of causes that ends in cholera infanturn. If treatment is unsuitable and the nursing bad, the child may die; indeed, many do die.

Children who get over the diseases peculiar to the teething age, carry, and further develop, enlarged tonsils, adenoids, gastric irritation, intestinal indigestion, constipation, intestinal parasitic diseases, the so-called contagious diseases, glandular enlargements, adenitis, tuberculosis, rickets, lymphangitis, scrofula, etc.

These diseases develop from childhood to puberty. Those children who are not swept out of existence will have seasons of betterment; a few will be carried by the force of development, which in a cyclonic fashion sweeps everything before it into health--and that, too, often in spite of wrong life, and a medical treatment that might prove fatal if administered at any other time in life.

These health storms, typhoons, revolutions, often sweep invalids into health, starting up without apparent cause, and carrying many victims of ill-health into physical states approximating good health. Then, if they are fortunate in having sense enough to follow proper advice, they may recover from the ill-health of youth and live to a ripe old age, enjoying life, health, and success. A few will enjoy approximately good health from early puberty to early middle life. Perhaps it would be better to say that there are a few who, through the impetus of development, will enjoy fairly robust health until perhaps the end of the first ten years of business life; then, because of neglect of exercise, and the practice of bad eating, and other habits, they break down and die of acute or chronic disease.

There are others who reach middle life before they have, by vicious habits, broken down their resistance and placed themselves in a physical state out of sympathy with health's revolutionary forces. These go down and out with tuberculosis, Bright's disease, diabetes, tabes dorsalis, apoplexy, and other diseases.

There is still another class who die between fifty-five and sixty-five of kidney, heart, brain, blood vessel, and nerve diseases, because they have lost their resistance to such an extent that they fail to attract the evolutionary forces that would carry them on another decade.

We hear of disease influences, but never of health influences. The truth is that there are more epidemic influences for health than the reverse. Indeed, if man ever learns to court heatth--cultivate resistance, attune himself to the harmonies of nature--he can make himself immune to disease-producing influences.

Chlorosis is thought, by many writers on medicine, to be caused by a syphilitic "taint;" but this is no more true than the claim, set up by the same authorities, that the whole human family is tainted.

Chlorosis I have found to rest on a basis of toxin poisoning derived from intestinal indigestion. After the uterine lymphatics have taken on a state of subacute inflammation (sometimes called adenitis), painful menstruation begins to develop, and the amount of menstrual discharge grows gradually smaller, until many such cases cease to menstruate entirely. In the opposite state--**hyperemia--**the pelvic circulation, due to toxin infection of the lymphatics, causes painful and profuse menstruation; if not corrected, cystic and fibroid tumors may follow.

Chlorosis presents a catarrhal state of the neck of the womb; the mucous lining thickens up and prevents the menstrual discharge from escaping freely. The discharge is bottled up to such an extent that decomposition takes place. It is the absorption of this decomposition that causes the anemia peculiar to chlorosis. When the disease is well developed, patients suffer from oxygen starvation. Carbonic acid accumulates; digestion and nutrition are impaired, and cell renewal is almost impossible.

The blood becomes so thin that there are noises in the head and giddiness. The patient is troubled with cold feet and hands. The mind is dull and inactive. Shocks--such as disappointment in love--may be fatal. In many chlorotics, excessive venery, sorrow over the death of a near relative or friend, inability to keep up with classes in school, worry, etc., further impair the health and prevent a return to health.

Mothers who eat imprudently and worry over family affairs--mothers who worry over boys who are unruly and who are getting into trouble--build indigestion, catarrh, and toxin poisoning.

Business men who carry their business worries around with them, or who use tobacco, coffee, tea, and other stimulants, and overeat, develop toxin poisoning.

Any worry that is habitual, in one who is severely taxed in a business way, and who eats too

much, or eats improperly--for example, bread, butter, and fruit jellies, jams, or preserved fruits--will lead to a premature grave with hardening of the arteries. When excessive venery is added, nerve resistance is lost, and the ordinary fermentation changes into septic decomposition. Bright's disease, suppurative inflammations of the lymphatic glands, liver, appendix, pleura, lungs, and other parts of the body, are liable to develop. Tabes dorsalis is a common disease in those who abuse nutrition with food, work, stimulants, and excessive venery.

Those who live far away from the markets, who live on dry beans, cured meats, and an inferior quality of bread, potatoes, and a few canned vegetables, and who are shut out from sunlight, fresh fruit and vegetables (such as miners), develop a state of acidosis, and, when predisposed to tuberculosis, break down and die of that disease. Others develop rheumatism and paralysis.

Emotional disturbances derange nutrition. Fear inhibits digestion; it deranges heart action to such an extent as to develop, in time, organic heart disease.

Anger has a serious effect on digestion and the heart.

Jealousy changes the whole being. From a sweet, even-tempered person, with mild, kindly features, the jealous subject is changed into a demon, with hard, cruel features; a kind, benevolent, philanthropic nature hardens into a cruel, selfish misanthropist; a disposition incapable of causing pain to the lowest animal is metamorphosed into a hatred that can kill the thing it loves.

Envy disturbs the entire body in the same way.

The giving-way to these emotions not only disturbs nutrition and interferes with cell-development, but alters the secretions from a benign, health-imparting influence to a malignant, disease-producing influence; from a neutral or agreeable odor to a rank, offensive smell that causes disgust even in those who are bound by love to the unfortunate one whose emotions have gone astray.

The cause of insane emotions is a wrong understanding of the relationship that should exist between people. The most violent types of emotional insanity spring up between married people. There is, and has always been, a feeling of ownership among married people. This is a survival of the chattel-slavery idea; it belongs to an ignorant age, and is not in keeping with advanced civilization.

Do away with the ownership idea, and have married people stand or fall on behavior--merit. Indeed, an abiding love must rest on the everlasting bonds of respect which spring up from conduct becoming, and in harmony with, dignity and refinement.

Too often, when men and women are united in the "holy bonds of matrimony," they forget all estheticism. They are more polite and considerate of the most inferior member of society than they are of each other.

So long as marriage means license to be common, immodest, indelicate, and too often vulgar, just so long will love become shipwrecked.

Why should a man expect a woman's infatuation to ripen into everlasting love, when she discovers him to be a cad with disgusting personal habits, or vice versa?

The bonds of "holy matrimony" are not sufficient to disinfect vulgar habits. Nothing but habits of cleanliness of mind and body can keep men and women aseptic--worthy of love.

What has all this to do with disturbed nutrition? Allow the veriest swain, or professional novitiate, to answer! Indeed, marital infelicity is a common cause of intractable indigestion and chronic toxin poisoning. What can palliatives do toward curing such cases? The surgeon is busy removing complaining organs; but, much to his surprise and his patients' dismay, the same old

symptoms are back after the operation. If the surgeon had not been so material, he would have known that he had to deal with pathology of the mind instead of the body.

Women have disturbed nutrition during pregnancy. The vomiting of pregnancy is often due to catarrhal inflammation of the neck of the womb. In all cases of excessive vomiting in pregnancy the womb should be examined; if congested, scarification of the mouth and neck of the womb, allowing a little of the surplus blood to escape, will relieve the tension and the reflex irritation. Often one or two treatments will correct the vomiting. There are cases of vomiting that cannot be controlled short of dilation of the mouth and neck of the womb.

The real cause of morning sickness harks back to overeating, fermentation, toxin absorption, and the concomitant causes. It is hardly necessary to spring an Irish bull by saying that people who are well will not be sick. However, the best writers on the subject of disease write much about the diseases of pregnancy, of change of life, of teething, etc., etc. In fact, it is necessary to have an undercurrent of toxemia, and, without this undercurrent, disease cannot develop. Indeed, toxemia is the only disease to which flesh is heir. Medical nomenclature clothes the various symptoms with individuality, but they are no more basically individual than are the limbs of a tree.

Diseases were clothed with a vague, uncertain specificity before bacteriology stamped them with an assumed individuality satisfying to the profession. I say "satisfying" advisedly; for the profession is so sure it is right that in all diseases where a germ has not been discovered to account for it, one is assumed to exist, and, as in infantile paralysis, all care, nursing, and treatment are in keeping with this assumption.

The nervous system must be normal, or nutrition will be interfered with.

Loss of sleep, overwork, excessive venery, overworked emotions--anything that uses up nerve energy--lower the digestive and assimilative powers, and also lower the power of the organism to organize its defenses--its enzymes. Hence, an amount of food that could be eaten and utilized by an organism in health would be too much, and would cause toxin poisoning, which would further enervate, and create nervous derangements.

Those in the habit of using coffee, tea, tobacco, alcoholics, or other drugs will find that these stimulants have a much more profound effect on them when, from food poisoning (toxins from fermentation) and lowered nerve energy caused by irregular daily life, their resistance is lowered.

Where the enervation is great, elimination is inhibited.

Urea.--The amount of urea excreted by a healthy adult thirty-five to forty years of age is about 500 grains (32 to 33 grams). A child five years of age secretes 180 grains (10 to 12 grams). In hysteria the amount may fall very low--sometimes to 35 to 50 grams. When this takes place, nutrition is almost at a standstill. Hysterical women can refuse nearly all nourishment without getting thin.

The elimination of phosphates is affected by hysteria. After an attack, the earthy phosphates increase and correspond to half of the phosphoric acid, whereas normally the proportion of earthy to alkaline phosphates is as one to three.

Drugs acting on the nervous system cause disassimilation. Mercury and iodid of potash pervert cell life; and where cells are broken down, sclerosis follows, and then the diseases peculiar to hardening of the tissues--tabes dorsalis and arteriosclerosis.

Drugs like those above mentioned spend their influence on organs which are most enervated. If the nerve centers have been outraged by a lascivious mind and excessive venery, such drugs as those that are given for syphilis will cause such disassimilation of the great nerve cells that spinal sclerosis will follow; and this change will be ascribed to syphilitic infection, when the

truth is that the sclerosis is due to the treatment. All secondary symptoms are due to lesions of the connective tissue, brought on by celldestruction from drug action--not from syphilis; for that disease spends its force on the surface of the body

If the vulnerable organ should be the kidney, the epithelium would be first affected by the drugs; or if the liver, the biliary cells would be affected by the drugs.

If the mucous membrane should be catarrhal, mercury causes ulceration.

Gall-stone is very common. The foundation is undoubtedly laid, in many cases, by mercury; first enervation from the thousands of influences which use up nerve energy, then toxin poisoning, which ruins the body's defenses. With this basis, chronic organic disease can be built by any habits or treatment that will cause disassimilation of the cells of the most important structure of the weakest organ of the body.

The seat of the primary lesion of all toxic poisons is in the highest organized cells. If a poison spends its force on the nerves and brain--as morphine, alcohol, and other drugs do--the disease will be of the brain and nervous system.

Morphine produces emaciation and morphinomania; alcohol often produces obesity and alcoholism, rheumatism and gout.

Lead disturbs the metabolism of proteids and causes an accumulation of urea, and rheumatism develops.

In those who are poisoned on starch and sugar, when the habit of taking too much is discontinued, and the intoxication and its influence are overcome, loss of flesh will be marked; but if proper habits of eating are adhered to, a normal weight will be restored as soon as physiological adjustment can be reestablished.

Constipation, with its infection, often causes great poverty of flesh; but, when overcome, fatness may follow.

The habit of overeating not only creates catarrhal inflammations and the toxin poisoning described, but in those who have great digestive power it causes plethory--full habit--and great strength for a time. A time comes, however, when the organism begins to go down, obesity takes the place of muscle and strength, and **rheumatism,** "gout, lithemia, oxaluria, or the formation of renal, vesical, and hepatic calcule" (stone) are established. Biliousness, or congestion of the liver, with engorged stomach and intestine, with the accompanying symptoms--namely, constipation, heavily coated tongue, bad breath, foul odors from the body and bowels, piles, prolapsus of the rectum, colitis, appendicitis, engorgement of the ovaries and uterus--are developed; and, when toxin poisoning is added, the usual pelvic diseases follow, including tumors.

The secretions are altered; the urine becomes overloaded with salts, sugar, albumin. The overstimulation at last ends in enervation; then comes sluggish elimination, with headaches, fatigue, lassitude, chronic tired state, drowsiness, mental stupor, apoplexy; and the linking of this diseased state with the state described before, coming under the head of chronic intestinal toxin poisoning, all together completes a vicious circle or chain, the links of which furnish the cause of all diseases.

The foods that feed this state are the carbohydrate and nitrogenous foods--the starch or sugar, and the meat or protein. When these staple foods are eaten in a refined state, with the tissue or building salts left out, or the foods that furnish them--namely, raw fruits and vegetables--the body starves for the salts, and disease must follow.

Few people in the centers of civilization starve to death from lack of food. They have food enough, if it only were the proper kind.

Many people eat what may be seen in the bakeshop windows. These windows contain what the masses want. This starch, fat, and sugar are eaten to the exclusion of fruit and vegetables, and the result is acidosis--scorbutus--ill-health, dull mind, and early death.

It has been the fashion in penal institutions to punish the refractory by placing them in solitary confinement and limiting their food supply to bread and water. Nothing more stupid could be done. If it is the institutions' desire to make the criminal or insane more criminal or insane, no better method could be adopted. But if the institutions exist for the cure of these invalids, they should be put in well-aired and sunlighted rooms, with the comforts of reading matter and a good bed, with fresh water and apples, keeping bread--one of the causes of their insanity--away from them.

Fresh fruit three times a day, with wholesome environments, will start these incorrigibles on the road to recovery. Then, if they are fed properly afterward, they may be cured, with a prospect of staying well.

Tumors or neoplasms are allied with infection. Without toxins, and obstructions to the free circulation of the blood, there can be no tumors developed. The cure for tumors means the correcting of toxin poisoning and freeing the circulation.

All the nutritive changes we have gone over are caused by external influences. These changes are not transmissible, but there is no question but that children born of parents whose nutrition is perverted are more sensitive to like influences than those who are born of healthy parents.

The victim of alcoholism will beget a child with a sensitive nervous system.

Abuse to nutrition may extend to sterility. Any stage short of sterility is stamped on children as a potentiality for taking on perverted nutrition far more acute than normal, but not a state that cannot be resisted, and even improved upon after birth. Nature puts the stamp of sterility on the positively unfit.

Disturbed Nutrition

Auto-intoxications are imminent under ordinary conditions--when health is normal.

In that state known as health, assimilation is approximately balanced with disassimilation.

The disposal of waste--of the catabolic products--is as necessary as the proper assimilation of the anabolic products.

Man is nearest an ideal state of health when his digestion and assimilation are almost balanced with his disassimilation and elimination.

Health is that state of man's body and mind that oscillates between near-health and near-death.

Disease is health's thermometer, so to speak, which marks the degrees of departure from an assumed ideal state of health to complete loss of health.

Disease, per se, is non-existent. The state of the body which we call disease is nothing more or less than the degree of departure of health from the ideal standard.

The cause of the departure may be any influence that increases, decreases, or perverts nutrition.

In previous articles cellular nutrition has been gone over; the causes of increase, decrease, and perverted nutrition have been cursorily referred to. Now it is necessary to give a thought to the consequences of inhibited elimination of the waste products of metabolism.

Auto-intoxication.--When there is retention of waste products in the system, the phenomenon is called autotoxemia.

The waste products are all toxic. They are eliminated by the different emunctories.

The bile is not entirely an excretory product; it serves several physiological needs. First of all is its action on the bowels. It is nature's laxative. When its elimination is interfered with, the liver becomes diseased. When carried into the bowels as it should be, it is taken up by absorption and used over; after which it is excreted by the skin, lungs, and kidneys.

The skin eliminates the fatty acids and other toxic substances. The lungs carry off water, carbonic acid, and volatile substances taken in with the food. For example, when onions are eaten, the volatile substance is thrown off by the lungs, skin, and kidneys, as evidenced by the breath and the strong odor from the urine. Asparagus causes the urine to be offensive for several hours after that vegetable has been eaten.

The solids in the bile are thrown off by the kidneys. Before this can be done, however, the solids must be rendered soluble. The nitrogenous products must be converted into urea.

The liver assists the kidneys by preparing different substances for excretion.

All organs of the body are commissioned to furnish enzymes for the purpose of preparing all solids within their jurisdiction for assimilation; in other words, rendering the solids dializable. This is necessary, or the system would become fatally clogged up. In this, bacteria become allies of the enzymes.

Blood.--The blood has enzymic properties to a great degree. And this is well; for the blood vessels are so numerous and so small that if the blood did not have the power to digest--render all solids dializable--deaths from embolism (obstruction to blood vessels) would be most frequent.

Pancreas.--When the pancreas is obstructed in its work, and fails to secrete its digestive ferment, sugar appears in the urine. It is thought that the primary trouble may begin with faulty functioning of the liver.

Thyroid Gland.--The thyroid gland has a secretion which appears to be necessary for keeping a perfect nutritive balance. When the gland is cut out, it is said to be followed by tetanic convulsions. Why? Because of imperfect digestion of starch; it also disturbs nutrition to such an extent as to cause myxedema (mucous infiltration of the tissues).

In suppression, from any cause, of the thyroid secretion, it is said that the administration of thyroid extract will correct the symptoms caused by the suppression. The administration of too much extract has been known to kill.

Trembling and albuminuria are symptoms of excessive use of the thyroid extract.

In some cases of obesity and albuminuria it is thought that there is a suppression of thyroid secretion.

Suprarenal capsule has a function to perform in nutrition. Suppression of its secretions gives rise to melasma (dark discoloration of the skin), or bronzed skin. Addison's disease is a tubercular infiltration of the capsule. Symptoms: skin discoloration, progressive anemia, and asthenia, ending fatally.

Testicles and Ovaries.--The removal of these organs in young subjects is followed by defective development. Boys remain boys; they fail to develop; their hair is thin and lacking in full development. In animals, the brain is smaller in those that have been mutilated.

Toxins in the Tissues of the Body in Standard Health.--As has been made plain in previous chapters, ideal health is a utopian dream; for the most perfect state of health which it is possible to attain carries a given amount of toxins in the blood and tissues.

Disassimilation means the breaking-down of cells; the result is the accumulation of debris, or waste, which is toxic, and it must be removed from the body as soon as possible. The blood contains a quantity of waste. The organism is adjusted to a reasonable amount of this poison--it is necessary, for it stimulates to action. But when elimination is checked and an oversupply is retained, then excessive stimulation becomes disease-producing. All parts of the body contain poisons. When nutrition is best, there is a balanced state of unorganized and organized ferments. Agreeing with what I have often said, health is only an approximate state. The body at best--under normal conditions--is a laboratory for building tissue, and necessarily becomes the receptacle of the waste and by-products, which are poisonous. An over-supply of toxins is liable to occur at any time from almost any indiscretion.

An extract of the tissues of the body will kill, if it should find entrance into the blood. When elimination is slow, the tissues carry more toxins. Exercise is necessary to force elimination.

It requires about one-fifth as much of liver as it does of muscle to furnish an amount of poison necessary to kill. Then it must be injected into the veins, or it cannot do harm.

Toxicity depends mostly on the nitrogenous matters.

The Toxicity of Urine.--An adult in health passes approximately three pints of urine in twenty-four hours. The poisons contained in the urine come from the food fermentation, and the waste products of tissue building.

Urotoxy.--A term invented by Bonehard to denote the standard of toxicity of the urine necessary to kill a kilogram of living substance. In order to find the toxicity of urine, inject a representative specimen into the veins of a rabbit, allowing it to enter at a uniform rate. When the animal is dead, the amount of urine necessary to kill should be divided by the weight of its body. This gives the dose necessary to kill one kilogram, or two and two-tenths pounds.

It is said that a man weighing one hundred and forty pounds secretes enough urine in fifty-two hours to kill him or kill his own weight.

The poisons in the urine, if not eliminated properly and if retained in the blood, cause many symptoms, a few of which are: sleepiness, headache, eczema, spasms, coma, overworked heart, arrested heart action.

The toxicity of urine may be inhibited by reducing the amount of potash salts taken in. A milk diet reduces the amount of poison in the urine; moderate exercise does the same. But if exercise or work is pushed to the point of great fatigue, the urine becomes loaded with the toxins.

The bile, gastric juice, pancreatic juice, and sweat are all poisons, to a greater or less extent, when injected into the blood. It is common knowledge that the expired air is poisonous. Investigators have found that in expired air there is a poison similar to ptomains.

It is reasonable to believe that the expired air must vary in keeping with the individual. The person who is living normally certainly cannot pollute his expired air, as one does who eats and lives in such a way as to keep his system poisoned with the toxins absorbed from a chronic state of intestinal putrefaction. This must be true of every other natural excretion of the body.

If the excretions of the body under normal conditions are toxic, then this toxicity must vary as health declines.

Auto-intoxication varies from the amount that exists in the physical and mental state known as health, to the amount that causes death. All the degrees between these extremes are states of

health.

To make my meaning clear: Alcohol is not a disease; it is a distillation from fermented grain--from starch. Grain, starch, bread, and alcohol are not diseases. If a man in health (standard health) takes small portions of alcohol, frequently repeated, he will gradually lose his power of coordination of mind and body. This gradation from full bodily control to a helpless lump of protoplasm is not disease; it represents different states of health. If the drunk man is diseased, what is the disease? There has been no entity added or generated. As soon as the alcohol is eliminated, the man returns to his former state--not suddenly, but gradually as he departed. If he eats grain, starch, or bread beyond his assimilative capacity, he develops certain symptoms of poisoning. Is not the man's state the same as that of his normal being, plus overeating? Surely nothing has been added--no entity has gained entrance; hence, if the drunk state, or the food-poisoned state, is a disease, then what is disease? Certainly not an entity, but a state of health brought on by any influence that increases, decreases, or perverts the state of man recognized as health. There is no such thing as disease per se. "Disease" is a word that should not carry other meaning than that a sick man is one whose health standard has been lowered by some external or internal influence which has disturbed nutrition.

If the influence is continuous, that organ on which the stress falls will take on functional, and later organic, change. Suppose the liver is the organ and is made to enlarge--is it rational to give special treatment to the liver? Is enlargement of the liver, or is hardening or atrophy, per se disease? Certainly not. The cause lies back in nutrition; the liver enlargement is merely a symptom.

The reader may extend this analysis to all the organs of the body; for it applies to all. The chronically alcohol-poisoned develop enlargement of the liver. The alcoholic poisoning is the cause. Possibly the enlargement has been brought about by the consumption of too much bread, starch, or sugar. Should the liver be taken out, or massaged, or drugged? Why? Would it not be rational to remove the cause, and allow nature to take care of the effects? Apply this theory to all organs and parts of the body.

Enervation is the principal cause of auto-intoxication, and it is sequential to overstimulation and any influence that uses up nerve energy.

When the body is enervated, functioning, both of secretion and of excretion, is lowered, which condition interferes with nutrition and causes a retention of excretions, resulting in autotoxemia.

Constipation is a common source of toxin poisoning. A few of the symptoms due to this poisoning are: headaches; a feeling of exhaustion; indeed, in chronic constipation is to be found the cause, or auxiliary cause, of about all the diseases caused by toxins.

Toxemia, irritability, monomania, delusional insanity, mania, epileptic convulsions, colitis, appendicitis, and many other symptoms, are brought on, directly or indirectly, by constipation and putrefaction in the lower bowels.

Overworked Organs.--It is obvious that overworked organs must fail to perform their functions, A stomach abused to the point of developing dyspepsia favors the development of poisons from food. An excessive intake of fat--butter, for example--favors the development of skin diseases. In nursing babies too much butter-fat in the milk causes deranged digestion. So much alkali is required to emulsify the fat that, unless the child can take fruit, a state of acidosis--scurvy--may develop.

When too much nutriment is carried to the liver, the hepatic cells are altered. If too much sugar is consumed, the liver fails to act upon it well, and the kidneys are forced to do vicarious work for the liver, by carrying out of the system sugar that cannot be utilized. The liver fails to act on the nitrogen, and the amount of urea is diminished.

Jaundice is caused by toxin poisoning, or by a weakened liver function from overwork or from obstruction of the bile-duct.

Cancer, hydated cyst, stone, catarrh, etc., are the results of years of wrong living habits-except the hydated cyst. This derangement is supposed to be caused by a parasite furnished by dogs.

An overworked liver and underworked lungs force extra work on the kidneys. When kidney derangement is to be treated, as auxiliary treatment the lungs and liver must also receive attention. If they do not, it should be obvious that failure to cure the kidneys must follow; for causes must be removed.

Icterus, or jaundice, is a toxic infection caused by an overworked liver, bringing on liver insufficiency.

Auto-intoxication from Enervated Skin, Lungs, and Kidneys.--The lungs throw off poisons--eliminate the volatile substances; but probably their greatest role is that of neutralizing poisons, such as tobacco, volatile drugs, and toxins from fermenting foods. Their action is not experienced unless respiration is normal and a sufficient number of red corpuscles are found in the blood. Breathing may be normal; but in anemia, dysemia, and chlorosis, oxygen starvation is experienced, and certainly there must be a failure to neutralize poisons which depend on a sufficient amount of oxygen.

The skin eliminates volitile substances. An animal varnished, shutting off elimination and radiation, dies in coma. The temperature falls; the urine becomes scanty; albumin and blood show in the urine before death. The same occurs if an extensive burn is suffered, or if the skin is covered by a disease.

To a certain degree the functions of the skin are inhibited by heavy underwear. It is a common thing to have consultants come in the winter wearing two or three heavy undershirts. In spite of this, they invariably complain of feeling chilly. The fact is that they dress so heavily that they suffer more or less as the varnished animal--namely, from suppressed skin function. Such subjects cannot be cured until they are rid of their bad habits--especially that of overdressing. These patients are always surprised to find that they are more comfortable in every way with the thinnest gauze than they were with all the clothing they could pile on themselves. The skin is a protector; when pampered and spoiled, it goes out of business.

Uremia is caused by the kidneys endeavoring to do vicarious work for the liver and skin.

Strong condiments, alcoholics, and toxins generally overwork the kidneys. When these organs are long overstimulated by overwork, they flag; and if they fail to carry off the urine--if they fail to separate the urinary elements from the blood--the excretion will be retained and uremia will be developed.

Lactic Acid Poisoning.--This poisoning takes place when breathing is shallow, or when from any cause there is oxygen starvation. In gastro-intestinal affections and diabetes this acid accumulates. This is the cause of so-called growing pains and polyuria in some children.

Acetous Fermentation.--This fermentation causes acid stomach, rheumatism, headaches, nervousness; in children, coughs, colds, enlarged tonsils, adenoids, etc.

Acetone or Ethy1diacetic or Acetylacetic Acid Poisoning.--This acid causes irritability. Unless controlled, it may lead to insanity. The breath is strongly that of ether or chloroform.

If this acid is suspected, a drop or two of perchlorid of iron should be allowed to run down the side of the test tube into the urine. The iron being heavy, it will go to the bottom and turn a brownish-red color.

Other acids are formed, but all those developments come from auto-intoxication, and will

disappear when the errors of life practiced by the patient are corrected.

We should get away from belief in certain diseases; for excesses of all kinds pervert nutrition and interfere with elimination. In this may be found both cause, effect, and cure.

7. Diatheses

Bad habits of speech and language are formed, as well as other bad habits. I have been in the habit of using the word "diathesis" in a reckless and meaningless sense. My only excuse is that I learned it early in my medical education, and continued to use it in the belief that my meaning would be understood better than if I should undertake to reform my language. Time has taught me to believe that truth can never be taught by fallacy, and so long as expression is fallacious it will hold thought to its dead-level.

The meaning attached to "diathesis" has varied. The general and prevailing idea has been that there are a tubercular, a syphilitic, and a cancerous diathesis. Since bacteriology has become the headliner on the medical vaudeville stage, and has been handing out "specific" etiology, the idea of diathesis is considered painfully deplorable. Notwithstanding the deplorability of the diathetic idea, the germ-theory advocates talk glibly of a universal syphilitic taint, and have appointed Wassermann to censor all suspects. After a blood test, if Wassermann nods assent, the doctor proceeds to medicate specifically; if he shakes his head in dissent, it is not final--oh no! The taint is suspected, and the victim is dismissed for a few months on suspended judgment. Like Victor Hugo's Jean Valjean, he must return and stand trial again and again. There is no hope of his ever being free from the sleuth hounds of persecution and prosecution. Neither the medical Sherlock Holmes' nor their victims suspect that the continual hounding builds in time the positive Wassermann reaction for which they are looking.

Taint, like diathesis, is never overcome; so what is the advantage of changing terms, if both carry an eternal fiat?

Diathesis, with a few, means a morbid temperament; and this definition is better than others. Hippocrates was nearer right than the mass of authority since his day. He declared that there were a diathesis of health and a diathesis of disease. But, as health and disease are two different phases of one state, there could not be a diathesis of health or disease; for neither is entitative--both being states.

Health and disease are different states of one and the same being. Perhaps the two states cannot be better defined than by saying that one is optimism and the other pessimism. One person believes in health and knows intuitively that it is his for the asking; another person believes in disease--believes that it is a heritage vouchsafed to him by divine providence.

To the discerning in physical as well as psychological health phenomena it is so plain that he who runs may read the truth; namely, that mind is the court of last appeal.

When the mind declares for health, health, and all that goes with it, will be realized. When the mind declares for disease, disease, and all that goes with it, will be realized. It should not be understood, however, that the mental declarations referred to are meant to be passive assumptions. Indeed not! The mind that declares for health believes that health is potential in life., and that, if the proper efforts are put forth, it can be realized. To make a homely illustration: Sugar is a potentiality of the sugar beet; but without effort--intelligent effort--sugar can never be a realization. Again, mind is a potentiality of brain; but unless the proper efforts for development are put forth, mind will not be realized. Passively to assume that health is positive and disease negative, and that by assuming the positive idea the negative must disappear, is self-delusion. Simply to assume that health is imminent, and will appear when its imminence is acknowledged, is pure, unadulterated delusion. Health must be the realization of properly adjusted means to ends. This state may be brought about fortuitously or by intelligent effort. It is not well, however, to trust to chance.

A belief in disease--a belief that man will be ill in spite of his best endeavors--is fatalism. Germs are everywhere, and that man cannot escape the disease they create is the attitude of the medical mind today. Watch the priests of this belief in convention assembled. Their wise deliberations are carried on in a cloud of tobacco smoke. One of their gods--namely, Lord Nicotine--goes before them "by day in a pillar of cloud.. and by night in a pillar of fire," in their search after truth. These priests of modem medical science are protected by their gods of sensuality, who move before them in pillars of smoke, fire, booze, and food--eating to keep up their strength. These gods do not abandon them "by day . . . nor by night, from before the people." And their constituencies stand for it. Great are the people, Selah!

As society stands today on the subject of health, the professions of religion, law, and medicine have declared for disease. And they should rejoice at their success; for disease is universal. Jails, penitentiaries, insane asylums, alms-houses, hospitals, sanitariums, sanatoriums, and, neither last nor least, the World War, all declare for the god of disease.

Only those with a philosophical comprehension will understand the significance of the above indictment. Those who have the proper understanding will know that to right all this world of error--disease--and its cause, will require much time; for health must be returned as it has been sent away-namely, by the slow process of evolution.

Is it not a fact that fear has been taught from the pulpit for ages? Fear of death, on account of the hell beyond, has caused a fear and belief in disease, because disease precedes death. Medicine has taught, and is teaching, with all the vehemence of sordid selfishness or stupid superstition, that disease is inevitable, with no escape by a route that is fraught with as many subtle causes for developing disease as there are schemes for immunization. All modem plans of immunization, except sanitation, are disease-building.

And what of law and order? It dare not take one step which is not squared on medical superstition. As much as it boasts of its erudition, and affects charity for the mental shortcomings of its weaker sister, medicine, its jails. penitentiaries, electric chairs, and insane asylums are built and filled on the authority of the preacher and the doctor, who censor the moral responsibility.

Our government gets its ethical eyes, ears, tongue, and opinions from doctors (medical dogma). Only a few months ago I saw a confidential letter from the Bureau of Foreign and Domestic Commerce of the Department of Commerce at Washington. The letter was for the use of the morning papers of Monday, March 19, 1917, and for the benefit of proprietary-medicine men, calling their attention to the rich field that China now offers for education in the patent medicine line. That country must have dropped back rapidly; for not long ago--twenty- five years ago--all our cities had skilled Chinese doctors. Is it possible that the medicine men of this country have run away from Drs. Sam Lang, Hooch Cooch, Ham Fat, and Wun Lung in so short a time?

That the readers may know with what zeal Washington is endeavoring to enlighten and benevolently assimilate the Heathen Chinese medically, I quote the last two paragraphs of the confidential letter:

> "Through judicious and persistent advertising, the natives are gradually being educated to the necessity of paying some intelligent attention to their ailments, and are responding remarkably well. For this reason it is not difficult to introduce a good article (proprietary drug) at a reasonable price, if supported by the right kind of advertising.
>
> The Bureau's report is devoted chiefly to sales methods and advertising, and the material presented on these subjects is new and important. Copies of the bulletin, which is entitled "Proprietary Medicine and Ointment Trade in China," Special Consular Report No. 76, may be purchased for five cents from the Superintendent of Documents, Washington, or from any district office of the Bureau of Foreign and Domestic Commerce. It contains twelve pages."

If, as prophesied by wiseacres, China is to be the future hope of republicanism, civilization, and the highest enlightenment, and if she is to pattern after the republicanism of today, it will be a case of "Hope long deferred maketh the heart sick." When in our imagination we see the present four hundred million Chinese, and the billions of their progeny that must follow before they can arrive at the stage of adopting even our medical and ethical superstitions; and then when we think of how long it will take the Chinese republic to give up the joy of forcing every other country to bow to it commercially before its ethics is evolved to the point of adopting the principle that in building others we build ourselves, hope is certainly deferred to such an eternity of waiting that it might as well die; for the realization is not for us nor our posterity.

It is not reasonable to believe that a people will escape the superstitions of the country from which they derive their inspiration. Obviously, then, the immediate future offers little hope for the retirement of disease--building beliefs and customs.

It is true that drugs have gone out of favor very rapidly in the last fifteen years, but the fundamentals on which health rests have not changed to more rational principles. Indeed, the medical mind has laid hold of bacteriology, which is a much more elusive delusion than any, if not all, of the profession's previous theories concerning etiology. With a new theory of causation, real cause, which should be largely intuitive--planted in the consciousness of man by the law of self-protection--is no longer of any use. Literally translated, the new law of cause and cure reads: Man may do as he likes; his acts count for nothing; if he is ill, a microscopic germ has attacked him, and the cure must be accomplished by a wise use of the cause. According to this theory, cause of disease is specific and entitative, and the cure and prevention must be specific and entitative. This being logically true, there is no excuse for the failure to cure disease, as is only too evident on every hand.

Modern medical science declares that disease is caused by a specific entity. If this declaration were true, therapeutics should be specific, and so certain that there would be no chance for disease to get a foothold. Certainly quacks and empiricists would have so little success, compared with established medicine, that no laws would be required to keep them from selling their inefficiency to an innocent and confiding public.

The germ theory is just one other false promise of vicarious atonement--a promise of immunization from the effects of broken law. If the offender will believe, and have a priest of the faith vaccinate or inject the immunizing agent (Savior) into his blood, he will be cured of all his sins.

With this superstition ingrafted on church and state, and even accepted by liberals, or those who pride themselves on having evolved out of superstition, what possible chance has a rational scheme of cause and effect--a rational interpretation of health--a real Philosophy of Health?

Before the nutrition of man's body can be advanced to a stable type--before man can build a state of health that will be dependable and allow him to develop his full efficiency--superstitions of all kinds must give way to truth. This is the truth that will make man free. When will it come? When!

Meanwhile we shall be busy with our pick and shovel, doing what we can toward leveling this mountain of error that stands between man and his health and normal development.

Probably apologies are due for such a lengthy digression from disturbances of nutrition. But is it possible to digress from the subject of nutrition when showing up fallacy? It is to be hoped, however, that this digression will be found potentially laden with enough side illumination on subjects the bearing of which on health is not well understood, to justify the liberty--or perhaps I should say outlawry committed against the writer's art.

To resume the subject of diathesis: It appears reasonable that a continual increase or decrease of physiological functioning must modify structure to correspond; and when structure is

changed from the effects of use--continual functioning--then it is transmissible, and not before.

The athlete can transmit as much of organic change as he has brought about in his nervous system. Not his muscles; no, he transmits nervous change--a potentiality--an ability to become an adept in athletics.

Organized skill transmits potentiality. Organized skill means that nerve- and brain-cells have taken on a memory that is transmissible in potentiality. A Webster transmits potentiality of brain. But such transmission does not necessarily mean that his progeny will be above mediocrity; for brain potentiality may be the only transmission. The nerve centers that furnish will power to work, concentration, capacity for continuous effort, may have been abused in the senior Webster to the point of degeneracy, and therefore the young Websters lack power to labor enough to bring out their mind potentiality.

The rule is that the masters in art and science do not leave children who represent them. One reason, perhaps, is that great skill comes to progenitors after families are begotten; and another reason is that great skill is the precursor of dissolution.

Great composers are near death physically when they reach their zenith. Is it strange that death should sing? Death should be the lowering of the curtain on the stage of life, at the close of the most skilled performance.

It would be strange for a Mozart or a Mendelssohn to transmit. But not so with great singers, or interpreters of their art; for the former are creators, and pay with degeneracy for their creative skill--in other words, they are consumed by their production; while the latter simply digest and function music, and may develop a transmissible ability to enjoy and reproduce.

Singers, as a rule, are not producers. A producer must climb the ladder of experience with educated faculties; and if he will give ear to the music of the spheres, he may be honored with a message to convey to his people before he dies. Those who enjoy what he brings may transmit the ability to enjoy to others. But the producer, the creator, pays with his life for his power to produce--and degeneration is not transmissible.

Brain is developed by thought. When a change in the structure of the brain is established from functioning, such change is transmissible.

Structural change from injury is not transmissible; for the change is not represented in the nerve centers.

The whole nervous system must be occupied more or less, directly or indirectly, in order to cause a structural change that is transmissible.

At conception, man has passed nature's quarantine and enters life with a clean bill of health. He may not be born in health; for, from conception to birth, he has time for vicious habits of parents or society to cause him to be born in ill-health.

Nature inhibits, and puts the stamp of sterility upon, the unfit--the degenerate. Conception means fit for birth. But each individual born brings into life with him family predispositions.

Disease is non-existent per se. Impaired health--a lowered health standard--is what we call disease. We cannot inherit disease; we do inherit predispositions, and these we call diatheses.

Diathesis means an inherited tendency to take on certain forms of disease. This tendency is divided into general and special. The general diatheses are scrofulous, gouty, and neurotic; the special diatheses are of the various organs of the body.

Because of the manner of living, habits, etc., certain organs are made to bear more of the burdens of organic life than others. If the extra work is uplifting--meets the approval of nature's

health censors--the transmission will be in keeping; if the overwork is organically vicious, the transmission will be in the nature of a diathesis; which means that the practice of ancestral habits will cause an early breaking down, and disease peculiar to parents will develop in children when the habits of parents are adopted.

The tobacco habit of parents will show in children as a type of nervousness with lowered resistance. The children of inebriates are born with the nervous diathesis. Children born of parents who suffered from stomach, liver, kidney, bowel, or brain diseases inherit a diathesis to correspond. If the children fall in with the habits of life peculiar to their parents, they will develop similar organic derangements; if they take up other habits of life--habits and customs which throw the weight of their enervating influence on other organs--then the predisposition--the organic diathesis--will not manifest, and perhaps will never have heavier burdens laid upon it than it can bear. However, if the organism becomes generally broken down, and enervation and autoxemia become pronounced, then the organ with a diathesis may lend its influence in complicating the case.

Organic diathesis is the only way to explain why people develop different organic diseases--why one develops a skin, another a bowel, a heart, a stomach, a liver, a lung disease, or a disease of some other organ of the body.

This is the only rational explanation of the fact that one man may drink barrels of whisky and continue to live, while another may take on liver disease, or develop an alcoholic neuritis, and die in early life from only a few years of tippling.

The man who has a liver diathesis develops liver hyperemia soon after developing the alcohol habit, while the one with the nervous diathesis develops neuritis in a short time after taking on the drink habit.

Achilles had a vulnerable heel, and most people have a vulnerable organ. This we call. predisposition or diathesis, Knowledge of predispositions is valuable to parents; for, if they act upon such knowledge, they can educate their children into a safety health knowledge.

A general survey of the field of medicine justifies one in declaring that there are scrofulous, nervous, and gouty diatheses, which are constitutional, and the organic diatheses, which are special.

Scrofulous--Adenitis--or Tubercular Diathesis.-- In the light of the truths set forth immediately precedingnamely: that all transmissible alterations must be organized in the nervous system--the subject of diathesis can be understood to better advantage, Scrofula--adenitis, or tuberculosis--is an organic change in the structure of the lymphatic glands. The cause of the change is chronic toxin poisoning. The special toxin is the alcoholic or acetous from sugar and starch. This causes a chronic catarrhal or inflammatory state, which defined means lost resistance--an enervated state. In this state the body fails to adjust itself to heat and cold; the radiating power of the skin is disturbed, and the mucous membranes are made to do vicarious service. This overworks or over-stimulates, and, as a consequence, the membranes exude--secrete an exaggerated quantity of mucous.

The hypersecretion of mucous serves a double purpose: that of excretion and, by coating the mucous surfaces, that of preventing the absorption of poisonous toxins. In this the lymphatics assist; for one of the functions of these glands is to arrest poisonous toxins and neutralize them. When the glands are forced to do excessive work in this line, they take on a state called adenitis or lymphangitis--a catarrhal state of the lymphatic glands. Like the mucous membrane, the lymph glands are made exceedingly sensitive to the influences of the toxins developed by putrefaction of animal proteins.

Characteristics of the Scrofulous Subject.--Scrofulous children are often very good-looking. The skin is white, soft, and beautiful; the eyes are adorned with long, exquisitely curved, and

flowing eyelashes; and the brow is mounted with a splendidly curved line of hair to match the eyelashes. The legs and arms are plump and prettily formed; but the flesh is soft and flabby, and, when youth is past, the flesh of such subjects sits on their bones much as a saddle fits a sow. The nose is often large and broad; the hair of the head long and beautiful in texture.

The young scrofulous subject, at or even before puberty, is troubled with acne, and often most beautifully featured young women and young men develop the most disgusting types of "acne vulgaris." Girls develop leucorrhea, and are often sexually precocious. Boys develop sex-neurosis.

These children have enlarged tonsils, adenoids, and enlarged submaxillary and cervical glands.

Slight inflammation of the eyelids is common. Often the edges of the eyelids are red, and discharge a secretion that glues the lashes together slightly during the night.

Glandular inflammations, that come and go, are common. When the glands once suppurate, they are inclined to repeat. It is hard to say when they are cured, as they appear to recover fully, but a week of indiscretion in eating is quite enough to start up the inflammation again.

Scrofulous children develop the first symptoms of catarrh soon after birth. The very bad habits of frequent feeding--every two or three hours--and giving sugar and starch, produce catarrhal symptoms. A cold is the first symptom; and, if errors of diet are continued, glandular involvement soon follows. Tonsillitis and adenoids ensue as a matter of course, and then all the diseases peculiar to childhood, in sequential order. A large percentage of these children die before teething is finished. Those who do not, have a history of many sick spells, besides the regular diseases of childhood. Those who have the diathesis most profoundly established, and whose anatomical construction favors the development of pulmonary tuberculosis, will go down with this disease about the end of the development period.

The age when bodily development is greatest is the most important age in life. This is the age when resistance to inherited tendencies is held back. If understood, and rational means were adopted for overcoming these tendencies, many who now go down and out with scrofulous diseases would improve on their ancestral stock by giving evolution a chance to bring out previously suppressed potential energies. Inherited diseases, or inherited predispositions to take on disease, mean ill-balanced anatomical construction; and defective construction must mean defective functioning. To illustrate: Environments and habits which neglect lung development and cause under-development predispose to tuberculosis in scrofulous subjects, but in those who have the nervous temperament unduly developed, brain diseases, insanity, or some form of nervous trouble will be developed.

In those cases where bone development falls below ideal physical construction--where eating habits, or geographical location, fail to supply material for proper bone development, or where drugs have been used which derange the nutrition of the bone--tubercular bone diseases may be looked for, such as caries; also tubercular inflammation of the synovial membranes, burse, and membranes of the brain.

The scrofulous diathesis is a constitutional state favoring the development of inflammations of all kinds.

In just what way a given scrofulous subject will be afflicted will depend on, first, his anatomical build; secondly, his habits; and, thirdly, his domestic and civic environments.

He may develop tuberculosis of the lungs when construction favors it, and the eating and other habits develop the necessary toxin poisoning.

If the most vulnerable point be the liver, heart, lungs, kidneys, skin, bowels, brain, or parts of less importance, indiscretion in the indulgences of appetite and passion will turn loose the sleuth

hounds of toxins, whose business is to seek out the most vulnerable gland or organ in the body, and there set up an inflammatory state, the severity of which must depend upon the bodily resistance and the continuance of the exciting cause.

The cure should be obvious to the most stupid; namely, to build up lost resistance by rest, and to correct the sensuality.

It is obvious that the state of resistance--the state of enervation--must range from one nearly normal to one of almost no resistance at all. The question of cure, then, must be a question of determining to which class the patient belongs. If to that of lowest resistance, the possibilities of recovery are nil. A perfect treatment will secure the most comfort and the longest life possible, but no cure. Not so of the type representing almost full resistance. Those in this class can be cured when in the first stages of almost any disease, by simply correcting their daily habits.

It is quite obvious that physicians whose experience is confined to large clinics filled with charitable subjects--patients of the ne'er-do-well type, the unsuccessful and scrofulous types--will have quite a different opinion, as to the curability of most chronic diseases, from that of the physician whose practice and experience have been confined to a more successful and higher physical type of people. There are two classes of patients who have low resistance. The first comprises charitable cases, found in county hospitals and public clinics. The second class is composed of the overindulged, pampered, and spoiled who have gone the pace--lived such a sensual life that an otherwise good constitution is reduced to no resistance whatever. The former class cannot be brought back, because the degeneration is too complete. The latter class cannot be brought back, because habits are more powerful than the will. Add to these hopeless cases a treatment that is degenerating, and then a consuming fear, which is commonly imparted, and there is reason a-plenty for building the pessimism of the average professional man.

Those physicians who look upon syphilis as one of the most dreadful diseases on earth have gained their experience by seeing and treating scrofulous--syphilitic--subjects of very low resistance. They have made the mistake of breaking down what resistance the patient had left by mercurialization, developing a scrofulo-syphilo-mercurial type that cannot be cured because of the physical degeneration which existed before the syphilitic infection. The force of these statements will be better understood if through the mind's eye there may be contrasted the scrofulous subjects, from the most resistant type to the type too low to throw off disease, with a non-scrofulous subject who, when in full health, cannot be infected.

The immune people--people who have no scrofula, and who fail to take on disease, no matter how much exposed they are--resist infection from specific diseases until their habits of life lower their resistance; then they frequently become infected.

Scrofulous subjects should be in the open air and sunshine as much as possible; and, if they desire comfort and a reasonably long life, they must be moderate in all things.

Gouty Diathesis.--This constitutional derangement--nutritive perversion--favors the development of arthritis, herpes, gout, inflammatory rheumatism, neuralgia, stone formation, and all skin derangements of a nervous type.

It is the vital temperament that takes on these diseases when toxin-poisoned.

The gouty diathesis belongs to the mental temperament.

The peculiarity of the gouty diathesis is that, as the intellect develops and becomes predominant, nutrition grows correspondingly poorer.

The scrofulous subject is slow and sluggish; he has soft, flabby muscles, cold feet and hands, with oily, doughy skin. The gouty subject is nervous; his flesh is firm, his skin dry, his hands and feet dry and hot. The skin of the body is inclined to be dry, and often sheds a scurf that will make black underwear quite white from the amount thrown off.

The gouty subject may be very lean, and he may be quite stout or fat. His hair may be thin, but seldom, if ever, to be compared in thickness, softness, and beauty with that of the scrofulous subject.

The gouty subject loses his hair early and becomes bald young. Great beards belong to the scrofulous diathesis.

The gouty subject is inclined to be melancholy, but he is often a comedian. He is bright, intellectual, witty, sharp, but in disposition more sad than otherwise.

The young gouty subjects suffer much pain in their sickness. They have headache, and are often sent to bed on feast-days, because of the bad effect that the excitement of preparation for the day has upon them. The scrofulous subjects go to bed the day following the feast, because of the overindulgence.

While yet young, the gouty subject often becomes asthmatic. In middle life and beyond, if out of health, he will have a wheezing in the lungs--sometimes a bronchial asthma. Heart asthma belongs to the gouty.

In babyhood convulsions are common. The babies of the gouty diathesis are nervous; when quite feverish, there is a tendency for congestion of blood to the brain, bringing on convulsions.

The gouty are inclined to have dyspepsia, headaches, constipation, piles.

The gouty are very fond of sugar and eatables made up of sugar, starch, and fat. Such eating often leads to enlargement of the liver.

Eating too much of rich and highly seasoned foods causes the formation of toxins of the fatty, acid type. The absorption of these toxins causes the asthma and bronchial irritation mentioned above, because of the elimination by the lungs; the breath is made offensive; the odor from the skin is bad; the skin becomes eczematous, because of the material eliminated by it.

Nutrition of the cells is perverted, and elimination is imperfect. This changes the fluids of the body.

Sugar in the urine of the gouty indicates that it is not consumed, but remains in the blood. This is the diabetes of the arthritic.

The gouty subject digests nitrogenous foods badly; hence there is present in the urine an excess of phosphates, uric and other acids. Oxalic acid helps in forming stone in the liver and the kidneys.

The gouty and scrofulous diatheses are sometimes mixed. In such case there must be a mixed pathology.

The gouty subject may develop an asthma, if the lungs are the most vulnerable organ; headache or migraine, diabetes, stone in the liver or kidneys, whichever of these organs happens to be the least resistant.

The gouty diathesis differs from the scrofulous in that tuberculosis is not likely to develop in a gouty subject. If it does, the disease is not inclined to develop a severe type, and it has a tendency to take on a spontaneous cure--take on a fibrous character, which is curable.

To sum up: Health is divided into good and bad. Health, then, is a generic term representing two states of the body, which are ill-defined except in pronounced types. These we call health and disease, which are species of health. The species disease is divided into races or diatheses, and diatheses are organized predispositions.

The scrofulous and gouty diatheses have been developed by influences continued long enough to change the fundamental cell structure. When the structure is changed, the function must be in keeping.

Gouty diathesis means that part of the human family has been subjected to influences which have produced a physical state functioning in a given manner under normal influences. When under abnormal or disease-producing influences, diseases are all linked together, taking on like nutritive changes.

All diseases developing under the influence of the scrofulous diathesis have a like basis, and must receive the same general treatment.

The same is true of the gouty or arthritic diathesis.

8. Heredity

"The fool inherits, but the wise must get."

The fool inherits. Indeed, the man who waits for a dead man's shoes is waiting for an empty inheritance; for the only inheritances worth while are our static possibilities, which are racial, ancestral, and parental.

The wise man cannot leave wisdom, but he does leave mental potentiality. But if his children succeed to a like wisdom, they must buy and pay for it as he did. The only advantage the children have over their parents is that they may see a little more clearly, and inherit a greater attention and a more persistent purpose. Yet they may not inherit industry. Power for work may be exhausted in the parents.

Indeed, children from wise parents may fail altogether in accomplishing anything; for they may be rendered impotent because of unwise care. When the habits of children are forming, they may have an abnormal conceit, selfishness, envy, jealousy, irritability, or hypocrisy developed that will more than offset any intellectual potency inherited. Careful training at the proper time will overcome these undesirable traits.

We inherit nothing except genus, species, and race. Even racial proclivity may be overcome in a few generations by change of environment; but much sooner by amalgamation.

To wait for money is to refuse to develop talent for securing it. To wait for talent to develop is to wait in vain; for we inherit only potentiality, which is an empty inheritance without cultivation. We inherit potentialty--not disease or affection.

The vital force, or vital energy, of the teachings of a generation or two ago has now given way to cause and effect--action and reaction--stimulation and reaction.

Man's type of body--his material construction--is fixed by heredity. He cannot get away from his genus, which is animal, nor his species, which is man. Man has many physical attributes which are as fixed as law; but his possible reactions are limited only by the variety of stimulants in his environment.

Species possess individuality, which is fixed and transmissible. Man inherits his ancestral type of body. The type has preserved its individuality throughout the ages so fixedly that men of all kinds and climes resemble each other.

The animal man has characteristics that are individual. He has two legs, and a foot on each leg; two arms, and a hand on each arm; a body which presents a front and a back; and, when he stands upright upon his feet and legs, on top of this body is a neck, and on top of the neck is a head. This is a common description of man that fits every member of the species. There are a common anatomy and a common physiology that fit every man, from as far back as man's

records run, down to the present. The chemistry of man's body is the sameyesterday, today, and forever.

The first step--evolution--out of the common, universal clay type is into races.

Naturalists are not at one in their division of mankind into races. Cuvier classified men into three races; Agassiz divided them into eight races.

A common classification is into five races; namely: the Caucasian, or white, race, to which belong the inhabitants of the greater part of Europe and western. Asia; the Mongolian, or yellow, race, to be found in Tartary, China, and Japan; the Ethiopian, or negro, race, which is found in Africa, Australia, and Papua (New Guinea and other Pacific islands); the American, or red, race--the Indians of South and North America; and the Malayan, or brown, race, found on the islands of the Indian Archipelago. Recent writers place the Malay, Indian, and Mongolian together.

Races divide into nations, peoples, tribes, and families.

Each departure from the common stock of species shows a specific difference. Each race has a personality all its own. The Caucasian race has a specific personality that differs from that of all other races. These differences are brought about by mechanical, physical, chemical, and psychological agents. The changes are brought about slowly. So strong is the force of physical heredity that it takes many generations to evolve into and out of the Roman nose, the potato lip, and the almond eye. Psychological changes move as slowly, if not slower. Look at our religious, medical, and legal superstitions!

Each subdivision of each race is marked by distinguishing characteristics.

Those with a cosmopolitan acquaintance can distinguish the nationality of the people whom they meet in their travels. If their education has been extended to a full familiarity with the inhabitants of any one country, a distinguishing difference will be found in those who have been confined to a limited section of that country.

Every country has its educated or intellectual, intelligent, and ignorant classes. These are not distinctions without differences. Intellectuality does not always mean intelligence; intelligence does not mean intellectuality, neither does it mean ignorance.

In our country we have a North and a South, an East and a West. The people in these four divisions have distinctive characteristics. 'There is a type called the "westerner," who is distinctive and unlike the "down easterner." And there is a westerner who is cosmopolitan in personality, and who is typical of all other cosmopolitan types.

These differences are brought about by intelligence, travel, and food. Causes for varying types of man at the beginning are certainly geographical, climatic, and food, as well as physical, influences. Climate and food are type-builders.

Psychology should not be left out of the list of causes of type-building. From now on this subject will hold a conspicuous place among causes that make for individuality.

Religion has stamped its influence on the face of humanity. A close student of physiognomies can read the ancestral type of religion in the faces of humanity today. This shows what part the mind has played in molding the body.

When we consider that a fixed physical development can be made to function in such a way as to change the individuality, we are ready to believe that there is nothing fixed from a hereditary standpoint, except the elements and genus or type, and the possibilities of types. The possible types into which the elements may be molded are infinite. This being true, it should be easy to see that there is little which is bound to the hard and fast lines of heredity, and that heredity, outside of genus and species, is more an accident than a well-ordered plan. If a child takes after

its parents, it will be due to postnatal, rather than to prenatal, influences. On this subject I have experienced a most radical change in belief in the past twenty-five years. I certainly hope I am not retrograding.

An adopted child from a criminal family will show as much advance in a good family as a child from a good family will show degeneracy when brought up in a bad family.

As function precedes structure, it must be obvious to the mentally discerning that a change in function must be followed by a change in structure.

But when does a change in function take place? Only when function is changed. We may profess a change in belief--we may preach our belief--but if we do not live it, we do not function it; hence there is no structural change. We may believe in diet as a remedy for all our physical and mental defects, but if we do not live our beliefs, we do not reap the benefit of our beliefs.

We see the proof of this in so-called criminals. They are put in reformatories; they are made to conform to the laws of reform; they talk it and act it, but do not think it; hence no structural change takes place, and, when the acid test comes, they are found to be the same.

When the Mongolian takes up his abode in our country, and proceeds to establish the habits and customs of his native country, and lives them daily, he continues to function Mongolian-like, and builds a physical structure to match. If he leaves Mongolia behind, and thinks, eats, and lives the American life, his structure changes to agree with his change in function. The physiognomy of structure is what I mean; for, as a matter of act, a real change of the fundamentals of genus requires much time and many generations. The foreign-born citizen who lives the life and thinks the thoughts of his native country never becomes a citizen in love and sympathy; he remains an alien to his adopted country so long as he lives.

It is impossible to amalgamate and assimilate disagreeing functions. Universal amalgamation will follow universal like functioning--like sympathies.

In matters of religion, we often see orthodoxy affecting reform--pretending liberality; the leaders struggling to reconcile their old beliefs to new ones, even going so far as to compromise on strong differences. Among the lay orthodox many live, act, and talk in such a way as to make it appear that they have experienced a change in belief. But there is really no change; for below the surface they function orthodoxy, hence preserve a structural physiognomy to correspond.

A pretended belief will bring no change. Belief must be lived; then a change in structure that is potentialized. follows, and this is inheritable. But please understand that it is inherited as a potentiality, which, if it be cultivated, may develop, but which may never arise as a material attribute.

When organs function crime, it is because the stimulation which causes the functioning calls out this particular effect. Change the stimulation, and we change the functioning--poisoning; for whatever toxins there are in the system cause a functioning to correspond.

Crime--Cause of

Crime is a disease brought on by bad habits. It is made up of such elements as a sluggish liver, brought on from overindulgence in alcoholics; or too much sugar, fat, and starchy foods. Such habits bring on discouragement, amounting to pessimism and a reckless indifference to consequences. These consequences may be reversed in the same subject, showing that good and bad depend on the kind of stimulation used in exciting reaction.

The intoxication from starch poisoning causes the building of pessimism. Gloom leads to recklessness and a desire to be thrilled by new sensations. Normal sensation is dulled when starch poisoning is pronounced, and common appeals, such as good advice from parents or guardians, have no influence.

This dulling influence extends so far as often to strike a withering blow at the fountain-head of intelligence--namely, attention. The power of attention--power of continuous attention--is the secret of intelligence and intellectuality.

The Influence of Toxin on Mind

A brain rendered dull by the toxins of indigestion, or from intoxicants of any kind, loses its power of attention; hence an otherwise bright mind is consigned to ignorance or crime, or both. If the child is idealistic, the toxin drunkenness may cause it to dream fanciful or grotesque daydreams. If the sensual elements of its nature predominate, its dreams may be such that, when materialized, they are called crimes. Toxins acting on the brain cause it to objectify in keeping with its type of thought; and the type may be sensual or not.

When attention is capricious, irregular, or spasmodic--in a word, when it cannot be sustained--knowledge must be fragmentary. Such a mind cannot be philosophical. It may be scientific, but it cannot be depended upon to work out the relationship of fundamental principles. The unity of all things is beyond the mental horizon of all who cannot build a reliable attention.

Importance of Attention

Nothing but the organizing effect of sustained attention can build for the future--can build for transmission--heredity; and this legacy is potentiality only.

Food poisoning is always marked by sluggishness of the brain as well as the other organs of the body. Every organ is represented in the brain, and the reactions from the impulses--be the stimulation from food or whatever the cause--will be in harmony. If the brain is made brutal by toxins, its functions will be in keeping.

The toxin-poisoned--the inebriate--acts from the promptings of his grosser sensations--his animal nature.

Change the life, and the functioning changes. Remove all influences that cause an undesirable reaction, such as toxin poisoning, and we see a desire for the good and a desire for the best supplanting a desire for the bad and a desire for the worst.

This being true, the atmosphere of despair thrown around people because of the general belief in the heredity of depravity should clear up, and hope and intelligent action should from this time on manipulate the scales of justice, wisely placing the blame for crime where it belongs.

Society must become intelligent enough to direct and control the functioning of its sick members--the sick in mind (the criminal) and the sick in body (the diseased). And, as function is the author and builder of structure, society must perfect criminal man, if he is ever perfected--must cure man, if he is ever cured-for nature executes the unfit.

Degeneration Is Not Transmissible

Wrong life, causing wrong functioning, is disease. All crime is disease. If continued, it ends in degeneration. Degeneration is not transmissible. When a man becomes an organic criminal--when a disease becomes organic--the God of Genesis steps in and declares: "Thus far shalt thou go, but no farther!"

Genesis means creation. It means that old things have passed away and new things have come into existence,

Birth and death are antithetical. The one comes into life; the other passes out with its infirmities.

What a hell life would be, if all the imperfections of parents could be visited upon children!

Why Criminals Do Not Reform

Why is it apparent that crime and criminals herd together? Why do not more criminals reform, if crime is functional and not organic? Because they continue to live in the same way. After they have served a term, they know no more of correct living than they did before; for in prison they are fed haphazardly. Perhaps the limited supply of a very plain food is all the benefit they get in the line of diet. Thus they return home to their heavy, gross eating, toxin poisoning, and the depressing effects of being pointed out as ex-convicts, and too often hounded about the country by petty officials of the law, who appear to take a delight in branding them as criminals and setting all the dogs of gossip howling at their heels.

It is difficult to say which is the greater criminal--society or society's victim. Truth declares that they are related as cause and effect.

There is little chance for a bad man to reform; for the undiscovered bad man in every community appoints himself a committee of one to see to it that the ex-convict gets what is coming to him.

Ignorance makes man a criminal, and ignorance keeps him a criminal.

The good and the bad in all mankind are purely functional. If we react good, it is because the shock that caused the reaction was good, and vice versa. We must get away from the ancient and should-be past belief in the entities good and bad.

We are; and the fact that **we are** is proof that **we are fit;** for otherwise we should not have passed through the portals of life. Inasmuch as **we are,** and **are fit,** our functioning will be proper if the cause of our functioning is censored properly and the right stimulation is used to bring about the reaction (functioning). Our reactions are just what they must be; for they are in keeping, and under the guidance of the laws of cause and effect.

If we would have ideal effects, we must bring them about through ideal causes.

Who can be so childishly silly as to expect figs from thistles--good from bad training? So long as the fundamentals of our ethics are false, when will the superstructure become true and ideal man-building?

Man is man. He is a microcosm--a duplicate of the macrocosm. He is neither good nor bad. He acts and reacts on his environment in kind. If he can so shape the impulses which cause him to react as to build good--the truth--he will soon function truth.

If the influence that causes him to react is good, beneficent, and worthy in every way, his reaction will be in kind. If the influence is bad, selfish, and unworthy in every way, his reaction will be in kind.

The idea of heredity-meaning the inheriting of good and bad--with all the disqualifying, soul-stifling, and health-destroying beliefs and customs that have grown up about this belief, should be given up--should be discarded; for it is a disgrace to this age, and belongs with the devil--with demonology. Indeed, it is one of his majesty's children. In the place of that fallacy should be put man in a state of neutrality. Man should be recognized as an unmoral being who is capable of being molded into truth or fallacy--law-abiding or criminal, loving or hating, healthy or diseased, wise or ignorant. It is all a matter of teaching.

To sum up the foregoing, let us assume that when a child is born it comes with a clean bill of health. I mean health; and the word includes what is ordinarily understood as health of mind and body, free from crime or criminal nature. When a child is born with venereal infection, the infection has taken place since its conception.

The Possibilities of a Child

A child at birth is a highly sensitized lump of protoplasm--human clay--which is made up of cells. A cell is composed of a central spot, or nucleus (small nut), and a body. This cell is the protoplasm out of which the human body is built.

At birth a child is an undifferentiated lump of protoplasm, possessed of ancestral form which binds it to its genus, which is animal, and species, which is man. It is no more a thinking man than the young sprout or twig is a tree with developed fruit.

The lump of protoplasm is potentially a human being. Whether it is to develop ideally or not depends upon the artificer--home and society.

A lump of potter's clay has all the potentiality needed to be brought into the most exquisite forms; yet, if it falls into the hands of a bungler, it may end in some grotesque shape with neither order nor reason.

If there are few expert artificers in the field of art who can send out perfect specimens, when in the privacy of their studios they may try and try again, we certainly should not expect that people without the slightest knowledge of man-building could mold a lump of human clay--protoplasm--into a perfect human being. Indeed, should we not expect just what we see-namely, nearly every finished product misshapen in some way?

If the molding is started wrongly, it may be gone over and covered-up; but the scars are left.

Why should the majority of human beings know how to rear children successfully, when they have but little common-sense in matters of far less importance?

The bungling work of stupid parents and teachers is charged to Providence. That a child inherits its faults and failures is accepted by law and society; yet that same law and society give themselves the double cross by holding the victims of heredity responsible for their inheritance.

When the best intellects of the day confuse facts as they do, what hope can we have that we shall ever evolve out of our chaotic state?

If children evolve undesirable traits, is there not more prospect of bringing about a reform with beliefs and actions based on the hypothesis that every child is a new and perfect being at birth, than by acting on the old hypothesis that they are cursed before birth by an inheritance out of which they can never be trained?

If training is worth anything, it should be started at birth. What kind of training can a child get at the hands of a father and mother who lack training, and whose stockin-trade is a lot of bad habits, kept at white heat by a cultivated sensualism? When the offspring of such unions go to the bad, it is from inheritance! Is that so? Then training has nothing to do with these degenerate children?

We must accept or reject the idea that children can be taught. If we accept it, then we must not excuse our failures and charge them to Providence.

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5. Nervous Reactions

As had been stated before, all acts of the living body are reactions. Every movement of our bodies, either voluntary or involuntary, is a reaction--the result of shock or stimulation--and is aroused by an external cause. Voluntary movements are directed from the mind--the mind wills the movement. Voluntary movements may become so automatic that it is difficult to distinguish them from involuntary movements. For example, the players on musical instruments seem to perform without thought. They read music, and their fingers find the notes on the instruments without hesitation and without a mistake--and that, too, so rapidly that it does not appear to be possible that the acts can be the results of mental deliberations.

The same may be said of reading. The person of educated mind will take up a book in which its author sets forth new and novel ideas regarding an old subject, or perhaps presents new ideas, or ideas contrary to those of convention; and almost instantly, without apparent time for analytical thought, the author's premise is interpreted and compared with the fundamentals of knowledge, and the book and its author are placed where they belong. False or true, the reasons for either are forthcoming and final.

The mind becomes so familiar with the foundation of knowledge that it detects an error on sight; yet it does reason, but with lightning-like rapidity, or, what is more true, with the rapidity of thought.

Every act (and thought is an act) is a reaction from an external stimulation. The effects of stimulation are of two kinds. In some the full reaction may take place at the point of stimulation; others, more complex, cause multiple reflex actions. The impulses are sent to the center from the surface terminals by the centripetal (afferent) nerves, and the irritations are reflexly sent from the center over the centrifugal, or efferent, nerves.

The afferent nerves are the nerves of general sensation; also of special and visceral sensibility. impulses of an irritating character imparted to those nerves result in changes of a psychic, sensory, motor, vasomotor, secretory, or trophic character.

Psychic changes may be produced by fear, anger, happiness, etc. Fear may be caused by a telegram conveying bad news; anger, by anything capable of producing anger.

Sensory changes may take place. For example, if ice cream is eaten too rapidly and the stomach is chilled too suddenly, intense pain or severe frontal headache may result, which will pass off as soon as the nerves of the stomach are relieved from the irritation of cold. Headaches are often the result of indigestion, constipation, etc.

Motor changes take place when toxic or other stimulation has become habitual, until tabes dorsalis or other forms of degeneration manifest themselves.

Vasomotor changes occur when alcoholics, tobacco, coffee, or other chemical toxins are used over a long period of time; or when constipation of long standing has caused systemic infection by forcing absorption of the toxins of putrefaction. Sclerosis, or hardening of the arteries, is a vasomotor change.

Secretory changes are produced by many forms of irritation. Pronounced pain, anger, or fear inhibits secretion, stops digestion, and causes poisoning by modifying the fluids of the body. Pleasant thoughts, renewed hope, or success revive secretions and excretions, and transform the invalid into full health.

Trophic or nutritional changes are caused by any and all influences that irritate, depress, or pervert the nervous system. Any influence that puts the mind at rest will improve digestion,

establish secretions and excretions, and transform the invalid into health. Those who have cultivated a fear or worry habit must be cured of the habit, after which they may continue in health.

An irritation may spend its force locally, as an escharotic (caustic) may cause an ulcer without awakening reflexes. The sun may burn the skin brown without causing a reflex irritation.

A poised mind may be abused--subjected to abuse that is looked upon as insulting--without having its equilibrium disturbed.

A local irritant may cause a sensation at the nerve center, which stimulates a motor impulse, and the part injured will instantly be removed from the point of irritation.

An irritation may cause a multiple of reflexes. A fright may cause vomiting and purging, a chill, headache, heart palpitation, and other vasomotor changes, as well as perspiration. An injury may cause many--or, if severe, only a few--reflexes.

A simple reflex is produced where the impulse from the point of irritation passes to the nerve center and back, or passes to a multiple of points.

Stimulants which act as builders of disease must be continual. For instance, tobacco, when first used, causes great prostration and vomiting. The nicotine is absorbed in the mouth; it enters the circulation and is distributed to an parts of the body. If the boy or man, at his first experience, were no larger than a cat or a kitten, the amount of nicotine required to prostrate him temporarily would be sufficient to kill him. His size is what saves him. The fact that the boy does not die is no proof that nicotine is not a rank poison.

The continuous use of nicotine establishes a toleration, but at the cost of a slow and continuous loss of nerve energy.

Those of low vitality, brought on from chronic tobacco poisoning, break down and die of some form of acute disease. No one ever suspects the truth that, if they had been possessed of the energy they have wasted on stimulants, they could have survived the disease.

This truth is not known, and will probably be disputed by the world of tobacco-users. But it is simply a matter of mathematical calculation. Tobacco is a poison. It uses up nerve energy, It requires nerve energy to resist shock, and, if a given shock is too great for the amount of energy possessed by the injured man, he will die. If he had been possessed of the amount thrown away on stimulants, he would have had enough to withstand the shock.

This is true of any stimulating habit. The inebriate, or the individual with used-up nerve energy from other stimulants, will go down under the influence of a disease that otherwise would not cause death.

The nicotine poison affects the mind by dulling ambition; it affects the sensory centers, and causes more or less loss of taste, smell, sight, and hearing; the vasomotor system is deranged--the heart is overworked, and the arteries are hardened; the trophic or nutritional system is deranged, and the subject loses weight--or, on the other hand, obesity may develop.

So long as man has the balance to the good, he can boast that his habits are not injurious to him. But what about sickness and the death-rate between thirty and sixty-five years of age? Why do more than twice as many men die between thirty-five and forty-five as between twenty-five and thirty-five, and nearly three times as many as die between forty-five and fifty-five? Because the ten years from thirty-five to forty-five is where man comes to the parting of the ways of life. He must let up on his habits or die.

Why should men in the prime of life be prostrated and die of acute disease? Lost resistance is the answer. What causes lost resistance? Persistent, excessive stimulation.

Acute disease cannot down a normal man.

When prostration comes, if a little of the wasted energy could be restored, it would make recovery possible.

To restore lost power reestablishes immunization.

When threescore and ten comes, if habits have been such as to conserve energy, life will be prolonged, and the sane and rational faculties will make the enjoying of life possible.

People who are healthy are normal, and normal people have the faculty of enjoying, be they twenty or a hundred and twenty years of age. Disease is what ruins life; for it means discomfort in mind and body. To enjoy, one must hold the right perspective of life; and this is impossible for those who are drunk--toxin--poisoned.

Dotage and driveling belong to disease--not to old age. Nature never makes a clown of old age. Man builds his own grotesqueness.

The lay reader must keep in mind that shocks of every kind are stimulating, and that stimulation to the point of awareness is overstimulation; and, when this is persisted in, organic change (degeneration) sets in; then the output of sensation is abnormal, and means mental and physical disease.

This is why men in the prime of life become prostrated with acute diseases, and die, or develop such chronic diseases as tabes dorsalis, diabetes, Bright's disease, arteriosclerosis, heart disease, epilepsy, et al.

There is but one reason for disease, either of an acute or of a chronic character; namely, lost resistance--enervation--from habitual overstimulation.

Tobacco, alcohol, coffee, tea, overstimulation from food, wrong food mixtures, sensuality, lasciviousness, overworked emotions, misanthropy, a life of selfishness and dishonesty--any one of these stimulants, used continually, lowers nerve resistance, causing man to become vulnerable to unusual shocks, and at last to the usual shocks of his environment.

The difference between health and disease--between a normal state of resistance and enervation--is that health, or normal resistance, reacts and readjusts from unusual stimulation or shock, and is so adjusted to local environment that its stimulating effects are not noticed--they are subconscious, as they should be if ideal health is desired; while disease is that state of health marked by lost resistance, with little power to react.

A man is not old until the stimulating effects of his environment are too shocking for him--not until he loses his reacting and readjusting power.

Reaction is the body's protector; pain is an educator, a protector. When we listen to the voice of pain--the call of reason--and remove its cause, we conserve our powers and lengthen our lives.

If fear of disease and death is the stimulant that is using up resisting power, then the cause of fear must be removed. If the cause is the bad habit of consulting doctors who frighten--who cause fear--but who do not impart an antidotal knowledge, then such doctors should be avoided.

People should be shown the danger they are in because of the life they are leading, and then have a way pointed out to them that will lead to health. But brutally to tell the sick what their disease is, and then to add that recovery is doubtful or impossible, is quite enough to convert a curable disease into an incurable one.

When all the people shall know that the making and the curing of disease are in their own

hands, then schools for teaching health will be more popular than drugs, vaccination, and surgical vandalism.

It is worse than childish to declare that teaching people to live carefully, eat carefully, and be prudent about the care of the body is disease-building. As well declare that education should be condemned, because, when full and well rounded, it too will cure the ignorance that leads to disease.

Nothing bad can come from teaching children that they must not handle guns, or that, if they do, they must be careful lest they kill themselves; that, for the same reason, they must avoid poisons; that food is body-building, and needed to keep well and happy, but that, if too much is eaten, or wrong combinations are made, disease, and even death, may result. Surely nothing wrong can come from telling young people that all their joys and pleasures may be turned into disease and death, if indulged in until resistance is broken.

Forewarned is forearmed. Disease and premature death come from ignorance, or possibly from the fact that habit is established before knowledge of its danger is acquired. Degeneration is established before cause is removed.

Knowledge will not save all; but it stands a better chance to save if it is taught before habits are formed.

Fear is an offspring of ignorance. Relief from fear is wonderfully curative and health-conserving. If fear is the sole cause of a given disease, then a full cure will follow when fear is removed. But if fear is simply a complicating cause--if fear, and the derangement that caused the patient to seek a physician in the first place, have been allowed to run on until enervation is so profound that one or more organs have lost their power to function physiologically--then to remove fear does check the speed of the patient's decline, and cause a feeling of mental and physical betterment which is often interpreted as a cure. Unfortunately, however, the original causes--namely, stimulating habits, and their effects (enervation), plus perverted organic functioning--still exist, and that, too, without the warning voice of apprehension and discomfort to guide the victim away from danger.

Suppose a trophic (nutritional) change has taken place to such a degree that sugar or albumin appears in the urine--what is to be done? Remove fear? Yes, fear, and every other cause of overworked reactions, must be removed, and then the slow march back to a restored resistance and nutrition will be made.

What can treatment directed to the organ do? What can removing organs do? Nothing. They are only servants of the master--nutrition--and, like all good servants, do whatever menial service is placed upon them. The master of the show is nutrition, and he does good work so long as he is supplied with sufficient food and nerve energy.

Pain and discomfort should be mentally suppressed and ignored, but not until their significance is understood and a well-directed plan for removing their cause is inaugurated.

To stop pain with drugs, or to ignore it, is not removing cause. Those who are wise will remove the cause; then palliatives will not be required.

Nervous reactions are necessary; they are constructive; it is only when excessive that they become destructive.

Exercise, up to a given point, is necessary for developing the greatest nutritive efficiency.

Exercise to the point of abuse overstimulates and becomes destructive. The first effects of stimulation are that the heart and blood vessels respond to extra work; the glands take on increased functioning; the mind becomes more active; the entire body responds; secretions and excretions take on renewed activity, and nutrition approaches the ideal.

This type of stimulation--exercise--is not an unmixed good. When pushed to excess, we see the common result of any form of overstimulation--namely, enervation. The athlete barters a long life for a short and active one.

The sensualist deliberately yields a long, sane, comfortable, and pleasurable life for a bacchanilian feast and the hell of repentance.

Reactions must not be pushed to the point of excess. If they are, nutrition is impaired; and that means that the whole organism is impaired, leaving the brunt of all future shocks to fall upon the weakest organ of the body. If that organ happens to be the lungs, tuberculosis, bronchitis, asthma, or pleurisy will be the headliner, or principal feature, of the pathological play on which the curtain of life will fall. If the vulnerable part of the body happens to be the bursal membranes, deforming arthritis (rheumatism) will take the front of the stage of life. If the kidneys, heart, liver, or other organs happen to be the vulnerable points, the type of disease will be one peculiar to these organs.

This should furnish a key to how it is possible for many unlike diseases to spring from the same cause. Is this fact so very wonderful, when we remember that all the different organs of the body--all the different tissues of the body--with their many varied functions, are all built from the same food? And the mode of treatment is so simple that it should be obvious to even a child mind; namely: if overstimulation--if shocking by any form of stimulant--has worn out the reactive powers of the system, and enervation is established, a cure must consist of conserving energy by avoiding shocks of all kinds. Rest--physical, mental, and physiological--is necessary. In established diseases, all foods must be given up for a time; certainly exercise of all kinds; and the mind must be freed from worry. To inaugurate such a treatment requires educated skill. Even if a child mind knows that the treatment must be rest, great skill is required in knowing what to eat, when and when not to eat.

Sensual pleasures of all kinds become enervating when indulged in to satiety. When they are, then it is that "life's apples turn to dust;" then it is that we see the "dregs" in the "wine of love," and know we have "bartered life's bread for a crust, and a draft that is as bitter as brine."

The discomfort of excess--overworked reaction--may be pushed so far that the warning voice of frequent crises is lost; after which the organism may be abused to the point of a fatal collapse without warning.

For example, the victim of apoplexy has the discomfort of overworked reactions early--years before the collapse. He suffers from overworked heart, rapid pulse, headache, vertigo, fullness of the head, roaring in the ears. More or less of these symptoms he will have from ten to twenty years before the final collapse. Slowly but surely a toleration for these discomforts is built. Apprehension is dulled; the "still, small voice" of self-protection is hushed; and all unexpectedly and without warning the collapse comes, and the victim is not permitted to say goodbye and farewell to his best friends. This is the price we pay for ignoring warning.

Food is a stimulant, and necessary to the building of body and mind. The stimulating effects of food are necessary to secure digestion and assimilation. Nutrition depends upon the reactions stimulated by food, as well as upon the building material furnished by the food. This being true, it must be obvious to a thoughtful mind that too much food, or food too highly stimulating, must frustrate the object of food by causing too much reaction, ending in enervation. Overstimulation from excessive eating is the commonest cause of disease.

Stimulation is necessary; for reaction must be continual. Without reaction there can be no heart action; breathing must stop; metabolism ends; in fact, life goes out.

Stimulation, like every other need of life, is good up to a given point; then it becomes bad. Again we are reminded that every good is linked to bad, which is educational and a test of worthiness to survive.

Indispensable stimulants are those which carry on their work subconsciously. All that is necessary to carry on vital action can be supplied without creating enough reaction to receive conscious attention. It is when reaction arouses consciousness that the stimulation is excessive.

The intensity of reactions increases, as does the excitability of the centripetal nerves-the nerves carrying impressions from the surface to the centers. For example: The nerves in the skin over a boil, an inflamed joint, or a blistered surface create central reactions, noticed in general nervousness.

The reaction is greater when the part irritated is naturally sensitive; for example, the eye, the ear, or the tongue.

Heat increases the excitability, while cold diminishes it.

A body made too warm by overheated houses, overclothing, too heavy underwear, is made too sensitive. This is a form of overstimulation that leads to enervation; following which, catarrhs; of any and all mucous membranes develop. When toxin poisoning is added, sensitiveness is diminished. This is a conservative measure; but, like all other good things, it becomes destructive when pushed too far.

An organ rendered less sensitive from overstimulation. is also rendered less efficient in carrying on its regular functioning; hence, when a cure is desired, the cause of its overstimulation must be removed, and, until time is given for a normal reaction, the organ must not be forced into a functioning which it is not able to perform. A season of rest is nature's remedy for all exhaustions following overstimulation. In this matter nearly all systems of healing are based on theories of cure that work in just the opposite way. When the organs where reflex action ends are badly altered, very grave symptoms are developed by stimulation of the peripheral or afferent nerves.

Chronic irritation, inflammation, and the accompanying organic enlargements from overwork, or from rheumatism, cause the organs to be sensitive to reflex stimulation.

In the case of myocarditis, or rheumatism of the heart, an impression--a shock-that would not be noticed by a normal heart will cause death. Heart stimulants are dangerous remedies.

On the other hand, when exercise has been neglected, the various organs of the body are weakened from lack of stimulation. Under such conditions the heart becomes so enervated that unusual exercise, such as running to catch a car, may end in collapse and death, the heart being unable to do the extra work forced upon it. Often such heart weakness has been aggravated by the use of alcoholics, tobacco, coffee, tea, and sugar. The excessive use of sugar tends to weaken muscular energy, because of its power to overstimulate.

When stimulation has been excessive-such as overindulgence of the grand passion--there may be such an alteration of the nerves of transmission--the centripetal (afferent), nerves--that sensation is retarded, or perception and reaction end in impotency. On the other hand, indulgence may be so great, from the excitability of the transmitting nerves, that the reflex centrifugal (efferent) nerves are so altered in their functioning that trembling and irregular movements, up to lost coordination, are established.

Syphilis is credited with building tabes dorsalis and paralysis; but overstimulation from the drugs used in its cure, and excessive venery, are more likely to be the cause. Excessive venery lays the foundation; then toxins from septic infection and drugs may prove to be the exciting cause.

Mental or Physical Reactions

In the foregoing it has been my endeavor to explain, as well as I can, physical reflexes, their causes and variations; also to give a hint regarding the diseases brought on from overwork and

underwork.

Nervous reactions, when expressed in the highest order, are mental or physical. All ideas, as well as all movements, have an external origin.

The spiritualistic school will not agree that our psychical nature is built from sense-impression, and that, for us to learn or know anything, we must have sensation. Our special senses are educated by external impressions. Without external stimulation, or without the sense-perception to recognize external impressions, we remain in ignorance--a state of ignorance known as idiocy.

Mind-potentiality evolves as the ages roll on. We do not inherit mind or innate ideas; we do inherit potentiality--an aptitude to understand. Probably the most potent factor in this inheritance is power of attention. With mental alertness a child will gather knowledge so rapidly that to dull pupils it will appear as though it must have inherited its knowledge.

The study habit, when once formed, is a great help to the dull mind.

Mind can never come into its own until man ceases to build physical disease. The mind of a sick man is handicapped. Habits that build disease of the body affect the mind also.

It is common knowledge that the character and type of intelligence and capacity for work are under the influence of various diseases. For instance: A deranged liver causes pessimism. Liver and stomach derangements cause sadness and the so-called neurasthenia. Genito-urinary affections produce irritability, jealousy, and a desire for revenge. Hypochondria and self-destruction are among the potential effects of venereal derangements. Granular inflammation and stricture of the urethra create irritability.

Delirium in fevers and drunkenness is a well-known phenomenon.

Psychical impressions are reflected on the body. Fear envy, and jealousy provoke excessive kidney, bowel, and heart action. Digestion is very seriously affected by worry. fear, or an unsatisfied state of the mind.

Nervous Reactions in the Normal State

In the normal state reactions vary; the conditions also differ.

Species.--The higher the species, the more powerful the reactions. Shocks, stimulations, or irritations which cause little or no response in animals, produce suffering and sometimes fainting in man. Shock seldom occurs in animals; when it does, it is always due to violent causes. This being true, why should vivisection throw any light on the management of man's diseases?

Influence of Sex in Bringing about Shock in the Human Species.--Women are far more easily affected than men.

Women are more easily affected through their emotions than men. This condition, however, is of artificial development; for the spermatozoon is more lively than the ovum, the male fetus is more active than the female, and boys are more active than girls.

Possibly the reason why women are more responsive through the emotions than men is because they have a different training. Women are protected, pampered, and kept back, and perhaps under. Men have done the world's work and the world's fighting, and that would educate them into a control over the emotions. Everything else being equal, it would be logical to presume that women should be less sensitive and emotional. They need control; for they take care of the children.

It is generally taught that the nervous system of children is feminine; that reactions are quick, mobile, and excessive; and that, as they grow older, the male becomes less reactive, until

advanced age finds the old man physically and psychically without reactive ability. This lost sensitiveness, however, can be accounted for from habits of life. Men use more stimulants than women, and indulge themselves more in every way; hence their reactions are suppressed or inhibited by overstimulation. The fact that stimulants impress the child greatly, while they scarcely affect the old man, is proof that the matter of little or much reaction is wholly a matter of education. Mind, with its auto-suggestion and imagination, builds sensitiveness.

The difference in the reactive power of races is a matter of climate, food, and education. The animal is dull compared with man, and the difference is a matter of mind. Animals differ in their reactive power, and the difference is a matter of intelligence.

In man, education should teach poise; for it certainly teaches imagination and sensitiveness, and poise is necessary for self-control.

If irritability is not a matter of imagination, after leaving the animal state, why are children of young parents more apt to react--more lively and cheerful--than children of older people? Experience teaches poise; hence reaction is largely a matter of education without experience, until sensation is dulled from satiety.

Children of very old parents lack youthfulness; they appear to continue the aging of the parents. This indicates that physical energy is transmissible, but that education and physical training leave a legacy of impotency and senility.

6. Nutrition

Nutrition is that which takes place in the body of a live, healthy animal between the time when food is taken into its body and the time when the ash resulting from the combustion of the food is excreted.

Life is the phenomenon we call nutrition, or, vice versa.

We see an automobile or a train moving with all the grace and celerity of an ideally constructed machine, and we say that its mechanism is perfect; hence its nutrition is perfect. If we see it halting, coughing, puffing, and blowing, in an effort to move, we know that something has gone wrong with its nutrition, or its mechanism. When we see the machine at rest, we know that the life of the engine is killed, The phenomenon which in animals and plants we call nutrition, and motion in the case of machinery, is life.

The power behind all activity--the power that makes activity possible--is the sun.

A machine is a synthetical arrangement of properly constructed and adjusted parts. When all parts are ready, it will not move until the sun's rays are thrown upon it by way of oil, coal, or electricity, all of which represent static energy, or stored-up sunshine.

Those who hold the dualistic idea persist in teaching that there is a mysterious force behind and on the outside of nature that causes the phenomenon we call life. They will not admit that it is the sun. Such minds are not satisfied with a simple explanation; they must have an unexplainable, mysterious, or, as Spencer declared, an unknowable cause.

It is wonderfully consoling to have faith in something--to have something that faith can lay hold of. Such a something I have. But, while I myself can get rest and comfort out of it, I realize that the majority of people cannot. I do not ask anyone to give up his beliefs for mine; but certainly no one can be injured by allowing me to try to explain the cause of life that gives me satisfaction.

Those who never have taken a peep into the world that is above, below, and beyond their unaided sense-perceptions must feel their limitations and know that there is an Infinite existence which has not been revealed to them. They are right; but they have no right to declare that it has

not been revealed to others.

The study of bones, flesh, and organs gives us an acquaintance with the animal, its mechanism and personality; but how its bones, flesh, and organs are constructed is quite another study; indeed, it is a world all to itself--a world hidden from common observation. Because of its infinitesimalness, this world is beyond the horizon of unaided sense-perception. On the other hand, the telescope and spectroscope reveal the infinitely large and distant.

To explore the regions where nutrition is going on, one must take one of the torch-lights of The Infinite--the microscope--and there will be revealed the mysterious--the handiwork of the Creator!

In the workshop of The Infinite there is a department where the rudimentary units out of which everything is made are evolved. They have but recently been discovered, and they are called electrons. For the sake of brevity, and to have a definite and inexhaustible source whence to draw a supply of electrons, we will say that the sun's rays are made up of electrons. So necessary a substance as the base out of which everything is made, should be everywhere: and certainly sunlight is everywhere.

In another part of The Infinite's workshop there is a place where cells are made. Cells are the units out of which living matter is made. The human body is made out of cells, the same as houses are made out of brick.

As stated before, we cannot observe The Infinite work unless we are aided by The Infinite's torchlight--the microscope. With this instrument we discover that the tissues of the body are made up of cells. To understand a cell, it will be well to examine some of the lowest forms of life.

The ameba is a colorless, single-celled, jelly-like, protoplasmic organism found in sea and fresh water. It is constantly undergoing changes of form, and nourishing itself from surrounding objects.

The white corpuscles of the blood perform ameboid movements--i.e., changes of form, consisting of protrusions and withdrawals of substance. (Gould's "Medical Dictionary.")

The ameba is found in mud and decaying vegetation at the bottom of pools of water. On examining a drop of this slime with a microscope that magnifies two or three hundred times, life is observed. A great variety of living forms are seen.

The ameba is the lowest type of cell-life. The structure of a cell is made up of a nucleus (a small nut) and a body which is composed of a substance known as protoplasm. In biology a cell is known as a bit of protoplasm containing a nucleus.

All tissues--nerve tissue, muscle tissue, bone tissue, and tissue of cartilage--are made up of cells. These vary in size, notwithstanding they are all microscopic. The microscope reveals the fact that there are characteristic forms of cells for each tissue; and, so far as known, all have a cell body and a nucleus.

The microscopic appearance of protoplasm is a colorless, semi-fluid substance, in which are seen solid particles, or granules. The nucleus is found near the center of the cell, and is composed of protoplasm denser than that of the cell body. The cell body may be likened to a bit of the white of an egg; but it should not be forgotten that the white of the egg is not living substance. The fertilized egg needs the sun's rays to add the missing link--to breathe into it the breath of life. The unfertilized egg needs a nucleus that is potentized with life. All the rest of the egg is body food, if you please.

An egg is not complete without the nucleus; and then, without the sun's rays, it can never take on life. This is true of the cells of a living body; for the sun's rays must be utilized to the extent of furnishing a pent-up heat of about one hundred degrees Fahrenheit, or these cells cannot renew

themselves.

Nutrition is the principal attribute of matter. The phenomenon known as nutrition is life; and this life cannot continue to manifest without the properties imparted by the sun--electrons and heat. The sun, then, is the source of all life.

Assimilation means that the cell seizes upon the nutritive materials placed at its disposal, and groups them together into an organic synthesis--a molecule--that is very unstable. In order to do this, heat, or the sun's rays, or the electrons, must be furnished in sufficient quantity. Every cell of the body is an electric cell; all are connected into a whole instrument, or battery, represented by the cerebro-spinal system; and the refined output is mind.

The feeding and the waste of this wonderfully complex electrical apparatus take place in the cells, which are microscopic bodies, and which have the power to gather the electrons from the sun, and select other elements from the food, with which to build a living organism.

Each cell is made up of molecules. A molecule is the smallest quantity into which the mass of any substance can be divided and retain its characteristic properties.

Disassimilation means that the molecules of the cells disintegrate and are reduced to simpler and more stable elements; and at the same time there is a loss of energy.

The disintegration of molecules is attended by the loss of forceh-heat or energy. This means the wearing-out of the cell; and the phenomenon is a manifestation of life, the same as the building-up. One is appropriating nourishment, the other is discarding worn-out material; and all the phenomenon is metabolism--nutrition or life.

It is well to note, in this connection, that life is the same, from the ameba found in the slime at the bottom of a pool of waste water, to the cell in the gray matter of a Websterian brain; from the lowest vegetable cell found at the mouth of the sewer, to the highest type of the most exquisite flower. All cell life is generically the same, differing or dividing into species.

The laws of nutrition are the same. The plant cell liberates force as does the animal cell, and both produce carbonic acid. The electron or carbon from the sun's rays, and the oxygen from the earth's atmosphere, meet in the cell and are united into carbonic acid, This phenomenon is not carried on in plant life to the extent that it is in animal life. The plant does not spend so much energy; assimilation predominates in plant life. The cells of **the plant feed upon** carbonic acid and water, which, under the influence of the sun's rays, unite into hydrate of carbon, furnishing vital force to animals. It was Herschel who first declared that the sun's rays are the source of all life.

In the study of cell life, four chief phenomena are observed; namely, a physical--that of taking in nourishment--absorbing--endosmosis; a chemical, consisting of organizing the material absorbed; disorganization; and, lastly, the throwing-out of the waste, which is called exosmosis.

Necessary to Cell-Building.--That these processes may be carried on properly, the nutritive material must be in a state of solution. Life is possible to the cell only when its nourishment is liquid. The cells of the human body are in a liquid medium-namely, blood, lymph, and plasma--from which they draw their nourishment.

The phenomena of cell life have been hastily gone over, and now it will be necessary to study the phenomena of cell-colonization.

Functions of Nutrition

The animal body is made up of organs. Each organ, may be regarded as a colony having individual as well as systemic attributes.

In the nutrition of an organized being there are seven successive functions, each one important. For ideal health to be maintained, they must all be carried on well.

1. Preparation of Food for Absorption.--Mastication and swallowing of food; transformation of food into a liquid state--the starch being transformed into sugar, the albumins into peptones, the fats emulsified, and all rendered liquid.

2. Absorption.--The liquefied food passes through the intestinal walls. This is what physically takes place, but in some way there is imparted to this absorbed nourishment a property that resists change--it is given resistance.

3. Dehydration.--The surplus fluid, a part of which is left behind when passing through the mucous membrane, would, if not left behind, cause elimination as fast as absorbed. Dehydration is finished in the lymphatic glands and liver. The liver has deposited in it the fatty acids, the peptones, and the sugar.

The glucose is dehydrated and becomes glycogen, which accumulates in the muscles and liver.

4. Cell-Nutrition, which has been explained before, takes place when the intestinal plasma--digested pabulum--reaches the cells. The cells appropriate the matter they want, and eject the waste, which passes into the blood and is eliminated.

In all cases of constipation that are not due to mechanical obstruction, the cause may be traced back to faulty cell-functioning. The endosmosis (absorption) and the exosmosis (organization, disorganization, and elimination) fail to be carried on ideally. One reason why this work is not carried on properly is because there are not enough enzymes generated in the system to render the food material dializable. The nutritive material that bathes the cells must be capable of passing through the cell walls; and, once in the cell, cell enzymes must prepare it for organization and elimination. Where there is more food material furnished than the secreted enzymes can take care of, or the amount secreted is below normal, cell-exosmosis fails to take place, and, as a consequence, elimination into the blood is retarded. Once in the blood, there may. again be a retardation, because the excretory material is not dialized enough to be excreted by the organs of elimination. Hence there follows a state of obstinate constipation which nothing can overcome except a treatment that reaches cell-inactivity; and, inasmuch as the real cause is a lack of enzymes, the amount of food taken into the system must be reduced to within the digestive capacity. I do not mean the digestive capacity of the stomach and bowels; for it is self-evident that there is more than enough of this digestion, or the cells and blood would not be taxed beyond their capacity.

The remedies for this constipation are fasting, resting, and water-drinking. After elimination has cleared cell- and blood-obstruction, a properly selected diet, taken in sufficiently moderate quantities not to force a recurrence of the obstruction, will bring about a permanent cure.

Where interference with elimination is of a grosser character than that which takes place in the cells--namely, in the liver or kidneys--we see stone-formation. When the excretions of these organs are rendered dializable--rendered liquefiable--the integrated stones will disintegrate and pass out of the body. In order that waste products may leave the system readily, they must be dializable; which means that waste matter must be liquefied fit for exosmosis. In the matter of gallstone and stone in the kidney, these stones are on the outside of the body, because such cul-de-sacs as the gall bladder are connected with the outside by the bowels, into which the bile and disintegrated stone can pass. Stone does not need to liquefy, for it has no membrane to pass through.

5. Disassimilation.--The liver changes nitrogenous products into urea--a crystallizable body which readily leaves the organism, favoring renal elimination.

6. Elimination is by the lungs, kidneys, skin, and bowels. By examining the excreta, it has been

found that 250 grams of carbon and eighteen grams of nitrogen are voided by an adult each twenty-four hours.

To eliminate eighteen grams of nitrogen, it is necessary to consume 500 grams of meat. To throw off 250 grams of carbon, two kilograms of meat would be required.

In a mixed diet of five parts of carbohydrates to one part of albuminous matter a perfect blend is had. Health depends upon a properly mixed diet.

7. To have all the foregoing stages of nutrition carried out properly, the mental state must be that of optimism; for the opposite mental state depresses, and inhibits more or less every process.

Fasting.--To keep food away from a man slowly starves him to death. Disassimilation continues, and it is supposed that death comes after forty per cent of the weight is lost. This may be true of those who are very thin, but it is not true of those who are overweight.

The loss of the various tissues is not equal. Fat diminishes ninety-five per cent. The organs lose most in the following order: spleen, liver, muscles, kidneys. The heart, nerves, and brain are most resistant. It has been said that the brain shows no loss from starvation.

Fat goes first; then the muscle or nitrogenous substance. When the muscle begins to go, there is an increase in the urea; albumin appears in the urine; the temperature falls, and the symptoms become serious.

Drinking water enables the one starving to live longer. Fear will cause a fatal termination much earlier than fasting and going without water; for fear inhibits elimination, if it does not also generate a poisonous toxin.

A dog, deprived of food and water, died in twenty days; another, deprived of food but given water, was still living at thirty days. Much depends upon the weight at the beginning of the fast, and the treatment during the time. If warmth is supplied, life will be prolonged.

People who take a fast to control disease must be kept warm. Chilling during a fast is very dangerous.

Unless much water is used during a fast, toxin poisoning will take place; and that, with chilling, is liable to kill the one fasting in ten days. When fear is added, death will come in from three to seven days.

The first common cause of disordered digestion is improper chewing. Next comes overeating, or eating of improper combinations.

When more food is taken than can be prepared for absorption, the food is caused to ferment because of the ever-present germ of fermentation. The result is fermentation, catarrh, or inflammation of the mucous membrane; gastritis, dilation of the stomach, diarrhea of the lienteric type; then poverty of flesh, nervousness, etc.

In those cases where too much sugar and starch are consumed (in children), gastritis, pharyngitis, tonsillitis, enlarged tonsils, adenoids, constipation, polyuria, and nervousness are common; in adults, rheumatism, glycosuria, diabetes, flatulency, headache, eczema, heart palpitation, constipation, colitis, piles, and prolapsus of the rectum.

It is hard to define exactly, or clearly to draw the line between cause and effect, when a mixed diet is being used; but it is safe to say that there will be no putrid or septic poisoning from food decomposition unless animal alburninoid is mixed in the dietary.

When animal foods are taken to excess, a severe type of whatever disease is developed may be

looked for. In children, a tonsilitis will be diphtheria or scarlet fever. Fevers will take on a typhoid or septic character. Wounds and puerperal derangements will take on septicemia.

The glands of the body--the lymphatic, liver, and ductless glands--are probably quarantine stations for the purpose of arresting and detaining septic toxins. These glands probably secrete enzymes which neutralize the septic toxins. The liver undertakes to care for the surplus protein and fit it for cell nutrition; it stores the sugar in the form of glycogen.

If the liver is out of condition, from overwork, it allows the sugar to escape. Then the kidneys take up the task of eliminating it. This is a glycosuria, caused by hepatic insufficiency. It is not diabetes proper. Real diabetes is a nervous derangement, and must be cured by restoring nerve energy.

The different acts of nutrition in man are now to be reviewed, with their perversions.

Liquefying Food

The first process in digestion is the liquefying of food. The food is ground by the teeth, and then mixed with the digestive secretions. When the individual is normal, and eats normally of a properly balanced dietary, and when everything else is normal--i.e., the mind is at rest, and the care of the body (such as bathing, rubbing, clothing, etc.) is normal, and properly adjusted to external influences--it can be said that ideal health is enjoyed. But, inasmuch as an ideal adjustment of man to his environment is obviously impossible, ideal health is a utopian dream. Like all such ideals, however, it is useful, in that it feeds ambition and rewards approximate attainments.

In every branch of life's activities the ideal is unattainable. The best is secured by endeavoring--the reward is in pursuing, not in attaining; for attaining is reaching an equilibrium where life ceases. Life is activity, growth, attaining. Health is activity, building, doing, striving, fighting against deterioration, and endeavoring to give life, or activity, to every potential of body and mind. It should be known that the possibilities potential in man are drawn upon very lightly.

When food is unfit, when it is taken in too great quantities, or when the quality is bad, or made bad by improper preparation, very complex derangements are set in motion.

When the food supplied is appropriate, but partaken of too abundantly, or when it is bad in quality or wrongly combined, and is not suitable to the demands of the individual, digestive disturbances result, Fermentation takes place; for the microbe of fermentation is everywhere. It is retrograde nature's enzyme, is omnipresent, and is for the purpose of fermenting and disintegrating the excess, defective, and worn-out material in the body. It is the function of fermentation to remove everything that is unfit, or not appropriate, for physiological digestion--life--building--growth and repair.

Life and death-growth and decay-are presided over by two elements of destruction. Life, at its beginning, has enzymes that ferment and dissolve and prepare food for integration--organization into living bodies; while death, at its beginning, has enzymes (microbes) that ferment, dissolve, and prepare surplus, waste, and worn-out material for exit from the body--to give back the elements to nature.

These two processes are at work side by side, and a study and understanding of them give knowledge of how to aid each in its particular sphere. It is a physician's prerogative to understand life and death--growth and decay; for he must lend a hand in freeing each from its particular entanglements.

When more food is taken than can be appropriated by the body, it must be got rid of; otherwise it obstructs and prevents normal operations. The germ of fermentation dissolves and fits this surplus for immediate exit from the body. **When too much is eaten continually, this microbic fermentation creates irritation, inflammation, or catarrh of the digestive tube and**

the associate, contiguous, and communicating organs.

On account of the gas generated by microbic fermentation, and the consequent distention of the stomach and bowels, dilation of the various parts of the digestive tube takes place. As a result of this distention, constipation is built, and the heart is disturbed, in that its action is interfered with by pressure on the diaphragm. All contiguous organs are pressed upon and put out of commission.

It is after intestinal fermentation is established as a habit that the reproductive organs of both sexes become functionally deranged.

The first functional disturbances set up by an oversupply of food are indigestion, dyspepsia, and sometimes diarrhea--usually constipation.

Nervousness and reflex symptoms accompany functional disturbances; namely: headaches, frequent urination--in children polyuria, causing bed-wetting; rapid pulse and palpitation of the heart; cough from throat irritation. Between insensible eructations of gas escaping from the stomach, causing throat irritation and cough, and a purely nervous cough from stomach and bowel irritation, it is hard to draw the line; but, as the treatment must be the same, an erroneous diagnosis will not prevent a cure.

Gastrectasia, or dilation of the stomach, is caused by years of overindulgence at the table. A common symptom of this derangement is the development of nodules around the second joints of the fingers, named "nodosities" or "bonehard." In subjects of low resistance, or in subjects who have become profoundly enervated, the nodules may be the early symptoms of a **developing rheumatoid arthritis.**

The kinds of food taken in excess govern the type of disease. An excess of starch, sugar, and fat--especially the starch in the form of whole grain--causes deforming rheumatism and builds stone in the gall bladder (gallstones), kidneys, and urinary bladder in the lithemic or gouty diathesis; lime is deposited in the heart and arteries, around joints, and in other parts of the body.

An excessive intake of sugar and sugar compounds--such as puddings, cakes, and pies--develops obesity. Where the intake of carbohydrates is in excess of the needs of the system, glycogen is stored, and when there is more than can be utilized, it is passed in the urine, producing glycosuria. It is the function of the liver to arrest and store sugar by dehydrating it to glycogen. When the liver is altered, the sugar passes into the blood and goes out of the body by the kidneys. Both these varieties of glycosuria are alimentary diabetes--the first cellular, the second hepatic from liver insufficiency.

Where animal proteins are taken in excess, they are taken up, but their digestion is not complete--cell- and blood-digestion flags. This nutritive perversion favors putrescence, and the building of simple catarrhal inflammations into ulcerations.

Gout is supposed to develop from defective digestion of animal foods. Alcoholics stand first as a cause of this disease, and the alcohol produced in the body from imperfect digestion of carbohydrates is a common cause of all types of rheumatism.

It was observed that digestion by the cells of the body is carried on by the aid of endosmosis and exosmosis (physical laws), but nutrition cannot be accounted for by physical laws alone. When peptones (the liquefied nitrogenous foods) pass through the walls of the bowels, the membranes appear to possess the power of dehydrating, so that peptone, as such, never reaches the blood so long as digestion is normal. In abnormal states peptone is found in the urine, causing peptonuria of intestinal origin. The nutritive materials that are carried to the liver by the portal vein are dehydrated by that organ. When the liver is diseased, however, peptones and sugar appear in the urine.

When intestinal indigestion and catarrh develop, the pelvic organs become involved; menstruation is made painful, irregular, and often too profuse; toxins are absorbed from the bowels; the lymphatics acting as quarantine stations are, in time, overworked, and catarrhal inflammation develops in the ovaries or womb, or both.

Because of a thickening of one side or the other of the womb, this organ is bent on itself, crooking and obstructing the passage or canal, causing pain when the menstrual flow seeks exit.

The womb and ovaries become very sensitive, and the downward pressure from gas in the bowels causes much discomfort.

The mucous membrane of the lower bowels takes on a catarrhal state from the constipation and gas distention. Colitis, appendicitis, proctitis, ovaritis, metritis, inflammation of the spermatic cord, urethritis, **prostatitis,** piles, and prolapsus of the reproductive organs, bladder, and rectum, are possible diseases coming from fermentation and gas distention. Indeed, a part or all of these derangements are so common that there is a procession of people, young and old, headed toward every surgical institution in the country.

When operating is once started--when, for example, the appendix is removed--the causes remain. The habit of overeating, or improper eating, fermentation, gas distention, toxin absorption, catarrhal inflammation of the intestinal mucous membrane, and lymphatic involvementall these remain to continue the discomfort for the removal of which appendectomy was performed.

Occasionally the patient has a respite from discomfort following the operation--not because of any curative effect produced by the operation, but because of the powerful suggestion often imparted by a surgical operation. Those who undergo an operation have faith that they will be cured, or they would not submit to it. The power of this suggestion holds the patient's belief for a time. If there is any discomfort following the operation, it is thought to be the consequence of the necessary mutilation, which will pass off in a short time.

After a brief, questionable rest from pain, the patient begins to complain to the doctor of pain similar to that suffered before the operation. The doctor may declare that the post-operative pain comes from adhesions; or the pain may be declared to be due to ovaritis or gall bladder disease. In due course of time the ovary or ovaries are removed, and the gall bladder is drained; or, as in the case of the late Governor Johnson, of Minnesota, operation after operation may be performed for overcoming adhesions--all to no purpose, for the cause is not removed, not even suspected.

In the case of men, the appendix, gall bladder, prostate gland, piles, and prolapsus of the rectum are attacked with the knife because of the pain produced by intestinal indigestion, catarrhal inflammation, and gas distention. Of course, each and every operation must be a disappointment; for none of the organs is pathologic to such an extent as to justify its removal. Besides, the disease is not of these organs proper, which are sensitive only because the real disease has developed a neurosis of all the organs.

Where appendicular operations have been performed, and the appendices have been found normal, the patients often remain better for a time, because of the suggestion carried by the operation; but in pronounced types of intestinal indigestion, with catarrhal inflammation of the bowels and infection of the lymphatics, there is a general sensitiveness, with periodic attacks of pain, apparently confined to one or more of the organs of the abdomen or pelvic viscera. The real cause, however, of the paroxysms of pain that pass as appendicitis, ovaritis, or disease of other organs, is gas distention, the pressure on the hypersensitive organs from gas being the sole cause. This being true, it should be obvious to every thinking person that surgery can be nothing but detrimental to those afflicted in this way.

The above is a true picture of the physical states of the great majority of those operated upon in

the past two or three decades, and those who are now on their march to a surgical hospital. It must be continued; for it is certainly obvious to the discerning, with the illumination above given, that removing any one, or a half-dozen, of these organs will not remove the disease. Removing the lymphatic system of the lower bowels and pelvis, were it possible, would not cure a derangement of this kind.

Lymphatic or scrofulous diathesis is a structural evolution of the lymphatic system favoring the development of tubercular diseases. The word "diathesis" is out of date, and "germ infection" is made to cover all diseased states once ill understood under the name "diathesis." It may be said of disease, the same as of a rose: "What's in a name?" This is true when a name carries no meaning.

Names only confuse, and help to hide from the mind's eve the true cause.

If we may look upon every child, born of well-disposed parents, as a purified lump of protoplasm with the potentialities of health and mental development normal, we can use the child as a standard of ideal health.

There are children, born of vicious parents, who are said to be born with venereal disease. It may be true; I believe that children are born with disease; but they were infected after conception.

My practice has been confined to a superior class of people, While I have always enjoyed a large private practice, it has been with those of a middle to a superior class of intelligence. The ignorant and vicious have always sidestepped me, because I require the giving-up of bad habits as a first step to a cure. Consequently, children born with venereal infection have never occurred in my practice. If they had, I should not believe that nature allowed the infection to take place before conception; for nature makes sterile all who are unfit to propagate.

Starting with perfect physical health, a child is fed too frequently, and kept from fresh air and sunshine. Many are bathed too much, handled too much, and subjected to too much noise. As a result the child's resistances--its enzymes and body defenses--are inadequate to meet the enemies of health; and the result is that a catarrhal state is developed. The child "catches cold" easily. The stomach and bowels are made sensitive, and ready to take on a state of indigestion; then toxin poisoning takes place, resulting in an effort, during the cold months, to throw off the poison by the skin and mucous membrane--gastritis, sore throat, and the exanthemata (eruptive fevers). It is a fact that the eruptive fevers--skin diseases--occur all the year around; yet their tendency is to appear more frequently in the winter, or during cold weather; whereas diseases of the stomach and bowels--mucous membrane--occur oftener in the summer, or during hot weather. Gastritis, bowel diseases, and the various eruptive fevers are a necessary sequence to feeding beyond the child's nutritional needs, and catarrhal inflammation of the mucous membrane is established as a habit. Finally resistance is broken, making the child susceptible to epidemic influences. When the heat of summer comes, it adds the last link to a chain of causes that ends in cholera infanturn. If treatment is unsuitable and the nursing bad, the child may die; indeed, many do die.

Children who get over the diseases peculiar to the teething age, carry, and further develop, enlarged tonsils, adenoids, gastric irritation, intestinal indigestion, constipation, intestinal parasitic diseases, the so-called contagious diseases, glandular enlargements, adenitis, tuberculosis, rickets, lymphangitis, scrofula, etc.

These diseases develop from childhood to puberty. Those children who are not swept out of existence will have seasons of betterment; a few will be carried by the force of development, which in a cyclonic fashion sweeps everything before it into health--and that, too, often in spite of wrong life, and a medical treatment that might prove fatal if administered at any other time in life.

These health storms, typhoons, revolutions, often sweep invalids into health, starting up without apparent cause, and carrying many victims of ill-health into physical states approximating good health. Then, if they are fortunate in having sense enough to follow proper advice, they may recover from the ill-health of youth and live to a ripe old age, enjoying life, health, and success. A few will enjoy approximately good health from early puberty to early middle life. Perhaps it would be better to say that there are a few who, through the impetus of development, will enjoy fairly robust health until perhaps the end of the first ten years of business life; then, because of neglect of exercise, and the practice of bad eating, and other habits, they break down and die of acute or chronic disease.

There are others who reach middle life before they have, by vicious habits, broken down their resistance and placed themselves in a physical state out of sympathy with health's revolutionary forces. These go down and out with tuberculosis, Bright's disease, diabetes, tabes dorsalis, apoplexy, and other diseases.

There is still another class who die between fifty-five and sixty-five of kidney, heart, brain, blood vessel, and nerve diseases, because they have lost their resistance to such an extent that they fail to attract the evolutionary forces that would carry them on another decade.

We hear of disease influences, but never of health influences. The truth is that there are more epidemic influences for health than the reverse. Indeed, if man ever learns to court heatth--cultivate resistance, attune himself to the harmonies of nature--he can make himself immune to disease-producing influences.

Chlorosis is thought, by many writers on medicine, to be caused by a syphilitic "taint;" but this is no more true than the claim, set up by the same authorities, that the whole human family is tainted.

Chlorosis I have found to rest on a basis of toxin poisoning derived from intestinal indigestion. After the uterine lymphatics have taken on a state of subacute inflammation (sometimes called adenitis), painful menstruation begins to develop, and the amount of menstrual discharge grows gradually smaller, until many such cases cease to menstruate entirely. In the opposite state--**hyperemia--**the pelvic circulation, due to toxin infection of the lymphatics, causes painful and profuse menstruation; if not corrected, cystic and fibroid tumors may follow.

Chlorosis presents a catarrhal state of the neck of the womb; the mucous lining thickens up and prevents the menstrual discharge from escaping freely. The discharge is bottled up to such an extent that decomposition takes place. It is the absorption of this decomposition that causes the anemia peculiar to chlorosis. When the disease is well developed, patients suffer from oxygen starvation. Carbonic acid accumulates; digestion and nutrition are impaired, and cell renewal is almost impossible.

The blood becomes so thin that there are noises in the head and giddiness. The patient is troubled with cold feet and hands. The mind is dull and inactive. Shocks--such as disappointment in love--may be fatal. In many chlorotics, excessive venery, sorrow over the death of a near relative or friend, inability to keep up with classes in school, worry, etc., further impair the health and prevent a return to health.

Mothers who eat imprudently and worry over family affairs--mothers who worry over boys who are unruly and who are getting into trouble--build indigestion, catarrh, and toxin poisoning.

Business men who carry their business worries around with them, or who use tobacco, coffee, tea, and other stimulants, and overeat, develop toxin poisoning.

Any worry that is habitual, in one who is severely taxed in a business way, and who eats too

much, or eats improperly--for example, bread, butter, and fruit jellies, jams, or preserved fruits--will lead to a premature grave with hardening of the arteries. When excessive venery is added, nerve resistance is lost, and the ordinary fermentation changes into septic decomposition. Bright's disease, suppurative inflammations of the lymphatic glands, liver, appendix, pleura, lungs, and other parts of the body, are liable to develop. Tabes dorsalis is a common disease in those who abuse nutrition with food, work, stimulants, and excessive venery.

Those who live far away from the markets, who live on dry beans, cured meats, and an inferior quality of bread, potatoes, and a few canned vegetables, and who are shut out from sunlight, fresh fruit and vegetables (such as miners), develop a state of acidosis, and, when predisposed to tuberculosis, break down and die of that disease. Others develop rheumatism and paralysis.

Emotional disturbances derange nutrition. Fear inhibits digestion; it deranges heart action to such an extent as to develop, in time, organic heart disease.

Anger has a serious effect on digestion and the heart.

Jealousy changes the whole being. From a sweet, even-tempered person, with mild, kindly features, the jealous subject is changed into a demon, with hard, cruel features; a kind, benevolent, philanthropic nature hardens into a cruel, selfish misanthropist; a disposition incapable of causing pain to the lowest animal is metamorphosed into a hatred that can kill the thing it loves.

Envy disturbs the entire body in the same way.

The giving-way to these emotions not only disturbs nutrition and interferes with cell-development, but alters the secretions from a benign, health-imparting influence to a malignant, disease-producing influence; from a neutral or agreeable odor to a rank, offensive smell that causes disgust even in those who are bound by love to the unfortunate one whose emotions have gone astray.

The cause of insane emotions is a wrong understanding of the relationship that should exist between people. The most violent types of emotional insanity spring up between married people. There is, and has always been, a feeling of ownership among married people. This is a survival of the chattel-slavery idea; it belongs to an ignorant age, and is not in keeping with advanced civilization.

Do away with the ownership idea, and have married people stand or fall on behavior--merit. Indeed, an abiding love must rest on the everlasting bonds of respect which spring up from conduct becoming, and in harmony with, dignity and refinement.

Too often, when men and women are united in the "holy bonds of matrimony," they forget all estheticism. They are more polite and considerate of the most inferior member of society than they are of each other.

So long as marriage means license to be common, immodest, indelicate, and too often vulgar, just so long will love become shipwrecked.

Why should a man expect a woman's infatuation to ripen into everlasting love, when she discovers him to be a cad with disgusting personal habits, or vice versa?

The bonds of "holy matrimony" are not sufficient to disinfect vulgar habits. Nothing but habits of cleanliness of mind and body can keep men and women aseptic--worthy of love.

What has all this to do with disturbed nutrition? Allow the veriest swain, or professional novitiate, to answer! Indeed, marital infelicity is a common cause of intractable indigestion and chronic toxin poisoning. What can palliatives do toward curing such cases? The surgeon is busy removing complaining organs; but, much to his surprise and his patients' dismay, the same old

symptoms are back after the operation. If the surgeon had not been so material, he would have known that he had to deal with pathology of the mind instead of the body.

Women have disturbed nutrition during pregnancy. The vomiting of pregnancy is often due to catarrhal inflammation of the neck of the womb. In all cases of excessive vomiting in pregnancy the womb should be examined; if congested, scarification of the mouth and neck of the womb, allowing a little of the surplus blood to escape, will relieve the tension and the reflex irritation. Often one or two treatments will correct the vomiting. There are cases of vomiting that cannot be controlled short of dilation of the mouth and neck of the womb.

The real cause of morning sickness harks back to overeating, fermentation, toxin absorption, and the concomitant causes. It is hardly necessary to spring an Irish bull by saying that people who are well will not be sick. However, the best writers on the subject of disease write much about the diseases of pregnancy, of change of life, of teething, etc., etc. In fact, it is necessary to have an undercurrent of toxemia, and, without this undercurrent, disease cannot develop. Indeed, toxemia is the only disease to which flesh is heir. Medical nomenclature clothes the various symptoms with individuality, but they are no more basically individual than are the limbs of a tree.

Diseases were clothed with a vague, uncertain specificity before bacteriology stamped them with an assumed individuality satisfying to the profession. I say "satisfying" advisedly; for the profession is so sure it is right that in all diseases where a germ has not been discovered to account for it, one is assumed to exist, and, as in infantile paralysis, all care, nursing, and treatment are in keeping with this assumption.

The nervous system must be normal, or nutrition will be interfered with.

Loss of sleep, overwork, excessive venery, overworked emotions--anything that uses up nerve energy--lower the digestive and assimilative powers, and also lower the power of the organism to organize its defenses--its enzymes. Hence, an amount of food that could be eaten and utilized by an organism in health would be too much, and would cause toxin poisoning, which would further enervate, and create nervous derangements.

Those in the habit of using coffee, tea, tobacco, alcoholics, or other drugs will find that these stimulants have a much more profound effect on them when, from food poisoning (toxins from fermentation) and lowered nerve energy caused by irregular daily life, their resistance is lowered.

Where the enervation is great, elimination is inhibited.

Urea.--The amount of urea excreted by a healthy adult thirty-five to forty years of age is about 500 grains (32 to 33 grams). A child five years of age secretes 180 grains (10 to 12 grams). In hysteria the amount may fall very low--sometimes to 35 to 50 grams. When this takes place, nutrition is almost at a standstill. Hysterical women can refuse nearly all nourishment without getting thin.

The elimination of phosphates is affected by hysteria. After an attack, the earthy phosphates increase and correspond to half of the phosphoric acid, whereas normally the proportion of earthy to alkaline phosphates is as one to three.

Drugs acting on the nervous system cause disassimilation. Mercury and iodid of potash pervert cell life; and where cells are broken down, sclerosis follows, and then the diseases peculiar to hardening of the tissues--tabes dorsalis and arteriosclerosis.

Drugs like those above mentioned spend their influence on organs which are most enervated. If the nerve centers have been outraged by a lascivious mind and excessive venery, such drugs as those that are given for syphilis will cause such disassimilation of the great nerve cells that spinal sclerosis will follow; and this change will be ascribed to syphilitic infection, when the

truth is that the sclerosis is due to the treatment. All secondary symptoms are due to lesions of the connective tissue, brought on by celldestruction from drug action--not from syphilis; for that disease spends its force on the surface of the body

If the vulnerable organ should be the kidney, the epithelium would be first affected by the drugs; or if the liver, the biliary cells would be affected by the drugs.

If the mucous membrane should be catarrhal, mercury causes ulceration.

Gall-stone is very common. The foundation is undoubtedly laid, in many cases, by mercury; first enervation from the thousands of influences which use up nerve energy, then toxin poisoning, which ruins the body's defenses. With this basis, chronic organic disease can be built by any habits or treatment that will cause disassimilation of the cells of the most important structure of the weakest organ of the body.

The seat of the primary lesion of all toxic poisons is in the highest organized cells. If a poison spends its force on the nerves and brain--as morphine, alcohol, and other drugs do--the disease will be of the brain and nervous system.

Morphine produces emaciation and morphinomania; alcohol often produces obesity and alcoholism, rheumatism and gout.

Lead disturbs the metabolism of proteids and causes an accumulation of urea, and rheumatism develops.

In those who are poisoned on starch and sugar, when the habit of taking too much is discontinued, and the intoxication and its influence are overcome, loss of flesh will be marked; but if proper habits of eating are adhered to, a normal weight will be restored as soon as physiological adjustment can be reestablished.

Constipation, with its infection, often causes great poverty of flesh; but, when overcome, fatness may follow.

The habit of overeating not only creates catarrhal inflammations and the toxin poisoning described, but in those who have great digestive power it causes plethory--full habit--and great strength for a time. A time comes, however, when the organism begins to go down, obesity takes the place of muscle and strength, and **rheumatism,** "gout, lithemia, oxaluria, or the formation of renal, vesical, and hepatic calcule" (stone) are established. Biliousness, or congestion of the liver, with engorged stomach and intestine, with the accompanying symptoms--namely, constipation, heavily coated tongue, bad breath, foul odors from the body and bowels, piles, prolapsus of the rectum, colitis, appendicitis, engorgement of the ovaries and uterus--are developed; and, when toxin poisoning is added, the usual pelvic diseases follow, including tumors.

The secretions are altered; the urine becomes overloaded with salts, sugar, albumin. The overstimulation at last ends in enervation; then comes sluggish elimination, with headaches, fatigue, lassitude, chronic tired state, drowsiness, mental stupor, apoplexy; and the linking of this diseased state with the state described before, coming under the head of chronic intestinal toxin poisoning, all together completes a vicious circle or chain, the links of which furnish the cause of all diseases.

The foods that feed this state are the carbohydrate and nitrogenous foods--the starch or sugar, and the meat or protein. When these staple foods are eaten in a refined state, with the tissue or building salts left out, or the foods that furnish them--namely, raw fruits and vegetables--the body starves for the salts, and disease must follow.

Few people in the centers of civilization starve to death from lack of food. They have food enough, if it only were the proper kind.

Many people eat what may be seen in the bakeshop windows. These windows contain what the masses want. This starch, fat, and sugar are eaten to the exclusion of fruit and vegetables, and the result is acidosis--scorbutus--ill-health, dull mind, and early death.

It has been the fashion in penal institutions to punish the refractory by placing them in solitary confinement and limiting their food supply to bread and water. Nothing more stupid could be done. If it is the institutions' desire to make the criminal or insane more criminal or insane, no better method could be adopted. But if the institutions exist for the cure of these invalids, they should be put in well-aired and sunlighted rooms, with the comforts of reading matter and a good bed, with fresh water and apples, keeping bread--one of the causes of their insanity--away from them.

Fresh fruit three times a day, with wholesome environments, will start these incorrigibles on the road to recovery. Then, if they are fed properly afterward, they may be cured, with a prospect of staying well.

Tumors or neoplasms are allied with infection. Without toxins, and obstructions to the free circulation of the blood, there can be no tumors developed. The cure for tumors means the correcting of toxin poisoning and freeing the circulation.

All the nutritive changes we have gone over are caused by external influences. These changes are not transmissible, but there is no question but that children born of parents whose nutrition is perverted are more sensitive to like influences than those who are born of healthy parents.

The victim of alcoholism will beget a child with a sensitive nervous system.

Abuse to nutrition may extend to sterility. Any stage short of sterility is stamped on children as a potentiality for taking on perverted nutrition far more acute than normal, but not a state that cannot be resisted, and even improved upon after birth. Nature puts the stamp of sterility on the positively unfit.

Disturbed Nutrition

Auto-intoxications are imminent under ordinary conditions--when health is normal.

In that state known as health, assimilation is approximately balanced with disassimilation.

The disposal of waste--of the catabolic products--is as necessary as the proper assimilation of the anabolic products.

Man is nearest an ideal state of health when his digestion and assimilation are almost balanced with his disassimilation and elimination.

Health is that state of man's body and mind that oscillates between near-health and near-death.

Disease is health's thermometer, so to speak, which marks the degrees of departure from an assumed ideal state of health to complete loss of health.

Disease, per se, is non-existent. The state of the body which we call disease is nothing more or less than the degree of departure of health from the ideal standard.

The cause of the departure may be any influence that increases, decreases, or perverts nutrition.

In previous articles cellular nutrition has been gone over; the causes of increase, decrease, and perverted nutrition have been cursorily referred to. Now it is necessary to give a thought to the consequences of inhibited elimination of the waste products of metabolism.

Auto-intoxication.--When there is retention of waste products in the system, the phenomenon is called autotoxemia.

The waste products are all toxic. They are eliminated by the different emunctories.

The bile is not entirely an excretory product; it serves several physiological needs. First of all is its action on the bowels. It is nature's laxative. When its elimination is interfered with, the liver becomes diseased. When carried into the bowels as it should be, it is taken up by absorption and used over; after which it is excreted by the skin, lungs, and kidneys.

The skin eliminates the fatty acids and other toxic substances. The lungs carry off water, carbonic acid, and volatile substances taken in with the food. For example, when onions are eaten, the volatile substance is thrown off by the lungs, skin, and kidneys, as evidenced by the breath and the strong odor from the urine. Asparagus causes the urine to be offensive for several hours after that vegetable has been eaten.

The solids in the bile are thrown off by the kidneys. Before this can be done, however, the solids must be rendered soluble. The nitrogenous products must be converted into urea.

The liver assists the kidneys by preparing different substances for excretion.

All organs of the body are commissioned to furnish enzymes for the purpose of preparing all solids within their jurisdiction for assimilation; in other words, rendering the solids dializable. This is necessary, or the system would become fatally clogged up. In this, bacteria become allies of the enzymes.

Blood.--The blood has enzymic properties to a great degree. And this is well; for the blood vessels are so numerous and so small that if the blood did not have the power to digest--render all solids dializable--deaths from embolism (obstruction to blood vessels) would be most frequent.

Pancreas.--When the pancreas is obstructed in its work, and fails to secrete its digestive ferment, sugar appears in the urine. It is thought that the primary trouble may begin with faulty functioning of the liver.

Thyroid Gland.--The thyroid gland has a secretion which appears to be necessary for keeping a perfect nutritive balance. When the gland is cut out, it is said to be followed by tetanic convulsions. Why? Because of imperfect digestion of starch; it also disturbs nutrition to such an extent as to cause myxedema (mucous infiltration of the tissues).

In suppression, from any cause, of the thyroid secretion, it is said that the administration of thyroid extract will correct the symptoms caused by the suppression. The administration of too much extract has been known to kill.

Trembling and albuminuria are symptoms of excessive use of the thyroid extract.

In some cases of obesity and albuminuria it is thought that there is a suppression of thyroid secretion.

Suprarenal capsule has a function to perform in nutrition. Suppression of its secretions gives rise to melasma (dark discoloration of the skin), or bronzed skin. Addison's disease is a tubercular infiltration of the capsule. Symptoms: skin discoloration, progressive anemia, and asthenia, ending fatally.

Testicles and Ovaries.--The removal of these organs in young subjects is followed by defective development. Boys remain boys; they fail to develop; their hair is thin and lacking in full development. In animals, the brain is smaller in those that have been mutilated.

Toxins in the Tissues of the Body in Standard Health.--As has been made plain in previous chapters, ideal health is a utopian dream; for the most perfect state of health which it is possible to attain carries a given amount of toxins in the blood and tissues.

Disassimilation means the breaking-down of cells; the result is the accumulation of debris, or waste, which is toxic, and it must be removed from the body as soon as possible. The blood contains a quantity of waste. The organism is adjusted to a reasonable amount of this poison--it is necessary, for it stimulates to action. But when elimination is checked and an oversupply is retained, then excessive stimulation becomes disease-producing. All parts of the body contain poisons. When nutrition is best, there is a balanced state of unorganized and organized ferments. Agreeing with what I have often said, health is only an approximate state. The body at best--under normal conditions--is a laboratory for building tissue, and necessarily becomes the receptacle of the waste and by-products, which are poisonous. An over-supply of toxins is liable to occur at any time from almost any indiscretion.

An extract of the tissues of the body will kill, if it should find entrance into the blood. When elimination is slow, the tissues carry more toxins. Exercise is necessary to force elimination.

It requires about one-fifth as much of liver as it does of muscle to furnish an amount of poison necessary to kill. Then it must be injected into the veins, or it cannot do harm.

Toxicity depends mostly on the nitrogenous matters.

The Toxicity of Urine.--An adult in health passes approximately three pints of urine in twenty-four hours. The poisons contained in the urine come from the food fermentation, and the waste products of tissue building.

Urotoxy.--A term invented by Bonehard to denote the standard of toxicity of the urine necessary to kill a kilogram of living substance. In order to find the toxicity of urine, inject a representative specimen into the veins of a rabbit, allowing it to enter at a uniform rate. When the animal is dead, the amount of urine necessary to kill should be divided by the weight of its body. This gives the dose necessary to kill one kilogram, or two and two-tenths pounds.

It is said that a man weighing one hundred and forty pounds secretes enough urine in fifty-two hours to kill him or kill his own weight.

The poisons in the urine, if not eliminated properly and if retained in the blood, cause many symptoms, a few of which are: sleepiness, headache, eczema, spasms, coma, overworked heart, arrested heart action.

The toxicity of urine may be inhibited by reducing the amount of potash salts taken in. A milk diet reduces the amount of poison in the urine; moderate exercise does the same. But if exercise or work is pushed to the point of great fatigue, the urine becomes loaded with the toxins.

The bile, gastric juice, pancreatic juice, and sweat are all poisons, to a greater or less extent, when injected into the blood. It is common knowledge that the expired air is poisonous. Investigators have found that in expired air there is a poison similar to ptomains.

It is reasonable to believe that the expired air must vary in keeping with the individual. The person who is living normally certainly cannot pollute his expired air, as one does who eats and lives in such a way as to keep his system poisoned with the toxins absorbed from a chronic state of intestinal putrefaction. This must be true of every other natural excretion of the body.

If the excretions of the body under normal conditions are toxic, then this toxicity must vary as health declines.

Auto-intoxication varies from the amount that exists in the physical and mental state known as health, to the amount that causes death. All the degrees between these extremes are states of

health.

To make my meaning clear: Alcohol is not a disease; it is a distillation from fermented grain--from starch. Grain, starch, bread, and alcohol are not diseases. If a man in health (standard health) takes small portions of alcohol, frequently repeated, he will gradually lose his power of coordination of mind and body. This gradation from full bodily control to a helpless lump of protoplasm is not disease; it represents different states of health. If the drunk man is diseased, what is the disease? There has been no entity added or generated. As soon as the alcohol is eliminated, the man returns to his former state--not suddenly, but gradually as he departed. If he eats grain, starch, or bread beyond his assimilative capacity, he develops certain symptoms of poisoning. Is not the man's state the same as that of his normal being, plus overeating? Surely nothing has been added--no entity has gained entrance; hence, if the drunk state, or the food-poisoned state, is a disease, then what is disease? Certainly not an entity, but a state of health brought on by any influence that increases, decreases, or perverts the state of man recognized as health. There is no such thing as disease per se. "Disease" is a word that should not carry other meaning than that a sick man is one whose health standard has been lowered by some external or internal influence which has disturbed nutrition.

If the influence is continuous, that organ on which the stress falls will take on functional, and later organic, change. Suppose the liver is the organ and is made to enlarge--is it rational to give special treatment to the liver? Is enlargement of the liver, or is hardening or atrophy, per se disease? Certainly not. The cause lies back in nutrition; the liver enlargement is merely a symptom.

The reader may extend this analysis to all the organs of the body; for it applies to all. The chronically alcohol-poisoned develop enlargement of the liver. The alcoholic poisoning is the cause. Possibly the enlargement has been brought about by the consumption of too much bread, starch, or sugar. Should the liver be taken out, or massaged, or drugged? Why? Would it not be rational to remove the cause, and allow nature to take care of the effects? Apply this theory to all organs and parts of the body.

Enervation is the principal cause of auto-intoxication, and it is sequential to overstimulation and any influence that uses up nerve energy.

When the body is enervated, functioning, both of secretion and of excretion, is lowered, which condition interferes with nutrition and causes a retention of excretions, resulting in autotoxemia.

Constipation is a common source of toxin poisoning. A few of the symptoms due to this poisoning are: headaches; a feeling of exhaustion; indeed, in chronic constipation is to be found the cause, or auxiliary cause, of about all the diseases caused by toxins.

Toxemia, irritability, monomania, delusional insanity, mania, epileptic convulsions, colitis, appendicitis, and many other symptoms, are brought on, directly or indirectly, by constipation and putrefaction in the lower bowels.

Overworked Organs.--It is obvious that overworked organs must fail to perform their functions, A stomach abused to the point of developing dyspepsia favors the development of poisons from food. An excessive intake of fat--butter, for example--favors the development of skin diseases. In nursing babies too much butter-fat in the milk causes deranged digestion. So much alkali is required to emulsify the fat that, unless the child can take fruit, a state of acidosis--scurvy--may develop.

When too much nutriment is carried to the liver, the hepatic cells are altered. If too much sugar is consumed, the liver fails to act upon it well, and the kidneys are forced to do vicarious work for the liver, by carrying out of the system sugar that cannot be utilized. The liver fails to act on the nitrogen, and the amount of urea is diminished.

Jaundice is caused by toxin poisoning, or by a weakened liver function from overwork or from obstruction of the bile-duct.

Cancer, hydated cyst, stone, catarrh, etc., are the results of years of wrong living habits-except the hydated cyst. This derangement is supposed to be caused by a parasite furnished by dogs.

An overworked liver and underworked lungs force extra work on the kidneys. When kidney derangement is to be treated, as auxiliary treatment the lungs and liver must also receive attention. If they do not, it should be obvious that failure to cure the kidneys must follow; for causes must be removed.

Icterus, or jaundice, is a toxic infection caused by an overworked liver, bringing on liver insufficiency.

Auto-intoxication from Enervated Skin, Lungs, and Kidneys.--The lungs throw off poisons--eliminate the volatile substances; but probably their greatest role is that of neutralizing poisons, such as tobacco, volatile drugs, and toxins from fermenting foods. Their action is not experienced unless respiration is normal and a sufficient number of red corpuscles are found in the blood. Breathing may be normal; but in anemia, dysemia, and chlorosis, oxygen starvation is experienced, and certainly there must be a failure to neutralize poisons which depend on a sufficient amount of oxygen.

The skin eliminates volitile substances. An animal varnished, shutting off elimination and radiation, dies in coma. The temperature falls; the urine becomes scanty; albumin and blood show in the urine before death. The same occurs if an extensive burn is suffered, or if the skin is covered by a disease.

To a certain degree the functions of the skin are inhibited by heavy underwear. It is a common thing to have consultants come in the winter wearing two or three heavy undershirts. In spite of this, they invariably complain of feeling chilly. The fact is that they dress so heavily that they suffer more or less as the varnished animal--namely, from suppressed skin function. Such subjects cannot be cured until they are rid of their bad habits--especially that of overdressing. These patients are always surprised to find that they are more comfortable in every way with the thinnest gauze than they were with all the clothing they could pile on themselves. The skin is a protector; when pampered and spoiled, it goes out of business.

Uremia is caused by the kidneys endeavoring to do vicarious work for the liver and skin.

Strong condiments, alcoholics, and toxins generally overwork the kidneys. When these organs are long overstimulated by overwork, they flag; and if they fail to carry off the urine--if they fail to separate the urinary elements from the blood--the excretion will be retained and uremia will be developed.

Lactic Acid Poisoning.--This poisoning takes place when breathing is shallow, or when from any cause there is oxygen starvation. In gastro-intestinal affections and diabetes this acid accumulates. This is the cause of so-called growing pains and polyuria in some children.

Acetous Fermentation.--This fermentation causes acid stomach, rheumatism, headaches, nervousness; in children, coughs, colds, enlarged tonsils, adenoids, etc.

Acetone or Ethy1diacetic or Acetylacetic Acid Poisoning.--This acid causes irritability. Unless controlled, it may lead to insanity. The breath is strongly that of ether or chloroform.

If this acid is suspected, a drop or two of perchlorid of iron should be allowed to run down the side of the test tube into the urine. The iron being heavy, it will go to the bottom and turn a brownish-red color.

Other acids are formed, but all those developments come from auto-intoxication, and will

disappear when the errors of life practiced by the patient are corrected.

We should get away from belief in certain diseases; for excesses of all kinds pervert nutrition and interfere with elimination. In this may be found both cause, effect, and cure.

7. Diatheses

Bad habits of speech and language are formed, as well as other bad habits. I have been in the habit of using the word "diathesis" in a reckless and meaningless sense. My only excuse is that I learned it early in my medical education, and continued to use it in the belief that my meaning would be understood better than if I should undertake to reform my language. Time has taught me to believe that truth can never be taught by fallacy, and so long as expression is fallacious it will hold thought to its dead-level.

The meaning attached to "diathesis" has varied. The general and prevailing idea has been that there are a tubercular, a syphilitic, and a cancerous diathesis. Since bacteriology has become the headliner on the medical vaudeville stage, and has been handing out "specific" etiology, the idea of diathesis is considered painfully deplorable. Notwithstanding the deplorability of the diathetic idea, the germ-theory advocates talk glibly of a universal syphilitic taint, and have appointed Wassermann to censor all suspects. After a blood test, if Wassermann nods assent, the doctor proceeds to medicate specifically; if he shakes his head in dissent, it is not final--oh no! The taint is suspected, and the victim is dismissed for a few months on suspended judgment. Like Victor Hugo's Jean Valjean, he must return and stand trial again and again. There is no hope of his ever being free from the sleuth hounds of persecution and prosecution. Neither the medical Sherlock Holmes' nor their victims suspect that the continual hounding builds in time the positive Wassermann reaction for which they are looking.

Taint, like diathesis, is never overcome; so what is the advantage of changing terms, if both carry an eternal fiat?

Diathesis, with a few, means a morbid temperament; and this definition is better than others. Hippocrates was nearer right than the mass of authority since his day. He declared that there were a diathesis of health and a diathesis of disease. But, as health and disease are two different phases of one state, there could not be a diathesis of health or disease; for neither is entitative--both being states.

Health and disease are different states of one and the same being. Perhaps the two states cannot be better defined than by saying that one is optimism and the other pessimism. One person believes in health and knows intuitively that it is his for the asking; another person believes in disease--believes that it is a heritage vouchsafed to him by divine providence.

To the discerning in physical as well as psychological health phenomena it is so plain that he who runs may read the truth; namely, that mind is the court of last appeal.

When the mind declares for health, health, and all that goes with it, will be realized. When the mind declares for disease, disease, and all that goes with it, will be realized. It should not be understood, however, that the mental declarations referred to are meant to be passive assumptions. Indeed not! The mind that declares for health believes that health is potential in life., and that, if the proper efforts are put forth, it can be realized. To make a homely illustration: Sugar is a potentiality of the sugar beet; but without effort--intelligent effort--sugar can never be a realization. Again, mind is a potentiality of brain; but unless the proper efforts for development are put forth, mind will not be realized. Passively to assume that health is positive and disease negative, and that by assuming the positive idea the negative must disappear, is self-delusion. Simply to assume that health is imminent, and will appear when its imminence is acknowledged, is pure, unadulterated delusion. Health must be the realization of properly adjusted means to ends. This state may be brought about fortuitously or by intelligent effort. It is not well, however, to trust to chance.

A belief in disease--a belief that man will be ill in spite of his best endeavors--is fatalism. Germs are everywhere, and that man cannot escape the disease they create is the attitude of the medical mind today. Watch the priests of this belief in convention assembled. Their wise deliberations are carried on in a cloud of tobacco smoke. One of their gods--namely, Lord Nicotine--goes before them "by day in a pillar of cloud.. and by night in a pillar of fire," in their search after truth. These priests of modem medical science are protected by their gods of sensuality, who move before them in pillars of smoke, fire, booze, and food--eating to keep up their strength. These gods do not abandon them "by day . . . nor by night, from before the people." And their constituencies stand for it. Great are the people, Selah!

As society stands today on the subject of health, the professions of religion, law, and medicine have declared for disease. And they should rejoice at their success; for disease is universal. Jails, penitentiaries, insane asylums, alms-houses, hospitals, sanitariums, sanatoriums, and, neither last nor least, the World War, all declare for the god of disease.

Only those with a philosophical comprehension will understand the significance of the above indictment. Those who have the proper understanding will know that to right all this world of error--disease--and its cause, will require much time; for health must be returned as it has been sent away-namely, by the slow process of evolution.

Is it not a fact that fear has been taught from the pulpit for ages? Fear of death, on account of the hell beyond, has caused a fear and belief in disease, because disease precedes death. Medicine has taught, and is teaching, with all the vehemence of sordid selfishness or stupid superstition, that disease is inevitable, with no escape by a route that is fraught with as many subtle causes for developing disease as there are schemes for immunization. All modem plans of immunization, except sanitation, are disease-building.

And what of law and order? It dare not take one step which is not squared on medical superstition. As much as it boasts of its erudition, and affects charity for the mental shortcomings of its weaker sister, medicine, its jails. penitentiaries, electric chairs, and insane asylums are built and filled on the authority of the preacher and the doctor, who censor the moral responsibility.

Our government gets its ethical eyes, ears, tongue, and opinions from doctors (medical dogma). Only a few months ago I saw a confidential letter from the Bureau of Foreign and Domestic Commerce of the Department of Commerce at Washington. The letter was for the use of the morning papers of Monday, March 19, 1917, and for the benefit of proprietary-medicine men, calling their attention to the rich field that China now offers for education in the patent medicine line. That country must have dropped back rapidly; for not long ago--twenty- five years ago--all our cities had skilled Chinese doctors. Is it possible that the medicine men of this country have run away from Drs. Sam Lang, Hooch Cooch, Ham Fat, and Wun Lung in so short a time?

That the readers may know with what zeal Washington is endeavoring to enlighten and benevolently assimilate the Heathen Chinese medically, I quote the last two paragraphs of the confidential letter:

> "Through judicious and persistent advertising, the natives are gradually being educated to the necessity of paying some intelligent attention to their ailments, and are responding remarkably well. For this reason it is not difficult to introduce a good article (proprietary drug) at a reasonable price, if supported by the right kind of advertising.
>
> The Bureau's report is devoted chiefly to sales methods and advertising, and the material presented on these subjects is new and important. Copies of the bulletin, which is entitled "Proprietary Medicine and Ointment Trade in China," Special Consular Report No. 76, may be purchased for five cents from the Superintendent of Documents, Washington, or from any district office of the Bureau of Foreign and Domestic Commerce. It contains twelve pages."

If, as prophesied by wiseacres, China is to be the future hope of republicanism, civilization, and the highest enlightenment, and if she is to pattern after the republicanism of today, it will be a case of "Hope long deferred maketh the heart sick." When in our imagination we see the present four hundred million Chinese, and the billions of their progeny that must follow before they can arrive at the stage of adopting even our medical and ethical superstitions; and then when we think of how long it will take the Chinese republic to give up the joy of forcing every other country to bow to it commercially before its ethics is evolved to the point of adopting the principle that in building others we build ourselves, hope is certainly deferred to such an eternity of waiting that it might as well die; for the realization is not for us nor our posterity.

It is not reasonable to believe that a people will escape the superstitions of the country from which they derive their inspiration. Obviously, then, the immediate future offers little hope for the retirement of disease--building beliefs and customs.

It is true that drugs have gone out of favor very rapidly in the last fifteen years, but the fundamentals on which health rests have not changed to more rational principles. Indeed, the medical mind has laid hold of bacteriology, which is a much more elusive delusion than any, if not all, of the profession's previous theories concerning etiology. With a new theory of causation, real cause, which should be largely intuitive--planted in the consciousness of man by the law of self-protection--is no longer of any use. Literally translated, the new law of cause and cure reads: Man may do as he likes; his acts count for nothing; if he is ill, a microscopic germ has attacked him, and the cure must be accomplished by a wise use of the cause. According to this theory, cause of disease is specific and entitative, and the cure and prevention must be specific and entitative. This being logically true, there is no excuse for the failure to cure disease, as is only too evident on every hand.

Modern medical science declares that disease is caused by a specific entity. If this declaration were true, therapeutics should be specific, and so certain that there would be no chance for disease to get a foothold. Certainly quacks and empiricists would have so little success, compared with established medicine, that no laws would be required to keep them from selling their inefficiency to an innocent and confiding public.

The germ theory is just one other false promise of vicarious atonement--a promise of immunization from the effects of broken law. If the offender will believe, and have a priest of the faith vaccinate or inject the immunizing agent (Savior) into his blood, he will be cured of all his sins.

With this superstition ingrafted on church and state, and even accepted by liberals, or those who pride themselves on having evolved out of superstition, what possible chance has a rational scheme of cause and effect--a rational interpretation of health--a real Philosophy of Health?

Before the nutrition of man's body can be advanced to a stable type--before man can build a state of health that will be dependable and allow him to develop his full efficiency--superstitions of all kinds must give way to truth. This is the truth that will make man free. When will it come? When!

Meanwhile we shall be busy with our pick and shovel, doing what we can toward leveling this mountain of error that stands between man and his health and normal development.

Probably apologies are due for such a lengthy digression from disturbances of nutrition. But is it possible to digress from the subject of nutrition when showing up fallacy? It is to be hoped, however, that this digression will be found potentially laden with enough side illumination on subjects the bearing of which on health is not well understood, to justify the liberty--or perhaps I should say outlawry committed against the writer's art.

To resume the subject of diathesis: It appears reasonable that a continual increase or decrease of physiological functioning must modify structure to correspond; and when structure is

changed from the effects of use--continual functioning--then it is transmissible, and not before.

The athlete can transmit as much of organic change as he has brought about in his nervous system. Not his muscles; no, he transmits nervous change--a potentiality--an ability to become an adept in athletics.

Organized skill transmits potentiality. Organized skill means that nerve- and brain-cells have taken on a memory that is transmissible in potentiality. A Webster transmits potentiality of brain. But such transmission does not necessarily mean that his progeny will be above mediocrity; for brain potentiality may be the only transmission. The nerve centers that furnish will power to work, concentration, capacity for continuous effort, may have been abused in the senior Webster to the point of degeneracy, and therefore the young Websters lack power to labor enough to bring out their mind potentiality.

The rule is that the masters in art and science do not leave children who represent them. One reason, perhaps, is that great skill comes to progenitors after families are begotten; and another reason is that great skill is the precursor of dissolution.

Great composers are near death physically when they reach their zenith. Is it strange that death should sing? Death should be the lowering of the curtain on the stage of life, at the close of the most skilled performance.

It would be strange for a Mozart or a Mendelssohn to transmit. But not so with great singers, or interpreters of their art; for the former are creators, and pay with degeneracy for their creative skill--in other words, they are consumed by their production; while the latter simply digest and function music, and may develop a transmissible ability to enjoy and reproduce.

Singers, as a rule, are not producers. A producer must climb the ladder of experience with educated faculties; and if he will give ear to the music of the spheres, he may be honored with a message to convey to his people before he dies. Those who enjoy what he brings may transmit the ability to enjoy to others. But the producer, the creator, pays with his life for his power to produce--and degeneration is not transmissible.

Brain is developed by thought. When a change in the structure of the brain is established from functioning, such change is transmissible.

Structural change from injury is not transmissible; for the change is not represented in the nerve centers.

The whole nervous system must be occupied more or less, directly or indirectly, in order to cause a structural change that is transmissible.

At conception, man has passed nature's quarantine and enters life with a clean bill of health. He may not be born in health; for, from conception to birth, he has time for vicious habits of parents or society to cause him to be born in ill-health.

Nature inhibits, and puts the stamp of sterility upon, the unfit--the degenerate. Conception means fit for birth. But each individual born brings into life with him family predispositions.

Disease is non-existent per se. Impaired health--a lowered health standard--is what we call disease. We cannot inherit disease; we do inherit predispositions, and these we call diatheses.

Diathesis means an inherited tendency to take on certain forms of disease. This tendency is divided into general and special. The general diatheses are scrofulous, gouty, and neurotic; the special diatheses are of the various organs of the body.

Because of the manner of living, habits, etc., certain organs are made to bear more of the burdens of organic life than others. If the extra work is uplifting--meets the approval of nature's

health censors--the transmission will be in keeping; if the overwork is organically vicious, the transmission will be in the nature of a diathesis; which means that the practice of ancestral habits will cause an early breaking down, and disease peculiar to parents will develop in children when the habits of parents are adopted.

The tobacco habit of parents will show in children as a type of nervousness with lowered resistance. The children of inebriates are born with the nervous diathesis. Children born of parents who suffered from stomach, liver, kidney, bowel, or brain diseases inherit a diathesis to correspond. If the children fall in with the habits of life peculiar to their parents, they will develop similar organic derangements; if they take up other habits of life--habits and customs which throw the weight of their enervating influence on other organs--then the predisposition--the organic diathesis--will not manifest, and perhaps will never have heavier burdens laid upon it than it can bear. However, if the organism becomes generally broken down, and enervation and autoxemia become pronounced, then the organ with a diathesis may lend its influence in complicating the case.

Organic diathesis is the only way to explain why people develop different organic diseases--why one develops a skin, another a bowel, a heart, a stomach, a liver, a lung disease, or a disease of some other organ of the body.

This is the only rational explanation of the fact that one man may drink barrels of whisky and continue to live, while another may take on liver disease, or develop an alcoholic neuritis, and die in early life from only a few years of tippling.

The man who has a liver diathesis develops liver hyperemia soon after developing the alcohol habit, while the one with the nervous diathesis develops neuritis in a short time after taking on the drink habit.

Achilles had a vulnerable heel, and most people have a vulnerable organ. This we call. predisposition or diathesis, Knowledge of predispositions is valuable to parents; for, if they act upon such knowledge, they can educate their children into a safety health knowledge.

A general survey of the field of medicine justifies one in declaring that there are scrofulous, nervous, and gouty diatheses, which are constitutional, and the organic diatheses, which are special.

Scrofulous--Adenitis--or Tubercular Diathesis.-- In the light of the truths set forth immediately precedingnamely: that all transmissible alterations must be organized in the nervous system--the subject of diathesis can be understood to better advantage, Scrofula--adenitis, or tuberculosis--is an organic change in the structure of the lymphatic glands. The cause of the change is chronic toxin poisoning. The special toxin is the alcoholic or acetous from sugar and starch. This causes a chronic catarrhal or inflammatory state, which defined means lost resistance--an enervated state. In this state the body fails to adjust itself to heat and cold; the radiating power of the skin is disturbed, and the mucous membranes are made to do vicarious service. This overworks or over-stimulates, and, as a consequence, the membranes exude--secrete an exaggerated quantity of mucous.

The hypersecretion of mucous serves a double purpose: that of excretion and, by coating the mucous surfaces, that of preventing the absorption of poisonous toxins. In this the lymphatics assist; for one of the functions of these glands is to arrest poisonous toxins and neutralize them. When the glands are forced to do excessive work in this line, they take on a state called adenitis or lymphangitis--a catarrhal state of the lymphatic glands. Like the mucous membrane, the lymph glands are made exceedingly sensitive to the influences of the toxins developed by putrefaction of animal proteins.

Characteristics of the Scrofulous Subject.--Scrofulous children are often very good-looking. The skin is white, soft, and beautiful; the eyes are adorned with long, exquisitely curved, and

flowing eyelashes; and the brow is mounted with a splendidly curved line of hair to match the eyelashes. The legs and arms are plump and prettily formed; but the flesh is soft and flabby, and, when youth is past, the flesh of such subjects sits on their bones much as a saddle fits a sow. The nose is often large and broad; the hair of the head long and beautiful in texture.

The young scrofulous subject, at or even before puberty, is troubled with acne, and often most beautifully featured young women and young men develop the most disgusting types of "acne vulgaris." Girls develop leucorrhea, and are often sexually precocious. Boys develop sex-neurosis.

These children have enlarged tonsils, adenoids, and enlarged submaxillary and cervical glands.

Slight inflammation of the eyelids is common. Often the edges of the eyelids are red, and discharge a secretion that glues the lashes together slightly during the night.

Glandular inflammations, that come and go, are common. When the glands once suppurate, they are inclined to repeat. It is hard to say when they are cured, as they appear to recover fully, but a week of indiscretion in eating is quite enough to start up the inflammation again.

Scrofulous children develop the first symptoms of catarrh soon after birth. The very bad habits of frequent feeding--every two or three hours--and giving sugar and starch, produce catarrhal symptoms. A cold is the first symptom; and, if errors of diet are continued, glandular involvement soon follows. Tonsillitis and adenoids ensue as a matter of course, and then all the diseases peculiar to childhood, in sequential order. A large percentage of these children die before teething is finished. Those who do not, have a history of many sick spells, besides the regular diseases of childhood. Those who have the diathesis most profoundly established, and whose anatomical construction favors the development of pulmonary tuberculosis, will go down with this disease about the end of the development period.

The age when bodily development is greatest is the most important age in life. This is the age when resistance to inherited tendencies is held back. If understood, and rational means were adopted for overcoming these tendencies, many who now go down and out with scrofulous diseases would improve on their ancestral stock by giving evolution a chance to bring out previously suppressed potential energies. Inherited diseases, or inherited predispositions to take on disease, mean ill-balanced anatomical construction; and defective construction must mean defective functioning. To illustrate: Environments and habits which neglect lung development and cause under-development predispose to tuberculosis in scrofulous subjects, but in those who have the nervous temperament unduly developed, brain diseases, insanity, or some form of nervous trouble will be developed.

In those cases where bone development falls below ideal physical construction--where eating habits, or geographical location, fail to supply material for proper bone development, or where drugs have been used which derange the nutrition of the bone--tubercular bone diseases may be looked for, such as caries; also tubercular inflammation of the synovial membranes, burse, and membranes of the brain.

The scrofulous diathesis is a constitutional state favoring the development of inflammations of all kinds.

In just what way a given scrofulous subject will be afflicted will depend on, first, his anatomical build; secondly, his habits; and, thirdly, his domestic and civic environments.

He may develop tuberculosis of the lungs when construction favors it, and the eating and other habits develop the necessary toxin poisoning.

If the most vulnerable point be the liver, heart, lungs, kidneys, skin, bowels, brain, or parts of less importance, indiscretion in the indulgences of appetite and passion will turn loose the sleuth

hounds of toxins, whose business is to seek out the most vulnerable gland or organ in the body, and there set up an inflammatory state, the severity of which must depend upon the bodily resistance and the continuance of the exciting cause.

The cure should be obvious to the most stupid; namely, to build up lost resistance by rest, and to correct the sensuality.

It is obvious that the state of resistance--the state of enervation--must range from one nearly normal to one of almost no resistance at all. The question of cure, then, must be a question of determining to which class the patient belongs. If to that of lowest resistance, the possibilities of recovery are nil. A perfect treatment will secure the most comfort and the longest life possible, but no cure. Not so of the type representing almost full resistance. Those in this class can be cured when in the first stages of almost any disease, by simply correcting their daily habits.

It is quite obvious that physicians whose experience is confined to large clinics filled with charitable subjects--patients of the ne'er-do-well type, the unsuccessful and scrofulous types--will have quite a different opinion, as to the curability of most chronic diseases, from that of the physician whose practice and experience have been confined to a more successful and higher physical type of people. There are two classes of patients who have low resistance. The first comprises charitable cases, found in county hospitals and public clinics. The second class is composed of the overindulged, pampered, and spoiled who have gone the pace--lived such a sensual life that an otherwise good constitution is reduced to no resistance whatever. The former class cannot be brought back, because the degeneration is too complete. The latter class cannot be brought back, because habits are more powerful than the will. Add to these hopeless cases a treatment that is degenerating, and then a consuming fear, which is commonly imparted, and there is reason a-plenty for building the pessimism of the average professional man.

Those physicians who look upon syphilis as one of the most dreadful diseases on earth have gained their experience by seeing and treating scrofulous--syphilitic--subjects of very low resistance. They have made the mistake of breaking down what resistance the patient had left by mercurialization, developing a scrofulo-syphilo-mercurial type that cannot be cured because of the physical degeneration which existed before the syphilitic infection. The force of these statements will be better understood if through the mind's eye there may be contrasted the scrofulous subjects, from the most resistant type to the type too low to throw off disease, with a non-scrofulous subject who, when in full health, cannot be infected.

The immune people--people who have no scrofula, and who fail to take on disease, no matter how much exposed they are--resist infection from specific diseases until their habits of life lower their resistance; then they frequently become infected.

Scrofulous subjects should be in the open air and sunshine as much as possible; and, if they desire comfort and a reasonably long life, they must be moderate in all things.

Gouty Diathesis.--This constitutional derangement--nutritive perversion--favors the development of arthritis, herpes, gout, inflammatory rheumatism, neuralgia, stone formation, and all skin derangements of a nervous type.

It is the vital temperament that takes on these diseases when toxin-poisoned.

The gouty diathesis belongs to the mental temperament.

The peculiarity of the gouty diathesis is that, as the intellect develops and becomes predominant, nutrition grows correspondingly poorer.

The scrofulous subject is slow and sluggish; he has soft, flabby muscles, cold feet and hands, with oily, doughy skin. The gouty subject is nervous; his flesh is firm, his skin dry, his hands and feet dry and hot. The skin of the body is inclined to be dry, and often sheds a scurf that will make black underwear quite white from the amount thrown off.

The gouty subject may be very lean, and he may be quite stout or fat. His hair may be thin, but seldom, if ever, to be compared in thickness, softness, and beauty with that of the scrofulous subject.

The gouty subject loses his hair early and becomes bald young. Great beards belong to the scrofulous diathesis.

The gouty subject is inclined to be melancholy, but he is often a comedian. He is bright, intellectual, witty, sharp, but in disposition more sad than otherwise.

The young gouty subjects suffer much pain in their sickness. They have headache, and are often sent to bed on feast-days, because of the bad effect that the excitement of preparation for the day has upon them. The scrofulous subjects go to bed the day following the feast, because of the overindulgence.

While yet young, the gouty subject often becomes asthmatic. In middle life and beyond, if out of health, he will have a wheezing in the lungs--sometimes a bronchial asthma. Heart asthma belongs to the gouty.

In babyhood convulsions are common. The babies of the gouty diathesis are nervous; when quite feverish, there is a tendency for congestion of blood to the brain, bringing on convulsions.

The gouty are inclined to have dyspepsia, headaches, constipation, piles.

The gouty are very fond of sugar and eatables made up of sugar, starch, and fat. Such eating often leads to enlargement of the liver.

Eating too much of rich and highly seasoned foods causes the formation of toxins of the fatty, acid type. The absorption of these toxins causes the asthma and bronchial irritation mentioned above, because of the elimination by the lungs; the breath is made offensive; the odor from the skin is bad; the skin becomes eczematous, because of the material eliminated by it.

Nutrition of the cells is perverted, and elimination is imperfect. This changes the fluids of the body.

Sugar in the urine of the gouty indicates that it is not consumed, but remains in the blood. This is the diabetes of the arthritic.

The gouty subject digests nitrogenous foods badly; hence there is present in the urine an excess of phosphates, uric and other acids. Oxalic acid helps in forming stone in the liver and the kidneys.

The gouty and scrofulous diatheses are sometimes mixed. In such case there must be a mixed pathology.

The gouty subject may develop an asthma, if the lungs are the most vulnerable organ; headache or migraine, diabetes, stone in the liver or kidneys, whichever of these organs happens to be the least resistant.

The gouty diathesis differs from the scrofulous in that tuberculosis is not likely to develop in a gouty subject. If it does, the disease is not inclined to develop a severe type, and it has a tendency to take on a spontaneous cure--take on a fibrous character, which is curable.

To sum up: Health is divided into good and bad. Health, then, is a generic term representing two states of the body, which are ill-defined except in pronounced types. These we call health and disease, which are species of health. The species disease is divided into races or diatheses, and diatheses are organized predispositions.

The scrofulous and gouty diatheses have been developed by influences continued long enough to change the fundamental cell structure. When the structure is changed, the function must be in keeping.

Gouty diathesis means that part of the human family has been subjected to influences which have produced a physical state functioning in a given manner under normal influences. When under abnormal or disease-producing influences, diseases are all linked together, taking on like nutritive changes.

All diseases developing under the influence of the scrofulous diathesis have a like basis, and must receive the same general treatment.

The same is true of the gouty or arthritic diathesis.

8. Heredity

"The fool inherits, but the wise must get."

The fool inherits. Indeed, the man who waits for a dead man's shoes is waiting for an empty inheritance; for the only inheritances worth while are our static possibilities, which are racial, ancestral, and parental.

The wise man cannot leave wisdom, but he does leave mental potentiality. But if his children succeed to a like wisdom, they must buy and pay for it as he did. The only advantage the children have over their parents is that they may see a little more clearly, and inherit a greater attention and a more persistent purpose. Yet they may not inherit industry. Power for work may be exhausted in the parents.

Indeed, children from wise parents may fail altogether in accomplishing anything; for they may be rendered impotent because of unwise care. When the habits of children are forming, they may have an abnormal conceit, selfishness, envy, jealousy, irritability, or hypocrisy developed that will more than offset any intellectual potency inherited. Careful training at the proper time will overcome these undesirable traits.

We inherit nothing except genus, species, and race. Even racial proclivity may be overcome in a few generations by change of environment; but much sooner by amalgamation.

To wait for money is to refuse to develop talent for securing it. To wait for talent to develop is to wait in vain; for we inherit only potentiality, which is an empty inheritance without cultivation. We inherit potentialty--not disease or affection.

The vital force, or vital energy, of the teachings of a generation or two ago has now given way to cause and effect--action and reaction--stimulation and reaction.

Man's type of body--his material construction--is fixed by heredity. He cannot get away from his genus, which is animal, nor his species, which is man. Man has many physical attributes which are as fixed as law; but his possible reactions are limited only by the variety of stimulants in his environment.

Species possess individuality, which is fixed and transmissible. Man inherits his ancestral type of body. The type has preserved its individuality throughout the ages so fixedly that men of all kinds and climes resemble each other.

The animal man has characteristics that are individual. He has two legs, and a foot on each leg; two arms, and a hand on each arm; a body which presents a front and a back; and, when he stands upright upon his feet and legs, on top of this body is a neck, and on top of the neck is a head. This is a common description of man that fits every member of the species. There are a common anatomy and a common physiology that fit every man, from as far back as man's

records run, down to the present. The chemistry of man's body is the sameyesterday, today, and forever.

The first step--evolution--out of the common, universal clay type is into races.

Naturalists are not at one in their division of mankind into races. Cuvier classified men into three races; Agassiz divided them into eight races.

A common classification is into five races; namely: the Caucasian, or white, race, to which belong the inhabitants of the greater part of Europe and western. Asia; the Mongolian, or yellow, race, to be found in Tartary, China, and Japan; the Ethiopian, or negro, race, which is found in Africa, Australia, and Papua (New Guinea and other Pacific islands); the American, or red, race--the Indians of South and North America; and the Malayan, or brown, race, found on the islands of the Indian Archipelago. Recent writers place the Malay, Indian, and Mongolian together.

Races divide into nations, peoples, tribes, and families.

Each departure from the common stock of species shows a specific difference. Each race has a personality all its own. The Caucasian race has a specific personality that differs from that of all other races. These differences are brought about by mechanical, physical, chemical, and psychological agents. The changes are brought about slowly. So strong is the force of physical heredity that it takes many generations to evolve into and out of the Roman nose, the potato lip, and the almond eye. Psychological changes move as slowly, if not slower. Look at our religious, medical, and legal superstitions!

Each subdivision of each race is marked by distinguishing characteristics.

Those with a cosmopolitan acquaintance can distinguish the nationality of the people whom they meet in their travels. If their education has been extended to a full familiarity with the inhabitants of any one country, a distinguishing difference will be found in those who have been confined to a limited section of that country.

Every country has its educated or intellectual, intelligent, and ignorant classes. These are not distinctions without differences. Intellectuality does not always mean intelligence; intelligence does not mean intellectuality, neither does it mean ignorance.

In our country we have a North and a South, an East and a West. The people in these four divisions have distinctive characteristics. 'There is a type called the "westerner," who is distinctive and unlike the "down easterner." And there is a westerner who is cosmopolitan in personality, and who is typical of all other cosmopolitan types.

These differences are brought about by intelligence, travel, and food. Causes for varying types of man at the beginning are certainly geographical, climatic, and food, as well as physical, influences. Climate and food are type-builders.

Psychology should not be left out of the list of causes of type-building. From now on this subject will hold a conspicuous place among causes that make for individuality.

Religion has stamped its influence on the face of humanity. A close student of physiognomies can read the ancestral type of religion in the faces of humanity today. This shows what part the mind has played in molding the body.

When we consider that a fixed physical development can be made to function in such a way as to change the individuality, we are ready to believe that there is nothing fixed from a hereditary standpoint, except the elements and genus or type, and the possibilities of types. The possible types into which the elements may be molded are infinite. This being true, it should be easy to see that there is little which is bound to the hard and fast lines of heredity, and that heredity, outside of genus and species, is more an accident than a well-ordered plan. If a child takes after

its parents, it will be due to postnatal, rather than to prenatal, influences. On this subject I have experienced a most radical change in belief in the past twenty-five years. I certainly hope I am not retrograding.

An adopted child from a criminal family will show as much advance in a good family as a child from a good family will show degeneracy when brought up in a bad family.

As function precedes structure, it must be obvious to the mentally discerning that a change in function must be followed by a change in structure.

But when does a change in function take place? Only when function is changed. We may profess a change in belief--we may preach our belief--but if we do not live it, we do not function it; hence there is no structural change. We may believe in diet as a remedy for all our physical and mental defects, but if we do not live our beliefs, we do not reap the benefit of our beliefs.

We see the proof of this in so-called criminals. They are put in reformatories; they are made to conform to the laws of reform; they talk it and act it, but do not think it; hence no structural change takes place, and, when the acid test comes, they are found to be the same.

When the Mongolian takes up his abode in our country, and proceeds to establish the habits and customs of his native country, and lives them daily, he continues to function Mongolian-like, and builds a physical structure to match. If he leaves Mongolia behind, and thinks, eats, and lives the American life, his structure changes to agree with his change in function. The physiognomy of structure is what I mean; for, as a matter of act, a real change of the fundamentals of genus requires much time and many generations. The foreign-born citizen who lives the life and thinks the thoughts of his native country never becomes a citizen in love and sympathy; he remains an alien to his adopted country so long as he lives.

It is impossible to amalgamate and assimilate disagreeing functions. Universal amalgamation will follow universal like functioning--like sympathies.

In matters of religion, we often see orthodoxy affecting reform--pretending liberality; the leaders struggling to reconcile their old beliefs to new ones, even going so far as to compromise on strong differences. Among the lay orthodox many live, act, and talk in such a way as to make it appear that they have experienced a change in belief. But there is really no change; for below the surface they function orthodoxy, hence preserve a structural physiognomy to correspond.

A pretended belief will bring no change. Belief must be lived; then a change in structure that is potentialized. follows, and this is inheritable. But please understand that it is inherited as a potentiality, which, if it be cultivated, may develop, but which may never arise as a material attribute.

When organs function crime, it is because the stimulation which causes the functioning calls out this particular effect. Change the stimulation, and we change the functioning--poisoning; for whatever toxins there are in the system cause a functioning to correspond.

Crime--Cause of

Crime is a disease brought on by bad habits. It is made up of such elements as a sluggish liver, brought on from overindulgence in alcoholics; or too much sugar, fat, and starchy foods. Such habits bring on discouragement, amounting to pessimism and a reckless indifference to consequences. These consequences may be reversed in the same subject, showing that good and bad depend on the kind of stimulation used in exciting reaction.

The intoxication from starch poisoning causes the building of pessimism. Gloom leads to recklessness and a desire to be thrilled by new sensations. Normal sensation is dulled when starch poisoning is pronounced, and common appeals, such as good advice from parents or guardians, have no influence.

This dulling influence extends so far as often to strike a withering blow at the fountain-head of intelligence--namely, attention. The power of attention--power of continuous attention--is the secret of intelligence and intellectuality.

The Influence of Toxin on Mind

A brain rendered dull by the toxins of indigestion, or from intoxicants of any kind, loses its power of attention; hence an otherwise bright mind is consigned to ignorance or crime, or both. If the child is idealistic, the toxin drunkenness may cause it to dream fanciful or grotesque daydreams. If the sensual elements of its nature predominate, its dreams may be such that, when materialized, they are called crimes. Toxins acting on the brain cause it to objectify in keeping with its type of thought; and the type may be sensual or not.

When attention is capricious, irregular, or spasmodic--in a word, when it cannot be sustained--knowledge must be fragmentary. Such a mind cannot be philosophical. It may be scientific, but it cannot be depended upon to work out the relationship of fundamental principles. The unity of all things is beyond the mental horizon of all who cannot build a reliable attention.

Importance of Attention

Nothing but the organizing effect of sustained attention can build for the future--can build for transmission--heredity; and this legacy is potentiality only.

Food poisoning is always marked by sluggishness of the brain as well as the other organs of the body. Every organ is represented in the brain, and the reactions from the impulses--be the stimulation from food or whatever the cause--will be in harmony. If the brain is made brutal by toxins, its functions will be in keeping.

The toxin-poisoned--the inebriate--acts from the promptings of his grosser sensations--his animal nature.

Change the life, and the functioning changes. Remove all influences that cause an undesirable reaction, such as toxin poisoning, and we see a desire for the good and a desire for the best supplanting a desire for the bad and a desire for the worst.

This being true, the atmosphere of despair thrown around people because of the general belief in the heredity of depravity should clear up, and hope and intelligent action should from this time on manipulate the scales of justice, wisely placing the blame for crime where it belongs.

Society must become intelligent enough to direct and control the functioning of its sick members--the sick in mind (the criminal) and the sick in body (the diseased). And, as function is the author and builder of structure, society must perfect criminal man, if he is ever perfected--must cure man, if he is ever cured-for nature executes the unfit.

Degeneration Is Not Transmissible

Wrong life, causing wrong functioning, is disease. All crime is disease. If continued, it ends in degeneration. Degeneration is not transmissible. When a man becomes an organic criminal--when a disease becomes organic--the God of Genesis steps in and declares: "Thus far shalt thou go, but no farther!"

Genesis means creation. It means that old things have passed away and new things have come into existence,

Birth and death are antithetical. The one comes into life; the other passes out with its infirmities.

What a hell life would be, if all the imperfections of parents could be visited upon children!

Why Criminals Do Not Reform

Why is it apparent that crime and criminals herd together? Why do not more criminals reform, if crime is functional and not organic? Because they continue to live in the same way. After they have served a term, they know no more of correct living than they did before; for in prison they are fed haphazardly. Perhaps the limited supply of a very plain food is all the benefit they get in the line of diet. Thus they return home to their heavy, gross eating, toxin poisoning, and the depressing effects of being pointed out as ex-convicts, and too often hounded about the country by petty officials of the law, who appear to take a delight in branding them as criminals and setting all the dogs of gossip howling at their heels.

It is difficult to say which is the greater criminal--society or society's victim. Truth declares that they are related as cause and effect.

There is little chance for a bad man to reform; for the undiscovered bad man in every community appoints himself a committee of one to see to it that the ex-convict gets what is coming to him.

Ignorance makes man a criminal, and ignorance keeps him a criminal.

The good and the bad in all mankind are purely functional. If we react good, it is because the shock that caused the reaction was good, and vice versa. We must get away from the ancient and should-be past belief in the entities good and bad.

We are; and the fact that **we are** is proof that **we are fit;** for otherwise we should not have passed through the portals of life. Inasmuch as **we are,** and **are fit,** our functioning will be proper if the cause of our functioning is censored properly and the right stimulation is used to bring about the reaction (functioning). Our reactions are just what they must be; for they are in keeping, and under the guidance of the laws of cause and effect.

If we would have ideal effects, we must bring them about through ideal causes.

Who can be so childishly silly as to expect figs from thistles--good from bad training? So long as the fundamentals of our ethics are false, when will the superstructure become true and ideal man-building?

Man is man. He is a microcosm--a duplicate of the macrocosm. He is neither good nor bad. He acts and reacts on his environment in kind. If he can so shape the impulses which cause him to react as to build good--the truth--he will soon function truth.

If the influence that causes him to react is good, beneficent, and worthy in every way, his reaction will be in kind. If the influence is bad, selfish, and unworthy in every way, his reaction will be in kind.

The idea of heredity-meaning the inheriting of good and bad--with all the disqualifying, soul-stifling, and health-destroying beliefs and customs that have grown up about this belief, should be given up--should be discarded; for it is a disgrace to this age, and belongs with the devil--with demonology. Indeed, it is one of his majesty's children. In the place of that fallacy should be put man in a state of neutrality. Man should be recognized as an unmoral being who is capable of being molded into truth or fallacy--law-abiding or criminal, loving or hating, healthy or diseased, wise or ignorant. It is all a matter of teaching.

To sum up the foregoing, let us assume that when a child is born it comes with a clean bill of health. I mean health; and the word includes what is ordinarily understood as health of mind and body, free from crime or criminal nature. When a child is born with venereal infection, the infection has taken place since its conception.

The Possibilities of a Child

A child at birth is a highly sensitized lump of protoplasm--human clay--which is made up of cells. A cell is composed of a central spot, or nucleus (small nut), and a body. This cell is the protoplasm out of which the human body is built.

At birth a child is an undifferentiated lump of protoplasm, possessed of ancestral form which binds it to its genus, which is animal, and species, which is man. It is no more a thinking man than the young sprout or twig is a tree with developed fruit.

The lump of protoplasm is potentially a human being. Whether it is to develop ideally or not depends upon the artificer--home and society.

A lump of potter's clay has all the potentiality needed to be brought into the most exquisite forms; yet, if it falls into the hands of a bungler, it may end in some grotesque shape with neither order nor reason.

If there are few expert artificers in the field of art who can send out perfect specimens, when in the privacy of their studios they may try and try again, we certainly should not expect that people without the slightest knowledge of man-building could mold a lump of human clay--protoplasm--into a perfect human being. Indeed, should we not expect just what we see-namely, nearly every finished product misshapen in some way?

If the molding is started wrongly, it may be gone over and covered-up; but the scars are left.

Why should the majority of human beings know how to rear children successfully, when they have but little common-sense in matters of far less importance?

The bungling work of stupid parents and teachers is charged to Providence. That a child inherits its faults and failures is accepted by law and society; yet that same law and society give themselves the double cross by holding the victims of heredity responsible for their inheritance.

When the best intellects of the day confuse facts as they do, what hope can we have that we shall ever evolve out of our chaotic state?

If children evolve undesirable traits, is there not more prospect of bringing about a reform with beliefs and actions based on the hypothesis that every child is a new and perfect being at birth, than by acting on the old hypothesis that they are cursed before birth by an inheritance out of which they can never be trained?

If training is worth anything, it should be started at birth. What kind of training can a child get at the hands of a father and mother who lack training, and whose stockin-trade is a lot of bad habits, kept at white heat by a cultivated sensualism? When the offspring of such unions go to the bad, it is from inheritance! Is that so? Then training has nothing to do with these degenerate children?

We must accept or reject the idea that children can be taught. If we accept it, then we must not excuse our failures and charge them to Providence.

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9. Pathology of the Fetus

As stated before, nature has put her eternal ban on the hereditary transmission of degeneracy.

Let us reiterate that there is no disease per se. What we call disease is an unideal state of health. What we recognize as health is a greater or less degree of approximation to an ideal state of comfort of mind and body. Few have perfect health; few realize their ideal standard; many are disappointed, and go through life singing, "Beyond this vale of tears." Those who think that man can escape all discomfort fail to understand the necessary educational influences of pain and discomfort.

Of course, the state known as health is a slight deviation from perfect health, functionally. But when functioning has been diverted from approximate health long enough to cause organized change of the character we call disease, this is degeneration, and is not transmissible.

Children are born with organs approximately perfect; or, as a result of accidents or injuries, they are monstrosities--deviations from normal physical development--and are frequently disposed of at the instant of birth because of their unfitness for independent existence; for example, headless children, or children born minus other vital organs.

The state of health which we call disease is not transmissible. Sterility stands between the unfit and propagation, No doubt children are born into environments unfit for proper development, but the vileness is all on this side of conception.

Diseases and deformities, up to monstrosities, are the results of traumatic influences. Disease-producing influences, such as toxin poisoning, may destroy life after it is started; but, at the time of conception, nature's health standard must have been satisfied, or it could never get by the censors who pass on proper conceptions. All sorts of detrimental influences may reach and influence fetal development; but life is started right--for certainly no organic disease in parents can be transmitted.

Drug-prescribing physicians have harmed unborn infants by medicating their mothers. Any influence that harms the mother must harm the fetus more or less. An overfed and incumbered mother will have an incumbered child.

It is said that mercury accumulates in the placenta. Why should it not find the fetus through the blood? The placenta is a filler which stands between the child and the ordinary blood derangements of the mother; but drugs, and especially mercury, arsenic, and iodid of potash, have a way of insinuating their toxic presence beyond the placental guard, there to deface the holiest of holies, and send it into the world a blot upon creation--a false witness against the purity of conception.

That the fetus and mother are united in bonds which allow a reciprocal exchange of physical and chemical influences, there is no question. For illustration: If a mother's uterus be opened, exposing a fetus, and a fatal dose of strychnin be injected into the fetus, fatal convulsions will be produced in the mother, while the child escapes; and, if sufficiently developed, the child may be extracted from the mother and saved--showing that it can stand a larger dose than the mother.

This statement is quoted from Sabory. It is not reasonable to suppose that a fetus can stand a larger dose of drugs than the mother; but the fact that the mother may be killed through the child, while the child is saved, is proof that every protection possible is thrown about the fetus. In this case the drug is taken up and sent to the placenta, and from the placenta to the mother's lungs and heart, before it can be returned through the general circulation to be distributed throughout the fetal body. The heart, and the circulation of blood through it, are far different in fetal life from what they are after the child takes an independent life. The blood, with its toxins,

is slow to reach the vital organs of the fetus. Indeed, the unborn child is safeguarded on every hand.

For the privilege of taking oxygen directly into our lungs we pay with a greater susceptibility to the poison influences of toxins.

When a fetus dies from poisoning through the mother by strychnine, it may be killed by the severe muscular contractions peculiar to convulsions caused by the drug; yet this is not very probable, so long as it is protected from contractions by a fluid cushion--the aniniotic fluid.

It is said that numerous observations establish that the bacillus of Eberth may pass through the placenta, but does not produce any lesion in the fetus, any alteration of Peyer's patches, nor any splenic hypertrophy, but causes a true septicemia. This is splendid proof of my contention that typhoid fever is the product of malpractice, and that all specific poisons--diseases with a specific poisoning--rest on one and the same basis--namely, septicemia--the septic base being chemically changed to suit the environment. A puerperal, typhoid, or traumatic septicemia, as well as a luetic infection, are all forms of sepsis, but featured by the environments under which they develop. Chaos reigns when specific individuality is given to all the different manifestations of putrefaction--septic poisoning. Our present system of treatment is made inefficient by a fallacious conception of causation.

Infection and contagion received a hard blow when it was discovered that, in the case of twins, one may be born with smallpox and the other not; and that the child is often behind the mother in point of time in the development of diseases.

Vaccinated mothers, living in an epidemic, may fail to develop the disease smallpox, and yet will give birth to children covered with pustules. This indicates that the mother's body is contaminated with the epidemic influence, or the infection could not be transmitted to the child. This also goes to show that, in all epidemic influences, those who do, not develop the tangible symptoms may be affected subjectively, having the disease in a subjective form, and how childish are all efforts at quarantine and immunization other than increasing resistance by raising the health standard.

So-called hereditary syphilis and tuberculosis are large subjects, the literature of which runs into tomes; but until the writers on these diseases shall know as much as high school boys, will know in a few years from now of the evils of bad habits in eating, clothing, and care of the mind and body generally, I shall not apologize to them for denouncing as rubbish their whole compilation on disease in general ,and syphilis in particular.

So long as wrong eating, wrong thinking, wrong care of the body--the use of tea, coffee, tobacco, and alcoholics-so long as the mind and body of our patients can be steeped in lasciviousness and sensuality, and all these disease-producing habits count for nothing with expert clinicians when they are weighing cause and effect to determine a correct diagnosis, why should I, or any other rational-minded physician, give any serious consideration to their conclusions as set forth in textbooks? Why are not their conclusions based on premises which have been robbed of their vital potency?

I charge the leading teachers of the profession of today with gross carelessness in making a diagnosis. They all know and acknowledge the evils of bad habits; but, in making a diagnosis, the effects of a vicious life are ignored entirely, and blood secretions, excretions, and pathological specimens are sent to bacteriologists, on whose findings a diagnosis is made and a cut-and-dried--specific--treatment is prescribed. The X-ray is used, and on its shadows is based a diagnosis, without a thought, or any consideration whatever, being given to the influence of the daily habits of the patient on causing the effects which the X-ray traces.

I have said that the pursuit of present-day diagnoses and treatment is a "fool's paradise." If it is not, why isn't it?

A life of lasciviousness and sensuality leads directly to degenerating diseases, such as tabes dorsalis; yet the leaders of the profession see nothing, think nothing, believe nothing, write nothing, and teach nothing, except that the disease is caused by syphilis and must be treated for syphilis, notwithstanding this treatment is a failure and they know it will fail. In the face of this, they *would* have laws passed to force their specific or anti-syphilitic treatment, and no other, at the pain of imprisonment for the culprit who would dare repudiate their dainnable pessimism.

The treatment standardized by the inhabitants of this fool's paradise (medical) will necessarily make their cures (?) correspond with their pessimistic prognosis. Perhaps it would be better to say that the treatment is logical--in keeping with the erroneous etiology,

From a modem medical view-point, there is but one toxin that counts in analyzing syphilis, and that is the toxin of syphilis. The modem medical gentleman may dive down into the worst human muck, but if he cannot find syphilitic infection, or the least excuse for suspecting it, he will issue a clean bill-of-health, to be put in escrow for ninety-nine years. If at the end of that time a Wassermann test, used every year, has shown negative, a certificate declaring the victim pure will be delivered to him "to have and to hold" for the remainder of his natural lifetime.

A syphilitic suspect is held under surveillance, and tested often enough and long enough to develop in him a syphilophobia, after which he will stand without being tied to any syphilomaniac.

To the uninitiated what I say may appear to be exaggeration, or perhaps entirely false; but the truth is that I cannot exaggerate on the fallacious teachings of modern medical science on syphilis--they are so false that they are beyond belief. The reason why medical fallacy has evolved to such dimensions on the subject of syphilis is because it is backed by law and the small voice of truth is frowned down.

'The majority of doctors who subscribe to the fallacy have no opinions, but they stand up and are counted for any ridiculous theories advanced by the "scientific" heads. In this way the stupid, unthinking majority governs; and when ignorance rules, insane delusion often sets the pace. 'The most dangerous delusions are those that are accepted by the lay minds as scientific.

When parents live in such a manner as to keep themselves enervated to the point of having imperfect metabolism--the point of having secretions and excretions more or less inhibited; when their personal habits are sensual, and the state of the alimentary canal is that of acetous fermentation in the stomach, and putrefactive fermentation in the bowels, their physical state is that of chronic toxin poisoning.

Acetous fermentation in the stomach and upper part of the small intestine has an inhibiting effect on the dehydrating process that takes place in the walls of the stomach, duodenum or small intestine, and liver. In the lower small intestine and the large intestine putrefaction takes place, and the toxins absorbed from this depraved condition is a constant source of poisoning. The lymphatic system arrests the absorbed toxins, and neutralizes them to a certain extent; but the body's immunization eventually becomes so overworked that glandular inflammations become the rule rather than the exception. This is the state that in time evolves the tubercular diathesis, which is described elsewhere under the head of "Diatheses." And, in thinking of diathesis, it should not be forgotten that more is meant than an average susceptibility; indeed, it means a fated certainty that tuberculosis will develop if the same habits of body and mind are practiced by the offspring that were practiced by the parents in developing acid fermentation in the stomach and putrefactive fermentation in the bowels. Without this inherited tendency to develop tuberculosis, no amount of association with people sick of pulmonary tuberculosis will cause its development.

When a subject showing so much degeneration of the vital processes is unfortunate in becoming acutely infected by any type of septic poisoning, ranging from venereal infection, through the infectious fevers, to infected injuries and surgical operations, his system will prove a

favorable culture-medium for the spread of the poisoning. The infectious fevers will develop the worst types. Venereal infections will act very severely, glandular inflammations will spread rapidly, and the system will show little resistance. Treatment will be slow in bringing about a change for the better. Anti-syphilitic medication, without correcting errors in eating, must fail.

Infectious fevers show a great mortality among such subjects. These are the subjects with whom modern syphilitic treatment plays such havoc. The most degenerated of this type are sterile; those who can pass nature's censorship and propagate are curable, and there is no transmission except an acute susceptibility to take on tuberculosis or syphilis, when the habits which lead to degeneracy are formed. A proper environment would lead away from such tendencies; but this influence seldom exists so long as children remain with parents, and parents remain ignorant of the health laws, and continue to practice vitiating habits. Children born. of such parents not only have a tendency to take on parental habits, but they are educated into them.

Postnatal influences cause degeneracies that are often ascribed to prenatal influences and inheritance.

The degenerating habits of the average parents during the gestation period, or during that period when a family is being raised, are quite enough to build a tuberculous or syphilitic diathesis. Excess in eating and excess in venery develop such a state of toxin poisoning that children are born more or less incumbered with flesh, and with such a sensitive state that they have little resistance. They soon develop toxemia; their lymphatic system takes on adenitis and lymphatic inflammations very easily. These are the children who develop borderland symptoms of scrofula, tuberculosis, and syphilis--they can satisfy the physician who is a syphilomaniac with all the thrills of a great discoverer.

Toxin poisoning from excessive eating, enervation from excessive venery and a lascivious mind, and poisoning from stimulants and improper clothing, housing, etc., build a state of body where no, symptoms are lacking for those who are ready to suspect tuberculosis, syphilis, or any degenerate state.

Errors in locating cause are the most tragic features of modern diagnosis. One of the most stupendous blunders of the day in medical science is in giving specificity to disease and ignoring the basic causes which make specific causes operative.

It is easy to graft specificity on a constitutional derangement, such as described above; but without some such cause the body proves a withering desert to the seeds of disease that fall upon it. To be specific and explicit: A child may be born with the tuberculous diathesis, yet it need not, because of that diathesis, develop and die of tuberculosis. Diathesis means susceptibility and inclination to take a given disease. Sterility prevents disease per se from being born.

Parents with vicious habits may deliver an incumbered child across the quarantine line drawn by nature, but nature's health officers are too loyal to evolution to allow the smuggling of infections into life. Degenerative processes must be manufactured on this side of conception.

Children born of parents who are too young are often degenerates. The cause, however, is psychological rather than physical. The first child is often a degenerate, as are only boys in large families of girls, and only girls in large families of boys. But the degeneracy is postnatal and psychical.

Physical degeneracy starts oftener from a psychological influence than from physical influences. However, both often start together, and walk hand in hand to the destruction of health and even life.

A babe is born. It is fed every two or three hours, night and day. It is disturbed in its sleep--in

its brainand body-building--by being put on exhibition to every friend who knows so little as to call in person on the puerperal mother, instead of sending a small note of one line conveying good wishes, and one flower (not a bouquet). Good wishes by telephone, or a personal card or note, with one flower, is all the personal attention any mother should receive from a friend, except her own family, for three months after the birth of the child.

Disturbing babies to look at them, kiss them, and shake them up to see how lovely their eyes are, and what exquisite little feet and hands they have, is nothing more than a delicious bit of hysteria and humbuggery practiced much too often for the good of the puerperal mothers and the babies; for right here is where the building of pathology of infants and heredity is begun.

The foundation of nervous irritability and indigestion starts at once, marked by constipation, white curds in stools, colic, and night and day crying.

Benevolent Assimilation--a Conservative Force

There is a tendency for pronounced types of any diathesis to grow weaker and weaker until unfit to reproduce; then they die out.

As stated often before, disease is not transmissible, but enervation is, Enervation means lost power of resistance, and when resistance is low, the influences which lower it find the high-bred diathetic easy prey, so to speak.

In breeding lap-dogs, the lower their nerve energy and the less, their resistance, the more popular they are among dog fanciers. The nearer death from fatty degeneration the stock at the stock shows is, the more it is admired and the greater is the premium.

One day years ago I was crossing Boston Commons. Moving along in front of me, at a snail's pace, was a woman far gone with fatty degeneration. When I was within ten steps of heir, she turned and said in a lackadaisical voice: "Darling, do you want mamma to wait for you?" I looked in the direction of her eyes, and saw an exophthalmic dog, whose weight certainly contrasted with that of its "mother," for she probably weighed two hundred, and her offspring could not have exceeded six to nine ounces.

The dog's breeding had left it with scarcely enough nerve energy to stand on its legs. It had eyes, but it saw not, and it had life, but it lived not. It was a case of nervous diathesis. It was bred almost out of existence.

Children may be born of parents who come from parents with strong, well-marked diatheses--with low resistance to influences which pervert nutrition--and if the diathesis favors tuberculosis, that disease will develop; if the diathesis is that of gout, the children will develop rheumatism and other gouty affections.

Children of tubercular diathesis, when bred down until they are very enervated, have but little resistance, and when they are abused in a way to pervert nutrition, they develop some form of tuberculosis. All they need to start the morbid process is to be vaccinated with cowpox, which is a bovine type of syphilis. Just what the difference is, the highest medical authorities do not know; the only apparent difference being that one develops in the human being and the other develops in the cow.

In a pronounced type of scrofulous diathesis, vaccination is all that is needed to set up a tuberculous or syphilitic morbid process that will be pushed on by wrong life to destruction of health and life while the victim is quite young.

Vaccination may start a morbid glandular derangement that will favor the development of all the catarrhal diseases peculiar to child-life.

Of course, infections from toxin absorption in the intestine are common to children of diathetic

type.

Children from a long line of ancestry favoring the development of the scrofulous, tuberculous, or syphilitic diathesis are weaklings, with flabby muscles, who develop adenoids and enlarged tonsils early. They develop skin diseases of an impetigo variety, and their lymphatic glands are very prone to take on inflammatory enlargements.

There are many fatal diseases developing in these children before and at puberty because their resistance is low and they are subjected to the same disease-producing habits as those from whom they inherit their type of health.

According to Darwin, this is the way the unfit are made to disappear.

A dyscrasia or diathesis is the sum of erroneous living practiced through generations. Diseases peculiar to a diathesis are not long in developing when the strain is pure and inbred; but where a beautiful tuberculous girl, with long, silky eyelashes and well-rounded body and limbs, compels an Apollo of the sanguine, vital temperament to fall in love with her, the tuberculous strain is diluted and the half-tuberculous children are given power to live; whereas, if the girl had attracted a young man, like herself, of tuberculous diathesis, the children of such a union would be born to die early.

Influence of Chronic Intoxications

Chronic food poisoning from the habit of overeating causes enervation. This state favors the development of any disease to which the one suffering from enervation is prenatally inclined. Anything that enervates those with a diathetic inclination will drive them into developing whatever disease their diathesis inclines them to develop.

Children born of parents enervated from chronic intoxications often start life with a great show of brilliancy; they are bright--indeed, precocious. But they soon come to an end, settling into disease or intellectual mediocrity. The cause for this may be one of many influences. The children are born and start life under domestic influences--a style of living--that have ended in alimentary, alcoholic, or other forms of inebriety in their parents; and the most natural thing for the children to do is to follow the parents in dietetic errors, and then, as they grow older, they adopt the coffee and tea habits, and perhaps later the tobacco and alcohol habits.

Excess in any one line paves the way for excess in other lines. Intoxication-be it from the absorption of toxins in the bowels from overeating, nicotine in the mouth, or alcohol in the stomach--develops enervation; and the more enervated a subject becomes, the more craving he has for more and greater varieties of stimulants, until the nervous system and nutrition are impotent. During the early stages, when the nervous system has strong reactive power, the mind is unusually bright--children show precocity; but the evil day of enervation, followed with prostration, must and does come. Then dullness follows brightness; will is lost; eccentricities come to the surface. The real artist may continue to produce in a way to please those who are not critical, but certainly not to please the artist himself, if he were normal.

Debauchery is not confined to physical stimulants. Ecstasy is mental debauchery. All cases of extraordinary precocity are types of mental diathesis brought on from idea--drunkenness. The emotions are fed with a consuming eagerness to drink at the fountain of all knowledge; the idea and desire become consuming; an ecstatic state is developed; and as a result we see the boy Christ "sitting in the midst of the doctors, both hearing them and asking them questions." On being asked by his simple-minded parents to explain why he was away from home, his answer was:

"Why look ye for me? Wist ye not that I must be about my father's business?" He was not understood, because the moral mind cannot look through the veil of ecstasy.

Only a short time ago the world of education was astonished by a boy of eleven years of age

lecturing to the Harvard professors on the fourth dimension. This is a type of ecstasy--mental inebriety. The enervation that must follow may show the will and all the positive elements of his character impotent; or the reaction may be so great as to sweep this precocious youth out of life.

These cases of premature--or, rather, extraordinary--mental developments were prepared for precociousness before birth. The parents developed a mental diathesis, and as soon as these youths were subjected to mental stimulation they developed mental inebriety.

Children, when once launched on the road of intoxication traveled by parents, will speed up and go much more rapidly and come to an end much sooner.

All habits--mental or physical, moral, immoral, or unmoral--are just so many varieties of intoxications; and, when indulged in without restraint, enervation, and the consequent perverted nutrition, follow. The children resulting are stamped with a diathesis which makes it easy for them to develop in the habits of parents.

As disease has no individuality per se, but is, first, last, and all the time, simply a state of health, all efforts in the line of healing worth anything are those that remove habits which lower the standard of health.

Moderation in all things builds a self-controlling diathesis that enables children to control themselves. Poise is as transmissible as any other habit.

Convulsions follow in the wake of parental drunkenness. Infantile paralysis is the effect of wrong nursing, and endemic or epidemic influences, on a child that is stamped with neurosis as a diathesis.

Unless we can fully comprehend the truth that normal children cannot be made sick; that such diseases as infantile paralysis take hold only of children who have been prepared by parental excess--perhaps excessive venery before and during the pregnant period, plus table excesses, and maybe alcoholics--we need not hope to build an immunization that will do away with epidemics. The part played by vaccination in breaking down resistance should never be forgotten.

Epilepsy is a neurosis built by parents and transmitted to children. Alcoholism is supposed to be the chief among all intoxications that build the neurosis in children which leads to epilepsy. In all probability, excessive venery stands at the top of all causes.

Saturnism (Lead Poisoning).--When the mother is poisoned, she usually aborts. When the father is poisoned, C. Paul found that out of one hundred and forty pregnancies more than eighty were abortions. Among the children born alive, one-third died the first year and one-third more before the third year. Those children who live to maturity are liable to have all kinds of nervous diseases.

One thing is always observed, namely: when degeneration is established from the use of any stimulants, sterility prevents propagation.

Hereditary Syphilis.--That symptoms produced by toxic poisoning caused by ordinary sensuality in those of scrofulous diathesis are often ascribed to hereditary syphilis cannot be successfully disputed. This I have demonstrated so often in my practice that the truth is common-place. For example: The abortion habit is curable by correcting vicious dietetic habits and venereal excesses. Pemphigus, when located on the soles of the feet, is declared to be absolutely characteristic; but the truth is that such skin diseases are developed prenatally and after conception, and are due to perverted nutrition brought on the mother from the sensual indulgences too common in, if not characteristic of, pregnant women.

The average woman's nutrition is perverted before conception, because of the universal habit of overeating and overindulgence in licensed sensuality. Add to this state the sensual

indulgences above referred to, and countenanced by good society and everybody's religion, and we have the ground-work for all the diseases to which the human offspring is heir. Modify this picture of perverted nutrition by poverty, squalor, and the corresponding psychology; then add the complicating influences exercised on these types by fear, hopelessness, dispair, and a disorganizing medication, as practiced by the representatives of modem medical science, and no imagination, it matters not how vivid, can picture a pathological inferno with more types of loathsomeness than evolves from the states here described--all, too, without anything more "specific" being added.

Where the above pathology is pushed to organic degeneration, sterility prevents its propagation; but there are enough functional diseases manifesting in the fetus, built by licentiousness in parents since conception, to satisfy the imaginings and perverted reasoning of our most pronounced types of syphilomaniacs.

Perhaps those who read my argument will say: "Why shall we accept one man's opinion against the opinion of the whole profession?" What can the whole profession know about a subject that it has not investigated? If the whole profession has, refused to watch the progress of perverted nutrition, as it develops under the sway of sensuality, and has not refrained from the use of medication, how is it to know what uncomplicated pathology is?

If the profession has refused to watch the progress of disease under fasting, or light dieting, and no medication, how is it to know what I know after years of such "watchful waiting?"

No man's opinion is worth anything on a subject about which he knows nothing, and to multiply such an opinion by a hundred, a thousand, or a million like opinions does not change the worthlessness of the first opinion. A fallacy multiplied by a hundred million minds does not make a truth. To force Galileo to abjure the Copernican theory ninety years after it had been published by Copernicus did not make the world flat.

Hereditary syphilis is a bugbear, the offspring of original sin, the fall of man, and like relics of the child-mind.

Hereditary syphilis is a disease made this side of conception, and is not transmissible. The child that is born with symptoms of disease is infected after conception.

It is a fact that we have the scrofulous diathesis, which means that the people coming under this head are more inclined to develop tubercular diseases, syphilis, and the thousand-and-one small diseases and symptoms that come under the head of scrofula, tuberculosis, and syphilis, than they are to develop symptoms of gouty diathesis.

It is worth while to try to comprehend that evolution had the preponderance of power, that the cosmic urge is on the side of development, and that there is a point beyond which degeneracy cannot go-and that point is conception. This is so true that no analytical mind can be in doubt when the great and profound truths of history are known and well digested.

Syphilis is a filth disease--a disease of clothes and sensuality. Man is slow in learning how to wear clothes--his morality transcends his estheticism. From a health point of view, a filthy man is much safer nude than clothed.

Syphilis is a disease reaching back far beyond the birth of the idea of specific treatment. Long before modem medical science, with its dogmatic, fatalistic teachings regarding "universal taint" and hereditary syphilis, King David confessed to his God: "There is no soundness in my flesh . . . no rest in my bones, because of my sin ... My wounds stink and are corrupt because of my foolishness . . . My loins are filled with a loathsome disease, and there is no soundness in my flesh . . . the light of mine eyes . . . is gone from me. My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off."

This confession was by David for his people. The symptoms were those of syphilis. If the

Jewish people were so diseased as to be shunned in that early day, before mercury, potash, "606," Wassermann tests, plays on the order of "Damaged Goods," and all the other insanities and inanities were discovered, what prevented the race from being wiped out? If circumcision was all the treatment, except fasting, it would be well for the wiseacres of the medical profession of today to tell us why the disease needs more attention today. Every other disease known to antiquity has grown lighter, if it has not become extinct, in the march of civilization.

The literature that has grown up on the subject of syphilis and its mystical habits is weird, and so eminently scientific that nothing can possibly evolve out of science to equal it, unless it would be a cure for the dreadful disease. But this is obviously impossible; hence the glorious achievement of the scientifico-syphilo-maniacs is likely to stand unparalleled in all medical history.

If I should undertake to refute all the freakish pathological phenomena attributed to syphilis, I should be occupied for the remainder of my days, and then leave the subject unfinished.

The following I give as a sample of myriads of analogies: "The microbe may remain inactive in some corner of the organism, and become active several years later, on the occasion of a traumatism or any other cause." This can be duplicated in those who are autotoxemic, and who are jotted out of "status quo" by an unusual shock.

We might tolerate the profession's syphilomania if it were not so pessimistic and fatalistic. But from years of experience we know that nature can throw off every disease that has not become organic; all that is necessary in the line of treatment is to remove every influence that is obstructive to the body's functioning. We know that the body is busy throwing out toxins, and if there is an accumulation--if elimination is not equal to accumulation--all that is necessary is rest (physiological rest), and nature quickly returns to the normal. There is no stimulation to elimination that equals physiological, physical, and mental rest.

That drugs will bring about elimination is true; but they bring a disappointing relief, for they excite to action and leave the organs more enervated. As a consequence, a relapse follows--or an apparent relapse; for, as a matter of fact, such relief is disease-building.

Hereditary tuberculosis and hereditary syphilis are analogous when found in a syphilitic or scrofulous diathesis--in a scrofulous subject coming from a father and mother of tubercular diathesis; but when one parent is scrofulous and the other gouty, the heredity is a modified scrofula or syphilis.

There is no hereditary tuberculosis. As stated before, diathesis means a tendency to develop given symptoms of diseases. Disease per se cannot cross the line drawn by sterility. To make an exact statement, diathesis means that health will deviate in a definite manner.

A child with the tuberculous diathesis well established may develop utero-tuberculous derangements.

Pronounced unmixed types of diathesis are hard to find. The tuberculous and gouty stand out more plainly and are recognized by the unskilled. A pronounced diathesis predetermines the type of diseases to which the subject is heir. The advantage of knowing to what class a child belongs, is that mistakes in climate, food, clothing, and occupation may not be made.

The tubercular diathesis should live out-of-doors, and be fed fruits and vegetables--very little animal food. The gouty diathesis develops gout, eczema, neuralgias, neurasthenia, etc. Animal food, with fruit and raw vegetables, should be the diet.

Both diatheses need grain during the developing period.

Arthritism, or gouty diathesis, presents the following characteristics: gout, eczema, nervous derangements, such as neuralgia, hemicrania, hypochondria, neurasthenia, gas, diabetes, gravel,

stone in the liver, kidneys, and bladder. When the father has gout, the son has asthma, and the daughter develops arthritis deformans. A child of this diathesis has headache at puberty, and may develop asthma or rheumatism; at about middle life, gout develops, and he dies of apoplexy.

It is said that gifted people--geniuses--are of a gouty diathesis, and are very inclined to develop single faculties to their own destruction.

The scrofulous diathesis starts with catarrh; nose, throat, and ear diseases; tubercular joint and bone diseases; catarrhal inflammations of all mucous membranes; glandular diseases.

Congenital malformations are said to start from infections. No doubt the nervous systems of the mothers have much to do with fetal development.

Fetal development is a large and interesting subject, but not necessary to this book. The readers who are interested should go to their public libraries, where they will find textbooks on the subject.

Physiological heredity is the innate power of the cell to reproduce a successor.

Ribot declares it to be a biological law that enables living beings to repeat themselves in their offspring.

There are two laws, however: first, the law of conservation--retaining ancestral type; and, second, that of evolution.

Conservation is the greater. Indeed, when we see with what tenacity humanity clings to all beliefs and customs, we sometimes wish that nature would relax her vigilance. But when we see how necessary it is for great resistance to be present all the time to prevent disease--degeneration--from crossing the lines drawn by heredity or transmission, we are made to rejoice that degeneration cannot be transmitted.

There is a temptation to write on the subject of reproduction and other features of heredity, but space will not permit. Darwin, Ribot, Haeckel, Weissmann, and many others will furnish the reader material out of which he may formulate his own belief.

10. Inflammation

Definition.--A burning. Any local influence that disturbs cell nutrition may be said to lower its standard of life or health, and this state we call disease. The phenomena are hyperemia, pain, heat, swelling, redness, and disordered function--impaired nutrition.

When the influence is traumatic (a wound or injury), there are two reactions which follow--namely, local and general. The local reaction causes a change in the nutrition of the cells injured and in their neighbor-cells. The general or systemic reaction causes a general nutritive change in keeping with the severity of the local injury. An injury may be so small that the general reaction is nil; yet, if the reparative process is interfered with because of inhibition of elimination and drainage, the systemic reaction may be so great as to cause death.

The simplest wound is a cut. When left to nature, the wound gapes. The wise mind will interpret nature's speechless signs about as follows: Nature is always conservative, and if there were danger in a wound standing open, it would be natural for the mechanism to close it, the same as the blood vessels close to stop bleeding. The blood vessels contract and retract, causing the flow of blood to be very light; then, on account of the slight flow of blood, a clot forms in the mouth of the cut vessel, which seals it most effectually. Where the blood vessels are torn or twisted apart they do not bleed. In certain diseased states the blood will not clot, and bleeding continues. It may be objected that wounds to blood vessels do sometimes bleed the injured to death. Yes, that is true. Every conservative provision of nature can be, and sometimes is,

overcome, but that does not alter the fact that nature places a special guard over each one of the body's vital functions, the normal action of each and every one being necessary to total full health of the body, and that each guard must be vanquished before the function over which it presides can be deranged or checked.

If microbes were dangerous to open wounds, they would not be in the atmosphere, in us and about us. If it were not for the reciprocal relationship existing between the microbes (organized ferment) and the enzymes (unorganized ferment), cell development could not take place, and tissue growth and reparation of injuries could not be brought about.

If the microbes could not get into a wound, either at the front or at the rear--either from the outside of the body through the medium of the atmosphere into the wound, or through the lungs into the blood, and, by virtue of the circulation of the blood, into the wound--healing could not take place. Organized ferments are as necessary to life as unorganized ferments. We know that cooked food, boiled water, and canned fruits are not so wholesome as foods not cooked. The false notion is sometimes advanced that uncooked vegetables are disease-producing. This is true only when the uncooked vegetables are diseased.

To kill the vitamin or enzymes in fruit, vegetables, or meat, by cooking, destroys the reciprocal balance between enzymes and microbes, resulting in decomposition. If, however, the cooked products are placed in vacuum, they will remain without change.

The Lister dressing places wounds in a state free from the access of germs; hence there is no danger from interfering with nature's plan of open drainage. But if the dressing is imperfect, allowing the germs to enter, and does not allow free drainage, the balance between germs and enzymes--between organized ferments and unorganized ferments--is lost, and the result is decomposition with infection, which ends repair, and sloughing of the parts takes place. If the sloughing establishes drainage, a reciprocity--a balancing of activities--between microbes and enzymes is once more established, and healing proceeds; but if sloughing does not take place and drainage fails to be established, organized ferments (microbes) gain the mastery over the unorganized ferments (enzymes), decomposition and disorganization of the blood take place, with the generation of sepsis which paralyzes the nerve centers, causing death in a very short time. If feeding is pushed "to keep up the strength and supply waste," the enzymes are used up, reparation of the wound--healing--does not take place, and the reparative material breaks down into pus.

The activity of the circulation in and about an injury takes place as one of the reactive phenomena following the shock of an injury, and causes swelling, pain, redness, and heat. This is a normal inflammation, necessary to reparation. To secure healing material, a surplus of blood must be taken to an injured part; and so much is taken that the environment of an injury is filled to overflowing-for nature is prodigal. This is the cause of the swelling, pain, redness, and heat; and the pressure on the nerves causes pain--the pain of inflammation. A surplus of blood means a surplus of heat; but so long as the chemistry of the elements is physiologically maintained, the temperature--inflammation--will not be above the normal visceral temperature, and the healing will then proceed normally. On the other hand, if the nutrition of the wound is perverted by having the waste retained, microbic fermentation takes place, which changes the chemistry, and decomposition supplants composition or healing. Normal inflammation, due to the fermentation caused by enzymes, is supplanted by abnormal inflammation, due to the fermentation caused by microbes. The first phenomenon is health as it appears when the reparative processes are working without a handicap; while the second is health as it appears when the reparative processes are working under a handicap.

Physiology and pathology are not opposing forces. They are two phases of life, and health is the thermometer. Health may register high, and it may register low; but the degrees between the extremes of full physiological health and full pathological death mark the standard of health.

Instead of the microbe per se being pathologic, it is physiologic and necessary to the life and

health of the cell, or the great aggregation of cells known as man.

The great importance of drainage is obvious when the above facts are considered, and such facts should enable the analytical mind to know that organized ferments (microbes) have no more to do with inflammation than unorganized ferments (enzymes). The real cause is obstruction to the normal operations of repair. If microbes must be pent up in a wound before they can set up their peculiar fermentation, then the cause of the pent-up condition is the cause of the morbid process.

Irritation and overfeeding cause too much secretion, and too much secretion is disease-producing.

Enzymes are secreted by all the organs and tissues of the body. When they are secreted in less quantities than normal, disease results. It would not be the truth to say that enzymes are disease-producing; yet too little or too much will result in imperfect metabolism.

Food is stimulating and body-building, but when eaten in too great quantities it is disease-building. It would not be the truth, however, to declare that food is disease-producing. Unless microbes can produce a specific disease without unnatural environments to aid, it cannot be truthfully said that they are disease-producing; if they are, then every benign influence may be said to be disease-provoking, because disease follows its perversion. The air is irritating to a fresh wound, but the irritation must be for a good purpose. It is; it checks the discharge of serum, and dries the surface of the wound so that reparation can take place behind the protection. The dry covering acts as a stay or fixation expediency, to secure the quiet necessary for healing. If the sealing-in of the wound is too close, and danger of infection threatens, an itching takes place, which forces rubbing or scratching, and this breaks enough of the covering to allow the escape of pent-up pus and waste matter.

Thus we see that nature is not afraid of air, nor of the dust and microbes which it carries. We see that nature does a splendid job, and her theory and practice are sound as science. The only objection is that her work in healing wounds is severely crude at times, and that it may be improved upon--only, however, in manual dexterity. The surgeon may lend nature his hands, but nature certainly does not need his brains. A good combination is for nature to lend the doctor the wisdom to carry out what she would do if she had hands.

Not long ago I read the extraordinary advice of stitching a wound together without the preliminary of cleansing, and without any attention to drainage except massaging the edges of the wound. All I have to say about such a procedure is that the Lord is on the side of that surgeon, and permits him to exploit the laws of nature in a most grotesque fashion.

A safe plan for surgeons who are not "anointed of the Lord" is carefully to drain all wounds that are sewed up, and, if quick healing is desired, to keep the parts as quiet as possible; indeed, keep fingers away from the wound, and especially those of the patient. If these precautions are not observed, the surgeon may find, after it is too late, that he may say with Pope:

> Pretty in amber to observe the forms
> Of hairs, or straws, or dirt, or grubs, or worms.
> The things, we know, are neither rich nor rare;
> But wonder how the devil they all got there!

It is just possible that the great physician who penned the surgical heresy referred to was posing and, for the sake of being thought original, suffered his logic to run counter to natural law and order. And again we are made to agree with David: "Verily, every man at his best state is altogether vanity." Selah!

Hands, with nature's wisdom, will clear the wound. Place a drain in the bottom of it, in such a manner as to secure perfect drainage; then bring the wound together, closing the gap and

coaptating the cut surfaces as nearly as possible; then apply a general dressing that will not interfere with drainage, but will lend support and steadiness, so that healing will not be interrupted by unnecessary motion. This is nature's wisdom turned to account.

Healing is interfered with by inflammation, or the causes that lead to inflammation.

We have seen that the first reactions stop bleeding, and cover the wound with serum and fibrin, which protect the surface by giving it rest from continuous irritation from air, dust, and insects.

If the cut surfaces are brought together, the healing must end much sooner than if a bridge of tissue must be built to span the gap.

The Wound and Natures Mechanism

Nutritive material is brought in abundance to a wound, caused by the irritation of the injury. Irritation, pain, redness, and swelling follow injury. At first, irritation causes contraction of blood vessels. This stops hemorrhage. As a result of the contraction--overstimulation--reaction sets in; the overstimulated blood vessels are enervated, and because of the enervation they relax and fill with blood; then exudation takes place. The cell-building elements cover the cut or mutilated surface, and crowd the border so much that there is a heavy discharge through the drain, if the wound has been properly dressed or has been left open. Where drainage is unobstructed, the healing behind the barrage of nutritive material thrown out moves along without a halt. The proportion of enzymes and nutritive material furnished by a healthy, not overfed, wounded individual insures rapid renewal of tissue. If obstruction takes place, microbic fermentation is set up in the pent-up surplus. This is a conservative process; for it thins the discharge, irritates the wound, and causes an extra amount of serum to be exuded. The purpose is to melt down any incrustations and new-made tissue that is obstructing drainage. When this fails, and the microbic fermentation gains the mastery over the enzymic fermentation that is protecting the healing surface, then the enemy--toxin or septic poison--pushes its way into the circulation, and septicemic fever and death follow very quickly.

Inflammation is almost nil when a wound is in a state of health; for it must not be forgotten that wounds, as well as all the phenomena we call disease, are different states of health. The strategic move for preserving the health of the wound, when it becomes obstructed, is little short of a miracle in appearance; yet it is the most natural workingout of cause and effect. We have seen that, unless the obstruction is overcome, the state of health will be lowered until it ends in death. In obstruction to wounds, nature destroys to make alive.

All nutritive changes which we call disease are due to influences which increase, decrease, or pervert cell-life; every symptom called disease is a conservative move; and, when not understood, or suppressed as doctors (not physicians) do, harm follows.

Inflammation is due to the local speeding-up of the nutritive processes caused by injury. The injury may be physical or chemical--a cut, tear, bruise, bum, blister, or a local irritant of any kind. When a wound is healing normally, the heat is about that of the normal viscera--namely, 99° to 100' F. When the temperature exceeds 100°, there is something going wrong--either the drainage is not perfect or the patient is eating too much.

The phenomena of inflammation are pain, heat, redness, and swelling.

Where the increase of heat is not more than one or two degrees above normal--above the temperature under the tongue--all is well with the wound.

The whole question of wound infection hinges on drainage. Any wound that drains well may be smeared with the most virulent septic poison without infection. The infecting agent must be rubbed into the wound so that it will be pushed into, or below, the granular surface. The infecting material must find a lodgment so secure that the flushing--enzymic--serums cannot

dissolve and wash it away.

Injuries in canals, tubes, ducts, and air passages will heal normally if drainage is not obstructed; but, when obstructed, the usual conservative methods of nature may further obstruct, and death may result from a rational therapeutic measure mechanically obstructed in its execution.

It is painful to watch members of the medical profession floundering about in a vain endeavor to save a patient from death from septicemia by injecting into the veins or subcutaneously a solution of salt, or a hastily prepared serum, regardless of the fact that the source of the infection has not been discovered; or, if it has, no adequate effort is being put forth to overcome it. What must be the conclusion when such floundering is observed? Obviously, that either the medical gentlemen are acting, or they have not a very accurate knowledge of the principles involved.

If the case is one of septicemia, following abortion, an intra-uterine douche of an hour's duration (hot salt water) is the first thing to do; and it should be repeated every three hours, if the patient continues to live. The douche removes the infecting material, establishes drainage, relieves the nervous system, brings on relaxation, lowers the tension that is interfering with all the life-processes, and, neither last nor least, places the organism in the most favorable state for resumption of secretion and excretion. A hot bath of from thirty to forty minutes' duration will prove a great auxiliary to the douches. Certainly no food should be given; for the work of elimination and neutralizing the poison--antidoting the organized ferments by the unorganized ferments, the germs by the enzymes--must not be hindered by interrupting the enzymic activities of repair with an intake of food, which, under the circumstances, is wholly superfluous and disease-producing.

Why does an injury or a local irritant or irritation cause inflammation at one time and not at another?

It is all a question of natural immunization; and natural immunization has for its elements an alkaline state of the blood, a normal nerve energy, and an optimistic psychology.

The blood, if normal, is alkaline and well charged with enzymes.

When an injury is received, there is first a shock, which causes a constriction of blood vessels. In time there must come a reaction, and the reaction equals the shock--the dilation of the tissues (blood vessels) will be equal to the contraction from shock. This means congestion or crowding of the parts, and, as in the case of a congested thoroughfare, traffic or the function of trade is impaired--too much blood is in the parts, causing an exudation, There can be no rest or standing-still; the exudates must be excreted, thrown out, or reabsorbed. To fit these exudates for absorption, they must be treated with enzymes, in order to fit them to reenter the circulation. If there is enervation and a lack of enzymes, then it will be "up to" bacterial fermentation to prepare the exudate for expulsion from the body. If there is no break in continuity--if there is no open wound--then the bacterially treated exudate must be absorbed into the general circulation, causing infection; or the infection will be corralled by walling in the devitalized territory and lining the inclosure with an impervious pyrogenc membrane. The pus that forms is retained--not allowed to escape into the general circulation; for, if it should, it would cause pyemia. If the body's natural resistance is too low to fortify it in this way--if it cannot localize and immunize the infecting material--then general infection takes place and the victim dies of septicemia.

Anything-any influence that causes irritation--attracts an extra flow of blood to the point of irritation. The engorged blood vessels exude a fluid. This fluid must get out of the body. If it cannot, it must be digested and reenter the circulation; or it must be bacterially liquefied and carried out of the body through the open wound. If there is no point of escape, an abscess must form, as described above, or general systemic infection must take place.

If the point of irritation is the pleura, the exudate may accumulate, and, from lack of bacterial

influence, the fluid is neither digested and absorbed, nor decomposed and converted into an abscess of the pleura, nor absorbed, creating septic fever and death; but remains a bland, innoxious fluid in the pleura.

The life of man, from his entrance to his exit in this world, is a process of metabolism. If this process is done well, he has health and well-being; if the process is carried out badly, he has impaired health.

Metabolism is carried on well or badly. When well done, we say that the individual is well--healthy; when badly done, then man is sick. Health and disease are states, not entities.

Inflammations of Mucous Membranes.--The simple forms of inflammation are those caused by the toxins generated by the influence of organized ferments on carbohydrate foods. When no more food is taken than can be utilized by the body--than can be fitted for assimilation by the unorganized ferments (enzymes)--the body in all its parts remains in a state of health called normal. Secretions and excretions are nearly enough balanced to insure health.

If, by mental or physical habits, nerve energy is lowered--if enervation is pronounced--secretion and excretion sink below the normal; this lowers enzymic production and increases the amount of waste products circulating in the fluids of the body. If the usual amount of food is eaten. digestion will not be perfectly carried out. A certain amount will be left over and above this amount that can be digested. This left-over material must undergo microbic fermentation.

If the organism is abused by overeating, overclothing, or living in too hot houses, or when the body is especially enervated, and is then exposed to low temperatures, or passing from hot houses, hot beds, to cold air--winter --temperature--irritation of the mucous membranes of all exposed canals results, until catarrhal inflammations become a constant state of the most exposed of these membranes.

Catarrhal inflammation of mucous membranes may be considered an index of the state of digestion and assimilation. The catarrhal sign means an oversupply of food--in some cases an oversupply of food and improper food. as well as improper combinations.

This catarrhal state is general and is the culture-medium for the development of all sorts of affections which we call disease.

For children to develop the affection known as diphtheria, all they need, in addition to their general catarrhal state, is a sudden change in clothes, weather, environment, and other influences, which brings on enervation; then add to these influences an unusual meal, or an unusual amount of meat, sugar, and rich cooking, such as served on holidays.

A child may be very enervated from whatever the cause, but it will not develop diphtheria unless it is poisoned by an oversupply of animal proteid.

11. Septicemia and Pyemia

Septicemia is poisoning from putrefaction. The poisoning may be slight and local, or it may be general and so intense that it overwhelms the patient, causing death in a few hours, and certainly in a few days.

A type of local as well as general septicemia may be furnished by puerperal subjects.

An injury at childbirth--a simple tear in the neck of the womb--may be bathed in a putrefactive lochia. The puerperal woman may not be kept clean--douches are neglected until the discharge is allowed to become septic. The torn part is submerged in this putrefaction, and enough is absorbed to set up a local inflammation and derange the blood so as to ruin the mother's milk for the infant, perhaps causing convulsions; or, if not so bad, then the milk may cause such a derangement of the stomach and bowels as to force weaning. In the mother's case, she may get

off with a local ulceration, an endocervicitis, or an endometritis; or she may develop a phebitis (milk-leg), and systemic infection may follow, leaving the way clear for a general or organic diathesis to establish a predisposed disease--namely, tuberculosis in one or more of its many phases, kidney, heart, or nervous diseases, or gout in the various forms.

When the septic infection is great (as it is when the womb is misplaced and drainage imperfect), absorption to a fatal amount is no infrequent happening.

There is a cut-and-dried classification of toxernias which corresponds to a bacterial classification that is legionary. To minds which respond only to the mystical, intricate, complex, and infinitely imaginative, bacteriology, with its infinite variety of germs of diseases--its theory of bacteriemia and bacterio-toxemia--certainly must be satisfying to a superlative degree.

Bacteriemia.--Bacteriemia is where the bacteria invade the entire organism and develop septicemia, without causing the special lesions; or they locate in viscera or tissue, and cause purulent foci (pyemia).

Bacteriemia, then, is general infection. In bacterio-toxemia the bacteria remain localized and secrete toxins, causing intoxication. This is an ingenious explanation which, defined, is a distinction without a difference. Indeed, according to the same authorities, the blood will not tolerate bacteria; it kills them, or forces them to ensconce in the tissues of the body,

Pyemia is distinguished from septicemia by the germs locating in the tissues and becoming purulent foci. True pyemia is exclusively ensconced in the tissues, while in septicemia the microbe is present in all parts of the organism. 'These are bacteriological teachings.

The only theory that appears logical--consistent with the unity of scientific knowledge and philosophy--and works out satisfactorily in a clinical way, is that bacteria, or organized ferments, begin their work where enzymes, or unorganized ferments, leave off. When physiological fermentation leaves off, pathological fermentation begins. In nature's economy, one is as necessary as the other; for one process is organizing and the other is disorganizing: one is evolution, the other is dissolution.

The old demonistic idea of warring forces--of good and bad being locked in mortal combat--is worthy of the childmind, but certainly ill becomes enlightened interpretation.

Science is nature defined. It is possessed of rigid necessity and absolute universality. Philosophy is the unifying of all knowledge--all science--into a logical unit. Unless fragmentary knowledge can be unified into a consistent whole with all other knowledge, such knowledge is not truth. Philosophizing is trying out knowledge--it is testing and proving the truth of experience.

According to the logic of absolute science and philosophy, a unitary cause of disease must act under all circumstances, and it must continue to act so long as cause and the object on which it acts are occupying the same environment. If this cause acts only under special and favorable circumstances, then it is not a cause, but one of a series of causes, any one of which is as important as any other. To build a system of cause and cure on one causative factor, taken from a multiple of factors, is building a fool's paradise. And that is exactly what our so-called specific cause is in our bacteriological system.

Germs of fermentation take on specificity from the toxins--chemical medium--which they themselves cause to generate in a given compound of elements. Single elements are proof against fermentation; only compounds are susceptible to organized or unorganized ferments. Organized ferments dissolve organized compounds, and fit them for elimination; the toxin is a resultant of the action of the ferment on the compound. The toxin is potential in the compound, but not in the germ.

It is true that the withholding of food from a septic patient ends the septic fever. Fasting stops

disease, because fuel for fermentation is withheld. Bacteria appear to be unable to cause fermentation when the organization is normal in energy and possessed of sufficient unorganized ferments to digest all the food taken into it.

In the light of these facts, the proper treatment for toxin poisoning--septic or pyemic poisoning, syphilitic or gonorrheal poisoning (the toxins representing the decomposition of several tissues in the body)--is to withhold food until nature has eliminated all toxins. Then feeding for the first week should be fresh, uncooked fruits and vegetables.

Septicemia--Infection always means that there is retention of a superfluous amount of reparative material. and confinement of this material in the womb, or in wounds, or in excretory canals or ducts, until putrefaction takes place. If the amount of infection is not overwhelming, and fatal, it may end in suppurative inflammation and formation of septic abscesses.

Milk fever, traumatic fever, putrefactive fermentation, syphilitic and gonorrheal infections, are different forms of septicemic inflammations. The distinguishing characteristics are furnished by the tissue involved, To make my meaning clear, think of the action of organized ferments (bacteria) on carbohydrates and fats. The result is to develop an acid which is more or less an intoxicant, but very unimportant compared with the toxins generated by the ferment on protein--meat--substances containing sulphur and nitrogen. It is probable, however, that excessive fermentation in the digestive tract of carbohydrates does impart a putrefactive change in the proteid tissues of the body and is the cause of offensive odors, hardening of tissues, inducing sclerosis and cancer.

Sclerosis.--Sclerosis means hardened tissue. Tissue in that state is very feebly vascular. It is white, firm. and resistant, grating under the knife. Keloid, which is an exaggerated development of scar tissue, is a form of sclerosis. Cirrhosis of the liver is a type of sclerosis, and atrophy of the liver is another form.

Organs that have been hardened from inflammation sometimes take on compensatory hypertrophy (enlargements). Then is presented normal tissue endeavoring to replace hard tissue, and this modifies the form of the organ.

Fistulas are the result of a hardening of the walls of an opening through which pus has been discharging. Instead of the walls on an abscess closing and healing, a hardening of the walls takes place, and the result is fistula.

When urethritis has continued for months, the walls of the canal harden at those points where the inflammation has continued. The result is hardening or stricture. Stricture of the urethra may form with no more to irritate the mucous membrane than unusually strong urine from meat eating.

When an irritation has continued for months or years, as in continuous acidity of the stomach, a chronic inflammation is produced, enlarging, and then hardening. If the offense to the tissue is continued, the end of the degenerative process will be cancer. Cancer is a form of spontaneous gangrene. When tissues have hardened to such an extent as to cut off the oxygen supply, there is nothing left but dry atrophy. If, however, there are islands of tissue throughout the mass of **atrophying hypertrophy** which still receive nourishment, life will continue until the hardening encroaches on the inlets of food to such an extent that nourishment is shut off. Then decomposition takes place, with the development of toxins; following which comes, slowly but surely, systemic infection.

An acidosis of a subtle form may develop a general hardening of tissues. If the circulatory system is most involved, death will come from atheromatous diseases--arteritis, endocarditis, apoplexy, paralysis, or arteriosclerosis. If the glandular system is most involved, then tuberculosis may follow. If serous tissue is most involved, perhaps cancer will be the ending of life.

The probabilities are that when syphilis, tuberculosis, gangrene, sclerosis, hypertrophy, atrophy, and all the various forms of infections and so-called contagions, are understood, they will prove to be different forms of one and the same thing; namely, sclerosis--or infection, inflammation, gangrene, death; and the various causes are all different forms of one and the same thing. Multi-specific causations, followed by multi-specific effects, as a basis on which to build a rational theory and practice of healing, are so out of keeping with the teachings of science and philosophy that it is a continuous surprise that such a system can receive the endorsement and support of as large a body of intelligent professional men as are found banded together under the banner of modem medical science.

'The whole phenomenon or complex of life, health, and disease may be summed up in three words; namely; digestion, nutrition, infection.

Reparation of Lesions.--When an injury has broken down and destroyed cell-life--when inflammation from any cause has broken down and destroyed cell-life--reparation cannot be perfect. The destroyed cells will be supplanted by sclerose tissue. This scar, or cicatrix, is more or less of a menace to the health and life of the tissue in which it is located, depending, of course, on the vital importance of the organ or tissue. If of the valves of the heart, the ending will be fatal without a rational treatment begun in time; if of the neck of the womb, a cancer may be the ending, if proper treatment is not instituted in time; if a gland of the breast be the injured part, then, without proper treatment, cancer will end all; if a stricture of the urethra, and neglected, bladder, and possibly kidney, disease may be the consequence; if a catarrhal thickening of the mucous membrance of the bile duct, and its obstruction is not relieved, stone in the gall bladder will result; if the hardening is of the spinal cord, ataxia and other forms of paralysis may result. The affections that result from hardening can only end with those limitations of tissues and organs of the body; and offenses to the tissues and organs of the body which may cause cicatrical tissue end only with the sum of everything in the environment of man capable of injuring his body and mind.

The lower the order of tissue life, the more power it has for regenerating. In a few animals it is possible to remove a portion of the liver, spleen, or kidney, and it will be rebuilt. It is said that the mutilated organs are reproduced according to their normal type. In spite of this fact, their lives are short compared with that of man, who has a very limited power of reproduction.

Intoxications of All Kinds.--Psychological intoxications--drunk on ideas, emotionalisms--and physical intoxications, such as alcoholic, tobacco, coffee, tea, acidosis from fermentation of carbohydrates, sugar, and fats, and toxin infections from the putrefaction of nitrogenous compounds--proteins; auto- intoxications caused by checked elimination from enervation brought on from overwork and worry; perverted nutrition, causing activities to start up in diatheses--all have an aging effect on the tissues of the body. Alcohol, when used in small quantities, has the effect of hardening the arteries, and when used in large quantities it produces fatty degeneration. When used in small quantities continually, the effect is to produce cirrhosis. Tobacco, coffee, and tea harden tissue. These drugs also produce arterial pressure.

A regular diet of bread, meat, preserves, cake, pie, puddings, coffee, and tea will bring on sclerosis by first creating toxemia.

Where Sclerosis Gets Its Origin.--Primarily a cell is produced under almost ideal conditions. It has been seen that health is a state that only approximates the ideal. Under the most favorable circumstances, a cell is approximately ideally developed. The state of nutrition that favors cell development means the normal balancing of energy, unorganized (enzymes) and organized (germs) ferments, and food (building material). If nerve energy runs low, enzymic power is weakened, cell-building drags, building material accumulates, obstruction takes place, and it is necessary for organized ferments to start an abnormal elimination. This means fermentation, irritation, inflammation, ulceration, sclerosis, cancer, and death.

The microbe acts as traffic police in keeping the avenues of the body cleared. This clearing-out

process causes the death and disorganization of a few cells in the midst of the fray, This results in the formation of cicatrices; **and here is where sclerosis originates.**

This scarring process, this hardening of tissue, goes on rapidly in those who live in a way to keep cell development more or less retarded by overstimulation from toxins autogenerated or brought in from without. When a cell is destroyed, a cicatrix is formed. When cicatrices multiply because of a continuance of cause, the accumulation may be so great as to destroy the nutrition of important parts by cutting off the circulation.

Impaired nutrition of important organs is brought about in this way; nephritis, hepatitis, and inflammation of other organs is brought about in this way. It should be understood that an inflammatory process started in this way grinds out to its end very slowly. It may end in hypertrophy, atrophy, cancer. etc.

Arteriosclerosis.--This affection may be general, with special emphasis placed on one or more of the viscera.

Just which special organs will be most affected will depend upon which have borne the stress of wrong life. If the brain and spinal cord have been kept hyperemic from venereal excess, or overstimulation--overstimulated from toxins taken in or toxins autogenerated--then apoplexy or ataxia will follow.

The affection is the last state of the effects of morbid stimulation, either mental or physical, or both. This derangement of the arteries is quite natural, for toxins are circulated throughout the body. The walls, or coats, of the arteries are infected and forced into degeneration sooner than other parts of the body. The highly complex tissues of the body, such as the brain and spinal cord, take on sclerotic change sooner than others.

This affection may begin early in life, but it is seldom absent in the aged, and it is common in adults.

Arteriosclerosis is seldom equally distributed. The parts most affected are those most used. Those whose occupation requires head work will develop hard arteries of the brain. The degeneration in the brain will be that of softening; when of the extremities, it will be dry or senile gangrene.

Symptoms are first dizziness, dyspnea of an asthmatic order, somnolence after eating, and hemicrania. Asthma and headache are the first symptoms in many; and these symptoms point to kidney affection. In women there are sudden congestions and sensations of heat, which pass as symptoms of change of life.

On examination, the heart gives out a tympanic click along with the second sound, with intermittent systolic and diastolic murmur. (See Heart Symptoms.) The arteries are hard; the sphygmomanometer indicates an elevated pressure of about twenty centimeters.

In the second stage there are many local manifestations. Whichever viscus (organ) in any of the four great cavities of the body (for instance, the brain in the cranial; lungs or heart in the thoracic; liver, intestine, or kidneys in the abdominal; and uterus in the pelvic) is the victim of special stress, in arteriosclerosis it will appear to be the cause of discomfort and sickness. If the stomach is the most vulnerable organ, then the subject will be treated for indigestion, dyspepsia, ulceration, or possibly other so-called diseases; if the intestine or reproductive organs are the hyperemic centers, these will be vandalized surgically; if the lungs are the most vulnerable organ, that organ will be the cynosure of the professional eyes of those who are consulted; the same will be true of the breast and other organs.

These various diseases (?)--symptoms or affections, more correctly speaking--are transitory and intermittent, and are in evidence only when the sclerotic subject has been imprudent, and when, through overwork, worry, excessive eating, or sensual indulgence, excessive, functional activity

has been brought on. The correct prescription is simply abstinence, followed by greater moderation. Sclerosis means aging, and all nature cries out for rest or moderation. Indeed, rest is the price of continuing in life, and death is the penalty for not resting.

Arteriosclerosis is not a disease that can be cured, but it can be held in check, and the subject made comfortable and quite efficient. It should not be forgotten, however, that the leading prescriptions are proscriptions. The object in treating such subjects is to encourage "status quo".

The organs of the body are sufficiently nourished when not pushed beyond the daily habits; but when speeded up, they do not receive enough blood to be supplied with the oxygen immediately necessary for a quick extra demand or nourishment required for the increased demand. Exercise makes a demand for more nourishment, and hardened tissues work slowly at best; hence great care must be taken not to overwork a sclerosed subject with hardened arteries.

Sudden speeding-up of the digestive organs, and of the heart and arteries, causes spasmodic breathing, clouding of the brain, and inhibits the kidneys, causing transitory uremia, evidenced by heavy drowsiness at inopportune moments when it is embarrasing to appear sleepy. After dinner the sclerosed subject will get heavy and sleepy, in spite of his endeavors to stay awake.

Arteriosclerosis manifests itself early in those of gouty diathesis. It must be understood, however, that toxin poisoning is necessary. Children and young people, as well as adults, must have the overeating habit; they must be in the habit of eating beyond their enzymic capacity. This, of course, necessitates bacterial fermentation of all superfluous nutritive material, and the generation of toxins. When this becomes an established habit, the blood becomes charged with toxins, and necessarily the intima (the internal coat of the arteries) and the endocardium (lining membrane of the heart) must become diseased.

Arteriosclerosis in the first stage presents, as one of the first symptoms, dizziness; dyspnea of an asthmatic character, somnolence after meals, and hemicrania (migraine--pain in one side of the head) are others. The observing physician, in examining all asthmas and hemicranias, will be on the lookout with a view of ascertaining if there is arteriosclerosis as the probable cause. If of a sclerotic origin, there may be a kidney change. In women there may be hot flashes--sudden congestions and heat-flashes--attributed to change of life, when sclerosis is the real cause.

To prove that the above symptoms are due to sclerosis, the heart must give out a tympanitic click at its second sound, and not always murmurs both systolic and diastolic.

The second stage presents organic disturbances, which come and go in keeping with excessive functioning.

The limping and stiffness accompanying this stage of sclerosis are called rheumatism--rheumatic stiffness. Inactivity is followed by claudication, (limping), stiffness, and more or less tenderness, which pass off shortly. Asystole (feebleness of the heart with dilation) presents itself intermittently; so do cerebral clouding and uremia.

The third stage is characterized by the localizing or organizing change. The heart may be the vulnerable organ, and the diagnosis may be sclerotic myocarditis. The heart becomes weaker and weaker, marked by asystole (shortened and weaker systolic contractions), which means that there are dilation and feebleness.

The arterial type is characterized by vascular dilation, with formation of aneurisms, and embolism is imminent.

The cerebral type is marked by unilateral headache, dizziness, etc. This type is liable to terminate in softening, or hemorrhage in the cerebrum, or the meninges. This ending is called cerebral apoplexy.

The renal type of arteriosclerosis is marked by nephritis, with polyuria, slight albuminuria,

palpitation of the heart, tension of arteries, and galloping murmurs, Death occurs from uremia, uremic convulsions, gradual weakening of the heart, and sometimes from apoplexy of the lungs.

Treatment.--Why should drugs be given? Can drugs add to life, or stop a habit that lowers the health standard? The habits of life that are using up nerve energy must be reformed. Those who are predisposed by diathetic heredity to develop the disease early should get away from family habits, both mental and physical, as soon as possible. Why should not a son or daughter develop affections like those of father and mother, when living in the same environment and practicing the same daily habits?

12. Tumors--Definition of*

(*To my lay readers: Do not fail to read this subject, even if it contains a few technical terms.)

Tumors are divided into benign (innocent) and malignant (dangerous to life).

Benign tumors may be considered as hyperplasias of any of the organs of the body. Hyperplasia means the overmolding of organs--hypertrophy--overnourishment; or, to speak in every-day parlance, an enlarged organ. A type of benign tumor, or hyperplastic development, is seen in what is called a keloid tumor. This tumor develops in scar tissue.

Histology.--Tissue science--the study of the structure of tissue.

Tissue.--The elements of a part of organ; for example, skin tissue, muscle tissue, glandular tissue, etc.

The keloid is described as an exuberant fibrous production, caused by the hyperplasia brought about by inflammation. Such growths are more inclined to develop in those who eat heartily and of gross or greasy foods, and who do not exercise enough to stimulate the required elimination.

Histology tells us that simple or benign tumors are made up of tissues having normal arrangement as to structure, or which are sufficiently normal to resemble somewhat the tissues from which they are developed.

Adenoma (a tumor of a gland) is found to have glandular structure. The cells proliferate (bear offspring--generate) and fill the alveoli (the cells of a gland; these cells may be likened to a bunch of grapes). They remain inclosed by the limiting membrane of the gland in which they develop, and show no tendency to invade surrounding tissue. This means that, no matter how large the tumor gets, it is always encompassed within the gland-covering.

Malignant Tumors have a different arrangement of structure; indeed, they are chaos itself--King Disorder reigns supreme. The cells, which vary in form and size, are inclosed in membranes--alveoli (the skin of the grapes--the covering of each gland-cell) of independent growth. These growths break through the retaining membranes (skin of the grapes) and invade any and all environmental (surrounding) tissue. As "war is hell" turned loose in social fife, or in civilized life, so is the histological insanity known as cancer. Indeed, cancer has not even the order or system of so-called civilized warfare. It is more on the order of guerrilla warfare, or a war of extermination.

Embryological Tumors.--A class of tumors due to defective development. They may be divided into those that start before birth and those that develop after birth.

Teratology is a branch of biology that treats of malformations. In the study of embryological tumors there is described the phenomenon of two spermatozoa penetrating into one ovule, which gives birth to two beings when development is normal; but when, from some cause, one remains rudimentary (fails to develop), it may become inclosed in its well-developed fellow and in future evolve into a tumor. This anatomical and physiological perversion has been offered as an explanation of all neoplasms--new-growths or tumors.

Is it strange that, in an organism so infinitely complex, and subjected to such an infinite number of unfavorable influences, as the human body, there should be many blasted cells, or defects in glandular development, in the course of physical development? Certainly not. Then, when health is impaired-nutrition perverted-it is not !strange that these defects should take on independent growth and become tumors, or abnormal growths.

It is also reasonable to believe that, so long as the organism remains in a state approaching the normal, it can dominate any tendency which these blasted cells (be they congenital or caused by postnatal injury) have for taking on their pathological trend. But when enervation is lowered and elimination imperfect, causing chronic intoxication, these defective developments, or crippled tissues, find in this perversion the encouragement to grow--to take on pathological activity--for, being defective, if they develop at all, it must be in keeping with their histological bias.

This blasting of cell- or gland-life, when it occurs in the skin or ordinary tissues of the body, usually ends in the development of benign tumors; but when it takes place in the higher type of glandular structure, and then meets with the necessary pathological nourishment--namely, chronic autotoxemic poisoning--it may start a state of anarchy--malignant disease.

This is perhaps more true of the lymphatic system. The reason for this is that the best and worst nourishment is found in the lymphatic glands of the body.

The lymphatic glands may be likened to quarantine stations--places where all suspicious characters--infections--are held up until they can be dismissed with a clean bill-of-health. The lymphatic glands in the groin arrest the infection of venereal disease that threatens to invade the organism, and hold it long enough to immunize it. When the amount of infection is great, and the immunizing power of the glands is inadequate, suppuration takes place, the infection being thrown out of the body by way of a heavy pus discharge. In this phenomenon, life-preservation is a grand struggle against mortality. Years after glands have been altered in their structure from suppurative inflammation, degenerative activity may spring up, and malignant disease (cancer) may develop and run rapidly to a fatal termination.

The lymphatic glands in the lungs arrest toxin infection that has been absorbed in the bowels. When their power to antidote the infection is not equal to the task put upon them, inflammation and suppuration take place, with systemic poisoning. This disease is called tuberculosis. The bacillus tuberculosis is a scavenger germ, and not the infecting agent. The infecting agent is a toxin developed in the bowels.

If the bacilli tuberculosis are like all other scavenger germs, they depend upon toxins for their specificity, and the infecting agent comes in by way of bowel absorption.

When resistance is low--when enervation is pronounced--the resulting autotoxemia so weakens the immunizing power of the glandular system that blasted or defective cells, from any cause, may be encouraged to take on pathological development; which means benign tumor, or malignant tumor--cancer.

Where there are no blasted or defective anatomico-physiological structures, the organs with the most defective functioning will bear the brunt of the incoming infections, and the following diseases may develop; tuberculosis of any part of the body, glandars, syphilis, scrofula, scurvy, etc.

Cancer must jump the bounds of glandular limitation before life is overwhelmed by its cachexia (blood-poisoning).

Cancer.--So long as the cancerous process is going on within the limiting membrane of the gland, its growth is restricted; but after it breaks this membrane, its growth is unrestrained, and the pathological metabolism taking place in the growth quickly sets up the cancerous cachexia.

The reason why the removing of a cancerous growth or disease fails to cure, is because the cancer has potentized the surrounding tissue with its toxin.

The conservative power of the body limits the infection as long as possible to the lymphatic glands. Why? Because the glands have more immunizing power than ordinary tissue. The spread of all infecting diseases is along lymphatic chains; but after lymphatic restraint is lost--broken--all the fluids of the body become infected, and life is destroyed very quickly.

That is the manner of poisoning by cancer, which is a form of sepsis. The difference between traumatic septicemia, puerperal septicemia, and the septicemia of cancer, is the slowness of the infection from cancer. However, if the cancerous tissue is torn or cut, freeing its infection from the limiting membrane, cachexia, or septicemia, will develop rapidly. If the wound into the cancerous tissue is open and drains well, absorption will be very limited; but if located away from the eye, where drainage and cleanliness must be an unknown quantity and quality, cachexia (septic poisoning) will spread rapidly. Indeed, patients will die from septicemia as quickly when developed from cancerous tissue as when developed from injured normal tissue.

Cancerous tissue will not unite--once severed, always severed. Torn, bruised, or severed cancerous tissue does not drain well, but tends to break down very rapidly. Bruised and torn cancerous tissue differs from healthy tissue in that the malignant tissue does not contract and retract, forcing waste fluids out of the bruised and torn channels to drain, but the fluids remain, flooding the parts, forcing rapid decomposition and absorption, and causing acute cachexia (septicemia) and death.

The reason why cancer cannot be cured is obvious. If all infected glands could be extirpated before the limiting membrane of any of them has been broken, and the growth has passed out and become mingled with the surrounding tissue, largely devoid of immunizing power, the disease could be cured; but this possibility is almost nil, for large lymphatic glands are surrounded by many small ones, and, while removing the large ones is an easy matter, small ones are overlooked and left to continue the work of the larger ones that have been removed.

The worst feature of the operation is that some of the infected glands are injured. This allows the cancer to spread in non-glandular tissue without resistance, which quickly involves the fluids of the entire body.

This is why people often do not live so long when operated upon for cancer as when left without an operation.

Where do cancerous diseases get the infection that initiates their evolution? From putrefaction taking place in the large intestine. The infecting material is absorbed; and if the cause (decomposition in the bowels) is only temporary, and not of frequent occurrence, no permanent harm will result. But if imprudent eating is continued until the latency of a pathological process in gland structure is rendered dynamic, then a morbific process is set up that is called malignant or cancerous.

If the disease could be detected early enough, and removed, a cure would follow. But often the disease is not suspected until fatally developed.

Before malignancy can develop in any part of the body, it is necessary for it to be potentized by exogenous or autogenerated infection. And since infection must be septic in character, but absorbed so slowly as to bring on cachexia, the cancer must begin to break down before the fluids of the body become infected by the poison.

Before a morbid process can evolve, resistance must be broken down. What is the nature of the resistance that is lost before cachexia is developed? The immunizing power--the power on the part of the body to generate its own immunizing agents.

Immunizing power has but little to do with physical force or strength. A very weak man

physically may have the power to protect himself from the disintegrating influences of his environment, while a very strong man may not.

Histogenetic Tumors ("histo," web or tissue; "genetic" (from "genesis"), generation).--In biology, the process or function of cells and cell-products.

This class of tumors are not supposed to be of embryonic origin, but develop from connective, muscular, nervous, or epithelial tissue.

The sarcoma, which grows very rapidly and becomes very large, is considered as standing between a malignant and a benign tumor.

Myxoma belongs to the mucous tissue. Fibroma belongs to the fibrous tissue. Lipoma belongs to adipose tissue. Condroma develops from cartilage. Osteoma grows from bone.

Vascular, lymphatic, angiomatous, endotheliomatous, and lymphaornatous tumors are produced from serous membranes derived from the lymphatic system.

Muscular tissue gives origin to two species of tumors--namely, leiomyomata a n d rhabdomyomata--which correspond to the non-striped and the striped muscle fiber.

Adenoma.--A benign tumor that has its origin in canals, ducts, and follicles of glands which have become stopped up, causing a cyst (sac) to form that is filled with a perverted secretion. Sometimes the lining membranes of these little cavities take on an excessive growth and end in what are called simple tumors. Such tumors do no harm, except for their unsightliness, when developed on exposed parts of the body, or from size. The tissues of these tumors always resemble those of the structure from which they are built. They have no tendency to break through their retaining membrane, which, of course, was originally the lining membrane of the passage that became plugged up.

This is not true of epithelioma (a true cancer). This disease respects no restrictions; it breaks through and invades any tissue, spreads in all directions, and leaves destruction behind it.

When Does a Cancer Become a Cancer?--That simple adenomatous tumors, and epitheliomatous degeneration, are related much as cause and effect, there appears to be convincing proof. In other words, cancer at the start is not always cancer. The question, then, is: When does it become cancer?

In the stomach there is first irritation from acid, due to overeating. If the overeating is persisted in, the acidity continues to irritate, until subacute inflammation is established. If the causes are not removed, the next stage is ulceration; then, further, degeneration into malignancy.

What can be the difference between last year's ulceration and this year's cancer?

That "cancer" is not always cancer, every experienced physician must have acknowledged to himself, if not to others. The question to be settled, then, is: What is the cause of the transformation?

I have thought that in ulceration the blood-vessels and lymphatics are sealed by adhesive inflammation before the sloughing or necrosis of their involved portions takes place, leaving them intact to perform their function of supplying reparative material; whereas in cancer the ulceration involves the bloood-vessels and glands so far distant from the surface of the ulceration that oxygen and nourishment are cut off and putrefaction is established, following which systemic infection (cancer cachexia) is established, which in time inhibits all physiological processes.

The cause of rapid fatality in some cases is the slight resistance given by some tissue to the spread of the disease, while in others it is the extension of the disease into parts where drainage

is cut off, forcing absorption and the rapid development of cachexia--blood-poisoning.

Another thought may be considered; namely, the state of the patient may be that of premature aging, and the blood vessels and tissues are sclerotic-hardened to such an extent that they offer no resistance to an ulcerative process. Under such conditions, the system can hardly be expected to generate anti-bodies for self-protection.

No doubt there are many factors in the process of evolving cancer. Those who would sidestep the trouble of thinking may say that germs cause the disease; but to the discerning, germs are a poor excuse for accounting for any disease.

In the building of all morbid processes, the chemic changes that take place in tumor-building must be known before the cause can be understood.

Cancer, tuberculosis, and other diseases appear to run in families. So do certain habits. Domestic peculiarities are confined to family strains. The relationship of given types of disease to strains or family peculiarities should be given attention until understood.

A peculiar style of eating, cooking, mixing, clothing, bathing, and thinking will be followed by a peculiar style of disease.

Like causes produce like effects--only, however, when everything is equal. When every phase of cause is known, the effect may be modified by changing the object on which the cause operates. For example: The sun, moon, and stars, or the astronomical bodies in general, we assume, are always the same; which, so far as the comfort and life of man are concerned, is not true. The subject on which these influences are spent--man, for instance--can be changed so that the fixed influences do not act the same; hence the effect cannot be the same. The sun does not act on the drunkard the same as on a sober man. The gluttonous and the temperate are acted upon differently by extraneous influences. Those of limited reasoning power consult the stars regarding their coffee-drinking, what clothing they should wear, and how to invest; when to bull and bear the market, and about their health; also when and whom to marry; in fact, regarding daily, monthly, and yearly affairs. There is no material difference, as far as ultimate results are concerned, whether sun, gods, planets, or devil be consulted--whether the Bible, the Koran, astrology, or other deific sciences be studied for the purpose of determining what is foreordained for man, domestically and socially.

All of which is as unscientific as to start children in the kindergarten in the study of mathematics.

If man ever finds God, he will begin the study with man; and if he ever finds man, he will begin the study with cell-life. If man ever finds the cause of his health and disease, he will find it by understanding the laws of his being; and if he is ever saved, he will save himself by obeying those laws. Yes, obeying every one--the most insignificant,

Man did not find the stars until he found the telescope; and he did not understand the, composition of stars until he discovered the spectrum.

There is but one door open to knowledge, and that is the ABC; and not the ABC of one department, but the ABC's of all departments. 'The ABC of God-knowledge is the laws of life. Unfortunately the study of God was begun with God; and, from the very nature of the subject, had to start with a hypothesis--a hypothetical God. As a consequence, no two people have the same God. A hypothesis must always be in keeping with the mental development of the individual.

Starting with a hypothetical Deity, it is not strange that many attributes, and even essential principles, have been left out. Those that concern us more than any other are natural laws--laws that minister to man's physical well-being. That these are left out of all theologies goes without saying, when we see theologians everywhere breaking the laws of health and life as ruthlessly

as though they belonged to the devil. Ministers--moral teachers--know no more of nature than their parishioners; and they are not ashamed of their ignorance. Yet nature is God's expression; and if we know nothing of God's expression, how can we say that we love something we know nothing about?

All this infidelity and atheism of our deistical students would not be, if the study of God would begin at the ABC of the subject, instead of starting with the graduation exercises.

In regard to diseases, modem medical science, often starts at the finish--to diagnose them. In order to find out all about the disease that killed the patient, a post-mortem is held, and the morbid findings are given out as diagnosis. A cancer is found; a fibroid tumor is found; an abscess is found; but the causes that produced these diseases have passed. The laws which were broken still exist, however; and, when broken again in the same way, like diseases will result, no matter whether or not the interpretation of the stars or the deities agrees.

It is of far greater importance to know the chemical needs of the brain than to know the ethical laws of society.

It is more needful to know the mechanical and chemical laws governing the growth of a fibroid tumor than to know the most scientific surgical technique necessary for their successful removal; because removing the tumor is nothing more than removing a symptom, which is very often quite remote from the cause.

Fibroid Tumor-Cause of

The erstwhile opinion of medical men was that back of the exciting cause of a tumor was that of inclusion during embryonic life: non-employed cells are enveloped in active cell-development; then in after-life they take on activity. That this was professional guesswork is evident, now that the latest guess is that tumors are caused by germs.

There are authors of standing who do not agree with the germ theory of tumor-development.

Every little while a laboratory scientist jumps into print with the announcement that the cancer germ has been developed in fish or mice by inoculation; and he enjoys an hour's fame, after which his little bubble of discovery reverts to oblivion.

No tumor can develop without obstruction to the circulation--without a local influence that disturbs nutrition and elimination.

It is safe to start with the hypothesis that, if full health is enjoyed, there can be no tumor-development.

The first thing necessary for the development of any form of disease is enervation, which always inhibits elimination; following which autotoxemia develops.

Fibroid Tumors of the Womb are developed about as follows: A young woman develops intestinal indigestion from imprudent eating. The catching-cold habit, with catarrh of the mucous membranes, follows. Soon there is developed intestinal putrefaction, which, being absorbed, causes infection. The pelvic lymphatics become involved. As there is more or less congestion of the mucous membrane lining the uterus and its neck, this condition is made more pronounced each month because of menstruation and the toxins being absorbed in the bowels, The uterine engorgement causes, longer and more profuse menstruation; painful menstruation begins, growing more pronounced month by month. Pain forces the calling of a physician, who on examination finds a flexed womb. The flexion is caused by a thickening of one side of the womb, which forces a flexion to the opposite side. The more thickening, the more obstruction to the circulation and the more bent is the neck of the womb; and the more bent is the neck, the more the canal is obstructed to the menstrual flow.

As the womb is flexed more and more, the circulation is more and more interfered with. The flexed side fails to receive the proper amount of nourishment, and the thickened side receives all that the uterine artery and other vessels can bring; but the return vessels fail to carry back the full amount, and, as a result, hypertrophy takes place--the parts are overnourished. Nature undertakes to organize the surplus; and she does--and we call it fibroid tumor. These growths grow rapidly or slowly, according to the amount of obstruction.

A growth may fill the pelvis and abdomen in five years; and again in some other women it may require twenty years to develop a tumor the size of an orange.

Injuries at childbirth often become the first cause of tumor, next to putrefactive infection from intestinal indigestion.

Another cause: A catarrhal inflammation locates at an old placental site, as a result of toxemia. Thickening and induration follow, impeding the efferent circulation. The more growth, the more pressure and obstruction, until the new-growth--fibroid tumor--is large enough to become a cause of its own growth, by impeding the circulation through its weight and pressure.

This work of overgrowth is pushed along rapidly by overeating, which means overnourishing; the surplus being organized into tumor.

Overeating and improper eating often cause gas distention of the bowels. The pressure from gas crowds and misplaces the womb. From such misplacements enough obstruction to uterine circulation may take place to cause hypertrophic enlargement, which is fibroid enlargement.

Constipation may cause enough pressure on the womb to start imperfect circulation, and later fibroid growth.

Wherever there is impeded circulation, new-growth must take place; and that means tumor. The kind of tumor will depend on the character of the tissues involved.

Add to these causes sclerosis, and malignant diseases may follow. That is, the benign tumors may become malignant.

Can they be cured?

Treatment.--Remove the cause, which can be done when understood. The circulation must be restored by removing the cause of the obstruction. Very few tumors require removal by the knife; for, if the cause is removed, the tumor will gradually disappear.

13. Synergies

Synergy means the unity of the organism under favorable or unfavorable influences.

In social life, an injury to one man is an injury to all; and so it is with the organs of the body--if one is injured, all are injured. Any influence that modifies function or structure of one part of the body influences the entire structure.

Family habits may be of such a character as to throw More stress on one organ than on another. The sequel is the development of an organic diathesis. (See subject of "Diatheses.") When this is true, the hundred-per-cent organs in the organism lend their influence in various ways to do vicarious work for the weak organ.

When the organism is enervated from the thousand-and-one influences incident to life, and intoxication has brought on such a state of the metabolism that the organism is overwhelmed by waste--excretory--products, it is then that inherited diathesis takes on activity. If the diathesis is tubercular, gouty, neurotic, or of any of the special organs of the body, it is in keeping with the laws of health and life for the affection peculiar to the diathesis to spring up. If the causes are not

removed, the affection will remain functional for a time; then organic change will take place. It is then that affections become diseases; it is then that an irritation and an inflammation from indigestion become ulceration of the bowels or stomach, and the ulcer perforates, and death ensues from peritonitis caused by the perforation. The peritonitis was caused by perforation; perforation was caused by ulceration; ulceration was caused by inflammation; inflammation (catarrh) was caused by irritation; irritation was caused by indigestion; indigestion was caused by fermentation; fermentation was caused by enervation; and enervation was caused by the thousand-and-one influences which build or destroy the body and mind of men, depending upon whether they are wisely or unwisely applied.

When one organ gives down--when the blood is deprived of the proper amount of building salts--the whole organism is deprived of the necessary building salts. When imprudent eating--sugar-eating, cake-eating, rich-meat and gravy-eating--has been practiced so long that enzymic fermentation is not equal to the task of physiologically digesting the intake, then it is that organic ferments--bacteria, microbes--set up pathologic fermentation, which is slightly toxic when developed in the carbohydrates and fats, but putrefactive and decidely toxic in the animal products. The organized ferments cause a souring of fruits, vegetables, and starches; the acid builds irritations and catarrhal inflammations of mucous membranes; and in this way the stomach may become the exciting cause of organic depression and catarrhal affections of all the organs of the body.

It is very hard for average physicians to get away from the idea that each organ acts in an isonomic manner--that organs break away from the union of organs and develop a disease without the consent of the general government. This is not only false, but it is absurd. When from inherited weakness, or from injury, a part--an organ or a tissue--is below the general standard, it becomes the seat or center of affection when the general standard of health is lowered. When enervation is brought about, and, because of the enervation, metabolism is impaired, elimination becomes imperfect, and, to autotoxemia, toxins from imperfect digestion are added. The system, under these circumstances, becomes so toxemic that the inherited weaknesses, either organic or systemic, take on disease. The disease, however, is an affection; for the cause lies back in bloodmaking and nutrition.

In the tuberculous diathesis the lungs or other vulnerable organs of the body give down with tuberculosis when the general health is impaired and resistance broken. The gouty diathesis favors the development of any type of gouty disease that is in keeping with the vulnerability of organs and tissue of the body. The disease may be articular. If so, joint rheumatism will be the type of the disease. It may be the arteries, in which case arteritis with hardening will occur. The kidneys or liver may be the weakest points; then urinary calculus or gallstones will form.

There is a unity of sympathies and a unity of action. The nerves, the muscles, the motor cells, the blood vessels, and the organs generally are in reality a unit. The muscles and the cells cannot function without the nerves, and if the nerves be enervated from overwork or poison, they fail to function properly. Then the muscles become weak, waste is retained, the cells fail to renew, and degeneration takes place.

To overcome any disease, restoration of nerve energy is of first consideration.

A giving-down of some of the bony structure from injury or from disease, may cause more or less distortion of the entire anatomy. The distortion requires an anatomical readjustment-an endeavor to change the mechanism to meet the new requirements. In the changes that take place, important organs--such as the heart, lungs, etc.--may be forced to take on disease because of the interference with their normal functioning.

The body is at work readjusting every minute. The forces of health and life are at work in the line of readjusting and idealizing all the time. Nature--physiological energies--is all expended in healing--repairing and building. Man needs no doctor, so far as healing is concerned; he needs instruction in knowing how to avoid abusing his body, and how to live to conserve his energies.

If a bone is misplaced, it must be righted. If an artery is cut, it must be tied. Nature heals the bone when broken, if it is kept quiet long enough. If a large artery is tied, nature dilates and enlarges collateral arteries, so that the parts temporarily ill nourished will soon receive a full supply of nourishment.

All malformations are met with readjustments to give collateral aid.

Extirpation of the ovaries produces atrophy of the uterus and often of the mammae.

When the eating habits are such as to crowd and disturb the liver function--impair its function of preparing urea and sugar for further use in the economy--we see kidney affections springing up as a consequence. The cure must get back to the cause--namely, remove nerve leaks and correct imprudent eating. If the remedy is neglected until the liver, kidneys, or pancreas take on organic change, then a cure is often impossible.

The muscular system and the liver are allies. Exercise uses up energy (sugar), which the liver furnishes. If the muscular system is not worked, the liver becomes engorged with glucose, or the glucose is sent to the circulation to be excreted by the kidneys.

Exercise is necessary where there is too great a supply of carbohydrate foods. Either the intake of starch and sugar must be limited, or work must equal the eating.

An organ, when enlarged, may, by pressure, affect other organs. An enlarged liver may impair the stomach and other organs. A dilated stomach, or gas-distended bowels, may create affections of the heart, lungs, or pelvic organs from pressure. Indeed, intra-abdominal pressure may be the cause of heart palpitation, asthma, hay fever, bladder and urethral irritation, falling of the womb, and displacements of other organs.

Because of compression from fat or gas distention, the excretory ducts, such as the bile-duct, are partially obstructed, In gouty subjects the formation of biliary calculi is liable to, follow; in tubercular subjects, tubercular inflammations, etc.

Where compression of a nerve is continuous, neuralgia, spasms, paralysis, and nutritive changes take place.

The part of the body most affected by nerve compression is the head and spine--the face rather than the head. The cerebro-spinal nerves pass out through various passages and foramina (small openings in bone). These openings are liable to have their caliber narrowed from a thickening of the walls from injury and consequent deposit of reparative material. So many are the ailments due to this cause that whole systems of healing have grown up, exploiting this etiological factor into a marvelous universal cause of all diseases.

The tendency for man to allow large sections of his body to lie fallow is the cause of much nerve compression, and consequent pain and sympathetic disturbances. When men stop their boyish exercises and settle into a routine business, only those parts of their bodies are exercised that are used in their business; the rest become fallow. A neglected part in time takes on deposits, and naturally grooves, foramina, and narrow openings between bones will become the repositories of deposits. This brings on compressions, with consequent impingement on the blood vessels and nerves. To secure relief, the patient must exercise the parts, or employ someone to massage; or, what is better, call a physician of one of the bone manipulating schools, who will relieve the nerve pressure. The members of these schools are wonderfully adept in bringing quick relief. But unless the patient--the one relieved--is taught the necessity of right living--taught the necessity of exercise, and how to eat to secure proper elimination--someone will have to be employed all the time to manipulate the unused parts of the body so as to keep down deposits and keep the body comfortable. It is not necessary for people to become athletes in order to avoid taking on these deposits. Athletes have their troubles-namely, over-development, which is not conducive to the best health and long life.

Compression of the pneurnogastric nerve may start up a pneumonia. Certainly there is much stomach derangement due to this cause. From such compression, stomach irritation, inflammation, ulceration, and cancer may follow. Cancer may result from compression on a small artery, causing the territory supplied by it to become ischemic (local anemia). From the same cause, neurosis or gangrene may result. It should not be lost sight of that wrong eating-haphazard eating-bringing on toxemia, has much to do with the manner of degeneration.

Compression on an excretory duct causes a backing-up of excretions; and, if it is of long duration, the blood win not be drained of that particular excretion. Other organs may do vicarious work. When compression is removed, the injured organ may have developed a sick habit and may never get back to the normal. This is daily observed by busy physicians in affections of the liver, kidneys, and pancreas.

When tissues such as the neck or body of the womb, or the pylorus of the stomach, etc., suffer from irritation and hyperplasia, cutting off a normal supply of blood, the effect is to cause an ischemia (anemia) of a small territory of tissues supplied by the arteries compressed. If the ischemia is pronounced, the result may be necrosis or gangrene. If the compression is of such a character as to affect only the venous circulation--the return blood to the lungs--the parts become hypertrophied, the tissues harden, the carbon and oxygen gases fail to exchange. Irritation, inflammation, ulceration, and cancer are different phases of the degeneration that will follow. The chronic state of the tissues from venous stasis is sclerosis. Fibroid tumor of the uterus is a type. It is obvious to the reflective mind that if this change of tissue can take place in the musculature of the womb, stomach, and other organs, when the circulation is interfered with, the same change can and does take place in the muscular tissue of other parts of the body, including the coats of the arteries. The change is brought about by cell compression caused by the irritation brought on from toxins generated in the intestine or f r o m chronic autotoxemia.

Compression of nerves causes neuralgia, spasms, paralysis, disturbances of nutrition, and at times fatal infections.

Compression or section of the pneumogastric nerve is followed by pneumonia.

Cancer of any part of the body in time infects the whole body through the autogenerated toxins--the toxins resulting from the degeneration of the neoplastic growth. The fact that neoplasms of all kinds owe their existence to local obstruction of nutrition should not be forgotten, nor the fact that perverted nutrition is characteristic of the life of these tumors, or growths. The chemistry of these growths is not in keeping with their environments, and it is liable to sudden and destructive changes. When the change of nutrition is great enough to cause a breaking-up or disorganization, the fluids pass into the environmental tissues; and, as the blood and lymphatics have power to oppose and neutralize the infectious infiltration, the spread of the toxin is held in check. But a time soon comes when the body's defenses are overcome; then cachexia rules and the body dies.

Malignant growths are built by obstructing the normal nutrition of otherwise healthy tissues of the body, but which, when abused, soon take on a chemistry in keeping with the sum of their elements plus fermentation. As these perverted tissues are on the descending plane--on the involuting route--it is only a question of time when degeneration will take place and such powerful toxins will be formed that the life of the body, which unfortunately becomes host for the erstwhile innocent neoplasm, will be destroyed.

Cancers are not malignant at their beginning. A fever is not septic at the start. Vaccination excites tuberculosis only in the tuberculous disthesis--it simply arouses the diathesis into activity. Perverted nutrition of the liver is not stone building at first. Hyperemia of the brain is not apoplectic at its beginning. Worry, over-worked emotions, and chronic toxemia ultimately become arteriosclerosis. Yeast and dough may become bread by baking. Organized germs and a beefsteak may end in putrescence, and the generation of toxins that may destroy life. Bacteria cannot poison without the meat, and the meat's toxic potentiality cannot evolve without the

germ. Two atoms of hydrogen are not water; one atom of oxygen is not water; but when the two are combined, water is made. Disease, health, life, and everything pertaining to animal existence, depend upon physiological chemistry for their existence. The immunization practiced on our hundreds of thousands of soldiers will prove to be the exciting cause for lighting up many latent pathologic diatheses; or planting purulent or septic foci which will develop into many unaccountable diseases by and by--diseases which the pension boards will not reckon as so many obligations of our government. Well may the helpless discerning say: "What will the harvest be?"

Neoplastic cells and pathogenic microbes, which are credited by the profession generally as being the cause of cancer, are not creative. All they can possibly do is to become elements in a chemical compound whose individuality is a so-called disease of some kind--cancer or syphilis, if you please.

Heart weakness may be brought on from many causes: fear, overworked emotions, anything that uses up nerve energy and produces its consequent autotoxemia; habitual overeating, and its consequent toxemia; intoxications from tobacco, coffee, tea, alcoholics; enervation from excessive venery. 'The result of heart weakness may be stasis in the brain, liver, kidneys, or pancreas.

Drugs or palliatives of any kind that stimulate the heart muscles relieve the headache, torpid liver, albumin or sugar in the urine; and the edemas (dropsical symptoms) disappear. The arterial tension is temporarily restored, and the patient is well, so far as his feelings are concerned. But the cure is palliative, and will soon prove but a short respite. There is but one cure, and that is to remove the cause. If this is done before organized changes have taken place, the cure will be permanent; if too late for a cure, then comfort and increased length of life may be expected. Those who have headaches often relieve themselves with coffee, or take a drug prescribed by a physician, and they call their reliefs cures; but, alas! the "cure" builds more heart disease, and hurries the end.

Embolism is a sudden occlusion of a blood vessel by a small body traveling in the circulatory system.

A strong organism is not given to gathering moss, so to speak, as we see in the case of the old oaken bucket. However, there is a very strong tendency for the development of emboli from deposits taking place in the heart, on the valves of the heart, and in the blood vessels, when there has been toxin infection running on for years. This occurs when the blood fails to carry a normal amount of enzymes.

A normal blood digests all clots which form from whatever cause. When foreign bodies succeed in gaining entrance into the circulation, they must be very resistant if they are not digested and made a part of the blood. The same is true of the lymphatic circulation. The lymphatic glands have the power of benevolently assimilating toxins that are absorbed.

Emboli are divided into exogenous and endogeenous--those entering the body and those developed in the body.

Endocarditis ends in atheromatous productions which open into the general circulation. The same occurs in arteritis. This accounts for many sudden and unexpected deaths.

Blood clots form on the interior of the blood vessels. They are caused by injury and various diseased conditions. Inflammation of the aorta may at almost any time furnish an embolus. that will swing into the circulation and cause a fatal obstruction.

Inflammation of veins is very liable to cause emboli. Phlebitis is caused by infection, This disease is very prone to cause embolism. It should never be forgotten that, if it were not for man's great immunizing power, he would be unable to protect himself against the many

invasions of his organism.

Course of Emboli: Emboli follow a regular route. Those of the arteries start from a lesion of the pulmonary veins, of the left heart, or of the aorta. They pass into the left carotid. They stop at the sylvian, and produce hemiplegia with aphasia. The embolus may follow the aorta, and may stop in the splenic, the renal, or the iliac arteries.

Effects of Embolism: Arrest may be in the heart. In this case sudden death may occur. A reflex syncope is produced, due to the excitation of the endocardium.

Pulmonary apoplexy may be caused by an embolus.

Softening is a common effect of embolism. Apoplexy is another effect.

When emboli are very small, only headache, dizziness, or some mental disturbance may result.

Partial or complete blindness may result from embolism of the central artery of the retina.

There are fatty and gaseous emboli.

Nerve Connections.--Compression of nerves may cause pain in distant parts.

Irritation of the biliary or urinary passages may cause nausea and vomiting.

Inflammation of the neck of the uterus or misplaced uterus may cause pain in the back of the head.

Excitement may produce paralysis, fainting, and other nervous derangements.

Red cheeks and lung irritation go together. Red cheeks may accompany congestion of lungs and hepatic colic.

Salivation goes with irritation of the stomach. Excessive flow of urine accompanies sciatic neuralgia. Stricture of the urethra, cystic irritation, and prostatic irritation may cause pain in the sciatic nerve.

Hepatic colic causes change in the circulation of the blood in lungs. The heart is also influenced. It may become insufficient, systole occurs, and edema may follow.

The kidneys affect the heart; the heart affects the lungs; the liver and the kidneys affect themselves.

The physician should trace the successive changes that take place. It is necessary to know the morbid sympathies. It should not, however, be understood that organs take on disease per se.

The cause of an organ becoming diseased is usually abuse of some kind. The stress of life rests more heavily on one organ than on another. Whenever an organ goes wrong, others are affected through sympathy. Then, after functional derangement has gone on for a certain length of time, organic changes take place; after which organic disease becomes a cause of other affections.

Inflammation.--Diphtheroid gangrene is declared by bacteriology to depend upon microbic infection; yet at the same time it is declared that a specific diphtherogenetic microbe does not exist. This certainly is true of every so-called specific disease.

Gangrene is the resultant of a morbid process of sufficient virulence to cause the death of the tissues involved in the inflammation. Necessary to this process must be lowered vitality, lost immunization, and a chemical change on the order of disintegration.

"Pseudomembranous sore throat may be produced by numerous microbes." Just the reverse is

true. The chemical changes taking place in the throat, from the initial inflammation to ulceration, on to gangrene and sloughing, due to the influence of the fermentation initiated by organized ferments in the nitrogenous tissues involved. Then these organized ferments take on an individuality and personality in keeping with the chemical medium resulting from the diseased process. In a breaking-down process there are all stages represented. Then why should not these organized ferments--microbes of fermentation--be found in all stages of transformation, from the simple germs of fermentation on to the virulent types found in putrefaction and gangrene?

It is well to keep in mind that putrescence, or the toxin resulting, is not potential in the microbe, but is potential in the protein, requiring the fermenting influence of the organized ferment to evolve the toxin. On the other hand, protein food has peptone as a potentiality; but without the fermenting influence of the unorganized ferment (enzyme), peptone would not evolve.

The material out of which pseudomembranes, are formed is a fibrogenic exudate--the very same material that is thrown out on abraded surfaces, or into solutions of continuity in any and all wounds. The quantity thrown out is always abundant, but the amounts are greater where the local irritation is great.

In pseudomembranous inflammation of the throat everything should be done to avoid breaking or loosening the membrane; for the more it is interrupted, the greater the local poisoning, and the more toxins there will be swallowed to be neutralized by the stomachic secretions.

Positively nothing is to be put into the child's mouth; not a drop of water, for swallowing must be avoided. The act of swallowing breaks the membranous protection. The old treatment of gargling and swabbing was barbarous and, for intelligent people, criminal.

Thirst must be controlled by frequent small enemas of water. Nourishment is not life-saving, as many think, but positively disease- and death-provoking.

Every patient, when prostrated with a disease, has locally or generally passed from enzymic control to bacterial control. All efforts of cure must be in the line of crossing back to enzymic control. This may be done if the intoxication from bacterial fermentation can be controlled before enervation is so profound that the nerve centers are paralyzed.

If the patient is plethoric, and the gastro-intestinal canal is full, and kept full, of food, the bacterial fermentation must thrive so long as such a state is continued. The enzymic production is at a halt, and every particle of food taken into the body becomes an ally to organized fermentation.

Stop food, and wash out the bowels daily; otherwise let the patient alone, except for gentle rubbing and bathing for comfort. High fever means much bacterial fermentation, and should be controlled by baths and the withholding of food.

The fact that the temperature declines with the consumption, or rather with the exhaustion, of the food supply should be proof sufficient to convince the skeptical that feeding the sick is encouraging disease.

A membrane is a protectorate--not simply a protector. For under this membrane is the process of repair, which requires rest, and the control of bacterial fermentation, and an enzymic influence sufficient to encourage all development. There must be enough retrograde fermentation to destroy obstructive accumulation, and enough constructive fermentation to fit the necessary amount of exudate for reparative work. This process requires a covering--a membrane-to protect from traumatic injury and an oversupply of bacteria or organized ferment.

From the foregoing explanation it is obvious how dangerous is the old-time practice of swabbing and gargling the throat. No wonder the mortality was great, and no wonder the

antitoxin treatment has proved such a success. Its success, however, has been of a negative character--on the order of the lesser evil. If the antitoxin has any influence--if it is not inert--it certainly must make a change in the nervous system; and this change must be reconciled, and an equilibrium or readjustment take place, before a normal healing process can be resumed.

The unreasoning cannot see that food is disease-producing from every point of view--from every conceivable influence which it may have on the subject. If this is true of food, why may it not be true of every influence, even though theoretically it is beneficial? It is the same rule that applies in all warfare; namely, the efforts put forth in times of peace for the upbuilding of the morale of a people become treason when attempted while the country is at war. Feeding in disease is treason to the body's government.

Suppuration.--Suppuration is of three kinds: phlegmonous, caseous, and thin pus.

Phlegmonous pus--or what is known as laudable pus--is a yellowish-wbite, creamy, thick, odorless liquid. It is met with in phlegmons and suppurating pleurisies.

Caseous pus resembles soft cheese.

Thin pus is a serous liquid which exhales a fetid odor.

The color of pus varies from a light yellow to an orange, brownish red, or greenish. The coloring may be from bile or blood.

Pus in sputum sinks in water, Pus in urine precipitates with the addition of ammonia. The microscope will reveal pus cells.

Bacteriology gives many pyrogenic agents, but there is much distinction without differences. A ferment and a protein end in fermentation, inflammation, and suppuration. The chemistry of the compound does the rest. Chemistry is the determining factor.

Purulent Foci.--Suppuration may exist in a tooth, in the antrum, in the ear, or elsewhere. When once formed, it may become incysted and take on a fatty degeneration. It may extend toward a hollow organ, as a suppurating appendix, if left alone, will surely insinuate an opening into the gut--a natural cure.

Pus has a tendency to follow tendons and aponeuroses. or muscular interstices, vascular or nerve sheaths. Nature controls pus by the action of enzymes, which keep it laudable. It is only when the organism becomes acid--when acidosis develops--that pus foci begin to break down, the pus becomes thin, and begins to poison the organism. it is then that organized ferments preponderate over the enzymes in the purulent foci. It is then that latent inflammations of a specific character take on activity and are said to be developing the various stages. Why this latent stage? Because the life of the patient is not sufficiently correct to allow a complete cure; hence in from ten to twenty or thirty years, when protection is prostrate, the focal points take on activity and the organism give down to an old enemy.

Chyliform collections are found principally in serous membranes. They occur from rupture of a vessel or even of the thoracic duct. In most cases, however, they are due to a primary purulent collection whose microbes have succumbed to the supply of unorganized ferments furnished by a healthy organism (enzymes) sufficiently to cause a granulo-fatty degeneration. The fat is freed and emulsified, giving the liquid a milky appearance.

If the liquid is absorbed, a cheesy mass remains, which may take on calcareus transformation. Tubercles sometimes take on this change or cure.

Symptoms of a purulent focus are pain, heat, redness, swelling. Pain is the first symptom. It is caused by an increased flow of blood to the part, which causes swelling and heat, as well as the redness.

The pain is of a pulsating character. In time the pulsating pain gives way to a feeling of constriction, due to stretching of the nerves. After pus forms, the pain may subside, to appear only upon pressure. Cold abscesses are considered tubercular. They form without causing much reaction. I have seen reputable physicians confuse sarcoma and cold abscesses.

Gangrene.--Defined, gangrene is mortification or putrefaction of tissue. The process is named necrobiosis. It is declared to be of microbic origin. It is well, however, to be reminded that microbes are always secondary causes, and to declare that a given disease is of microbic origin is to leave the question of real cause in the air, from which it will never come down for a thinking mind until it is furnished an adequate cause. The fact that there is no specific gangrenous microbe is proof that, following the cause of the devitalizing of a given tissue, any organized ferment is sufficient to cause putrefaction of the dead tissue. The colon bacillus is sufficient to set up putrefaction or gangrene of the undigested food in the intestine.

When a part is dead, it must either desiccate or putrefy. Where there is heat and moisture it rots; and that is what gangrene is. The causes leading to death of tissue may be mechanical, physical, chemical, or animate: mechanical when a part is killed by machinery; physical when a part is killed by strong acid, excessive cold, or excessive heat; and animate when a part is killed by bacteria. It should not be forgotten, however, that germs must be aided by a forerunner which first devitalizes. The animate agents follow all agents that devitalize.

Anything that cuts off blood or nerve supply may devitalize to such an extent that germs may finish the destruction.

Fermentation of food may cause sufficient intoxication to destroy tissue. Then gangrene follows.

If it is understood that any putrefactive process, it matters not what the cause, is gangrenous, it will not be necessary to go into detail and name all the diseases which end in the death, or gangrene, of isolated spots of tissue or integument. Suffice it to say that the infections from typhoid fever, syphilitic chancre, gonorrheal bubo, septicemic fever, etc., are all putrefactive--gangrenous--infections.

Every diathesis takes advantage of systemic enervation to use these foci as centers from which to spread its peculiar type of disease.

If those who have suffered infection--an invasion--from a septic disease of any type (so-called contagious or infectious) will live in such a manner as to encourage elimination and an increase of nerve energy, these internal foci will be destroyed--will be used as fuel; and then it may be said that a blood poisoning--a specific disease--is cured.

A cure cannot be made by drugs, because a drug adds nothing to nutrition. A drug may irritate an organ and force artificial functioning, as in purging the bowels. But what does really take place? The bowels are forced to empty, but their functioning is inhibited, and, if the abuse is continued, they will cease functioning entirely. This is true of all medication and all organs affected by drugs. The so-called eliminating drugs irritate, but do not eliminate. They depress, enervate, and join with the enemies of the body in breaking down resistance and establishing infection rule over the entire body, or what "Damaged Goods" so graphically describes as the inevitable taint.

I here and now call upon all truth that is potential in medical science to bear witness to the statement I am about to make; namely: The human body is fully able to eliminate all infections, if it is given reasonable care in the lines of feeding, bathing, clothing, and mental poise. If, from an inherited diathesis, the constitution cannot resist the breaking-down influence of an infection, even when aided by the best of dietetic and hygienic care, the only possible results from medication and baths must be further enervation and less resistance to septic (specific) infection. Nature can eliminate and readjust, if permitted to rest physically and physiologically.

If proper care--a care that favors a better elimination and tissue renewal--fails to rid the body of septic foci, it is a beggarly reasoning power that ran believe that a medication which impairs nutrition and hardens tissue--causes a gingivitis (shedding of teeth) and ulceration of glands and bones, and even blindness--can act favorably and persuade or force a health standard that does not exist and is not potential in an organism.

The consensus of medical opinion holds to the superstition that by some magical power the drugs mercury, arsenic, iodin, potash, or a mysterious compounding--a synthetical blend--of drugs, can be made to go on a still hunt through the organism and drag out of their hidings all septic foci and expel them from the body, "Some dream," I admit; but no unprejudiced mind can find any proof for it in any of the fundamentals of medical science yet recorded.

Tubercles.--Those desiring an extensive bacteriological history of tubercles should procure a monograph on the subject.

All germs of a bacterial or microbic character are capable of generating fermentation in an environment favorable to their functioning; namely, a crowded nutrition, or overworked enzymic fermentation; threatening fatal obstruction to physiologic processes or devitalized tissue from injury.

When enervation is great, those who have purulent foci deposited from septic fevers, syphilitic ulcer or chancre, gonorrheal bubo or stricture, or chronic colitis with putrefactive fermentation, will develop affections in keeping with their diatheses. If they have the tuberculous diathesis, or if they are predisposed to take on glandular inflammation of a scrofulous nature, the type of their disease will be tubercular, which may be developed in any tissue of the body. If the diathesis should be of a nature to develop sclerosis, heart and arterial diseases will develop.

So long as any and all affections (so-called diseases) are permitted to develop only after the body's natural immunization is exhausted, it is very far-fetched to declare that a process which is wholly house-cleaning--wholly an emergency auxiliary to a physiological process--is disease-producing, or the cause of disease. Indeed, disease is a state, and those influences that increase or decrease the comfort of that state are causes of health and disease. Organized ferments are a part of a necessary and a properly organized environment for man. This is equally true of enzymes, food, sunshine, and other elements. Indeed, like every entity in the environment, each can be made man's friend or enemy, food or bane. Food is necessary to health and life, yet it is made man's greatest enemy.

For those with a diathesis there is but one immunization--namely, good health. Instead of seeking cures, prevention is the rational work--not extermination of germs, which is obviously impracticable, even if it were possible. And prevention is encompassed in one word-namely, moderation.

The control of tuberculosis must begin in childhood, if not before. Proper feeding, bathing, and clothing, along with enough intelligence to put such knowledge into practice, will stamp out the disease.

Localization and Evolution of Tuberculosis.--Theories of localized tuberculosis other than of the lungs are quite plausibly worked out. Of course, the pulmonary variety of tuberculosis is pretty generally conceded to come from inspiring infected air, or from taking the germ into the stomach with food. The bacilli introduced by the inspired air ingraft themselves in the apices of the lungs. The reason for this particular localization is attributed to the limited expansion of this part of the chest, and especially the weakness of the expirating movement. The natural sciences--especially mechanics--are frequently used by medical science in reinforcing a theory; but the student should not allow plausible argument to paralyze his real effort at getting at the truth.

If the theories of scientific medicine regarding tuberculosis were true, there could be no plausible reason given why tuberculosis, syphilis, or a fatal contagion had not depopulated the

earth; and certainly, if the theories of bacteriology were true, there could be no good reason given why germs had not prevented the populating of the earth.

The fatal weakness about all the germ science is that it cannot give a good reason why man is not extinct, if its theories of causation are true; and, on the other hand, if all it boasts of its great art and science be true, why disease is not stamped out.

Why do not all people who inhale bacilli develop the corresponding disease? Why are there people who cannot be made to take tuberculosis, and why are there a small percentage: who cannot be prevented from taking the disease? The answer to these questions will give a good working hypothesis on which to base a rational theory of causation.

The theories advanced in the various chapters in this book certainly are plausible, and the fact that, when applied, they work is all the proof that rationality needs. Bigotry and prejudice have never been, nor ever will be, convinced that the other fellow is not an ignoramus.

The theories of diathesis, enervation, and autotoxemia, when applied to tuberculosis, work out and rationally explain the cause, and certainly give the only depend prevention or immunization.

The various types of tubercular diseases--the classified tubercular diseases--are easily explained when it is known that this infection cannot be made to infect a gouty diathesis, but that it is easy to cultivate all types of tubercular affections--graft them, so to speak--on the tubercular diathesis.

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9. Pathology of the Fetus

As stated before, nature has put her eternal ban on the hereditary transmission of degeneracy.

Let us reiterate that there is no disease per se. What we call disease is an unideal state of health. What we recognize as health is a greater or less degree of approximation to an ideal state of comfort of mind and body. Few have perfect health; few realize their ideal standard; many are disappointed, and go through life singing, "Beyond this vale of tears." Those who think that man can escape all discomfort fail to understand the necessary educational influences of pain and discomfort.

Of course, the state known as health is a slight deviation from perfect health, functionally. But when functioning has been diverted from approximate health long enough to cause organized change of the character we call disease, this is degeneration, and is not transmissible.

Children are born with organs approximately perfect; or, as a result of accidents or injuries, they are monstrosities--deviations from normal physical development--and are frequently disposed of at the instant of birth because of their unfitness for independent existence; for example, headless children, or children born minus other vital organs.

The state of health which we call disease is not transmissible. Sterility stands between the unfit and propagation, No doubt children are born into environments unfit for proper development, but the vileness is all on this side of conception.

Diseases and deformities, up to monstrosities, are the results of traumatic influences. Disease-producing influences, such as toxin poisoning, may destroy life after it is started; but, at the time of conception, nature's health standard must have been satisfied, or it could never get by the censors who pass on proper conceptions. All sorts of detrimental influences may reach and influence fetal development; but life is started right--for certainly no organic disease in parents can be transmitted.

Drug-prescribing physicians have harmed unborn infants by medicating their mothers. Any influence that harms the mother must harm the fetus more or less. An overfed and incumbered mother will have an incumbered child.

It is said that mercury accumulates in the placenta. Why should it not find the fetus through the blood? The placenta is a filler which stands between the child and the ordinary blood derangements of the mother; but drugs, and especially mercury, arsenic, and iodid of potash, have a way of insinuating their toxic presence beyond the placental guard, there to deface the holiest of holies, and send it into the world a blot upon creation--a false witness against the purity of conception.

That the fetus and mother are united in bonds which allow a reciprocal exchange of physical and chemical influences, there is no question. For illustration: If a mother's uterus be opened, exposing a fetus, and a fatal dose of strychnin be injected into the fetus, fatal convulsions will be produced in the mother, while the child escapes; and, if sufficiently developed, the child may be extracted from the mother and saved--showing that it can stand a larger dose than the mother.

This statement is quoted from Sabory. It is not reasonable to suppose that a fetus can stand a larger dose of drugs than the mother; but the fact that the mother may be killed through the child, while the child is saved, is proof that every protection possible is thrown about the fetus. In this case the drug is taken up and sent to the placenta, and from the placenta to the mother's lungs and heart, before it can be returned through the general circulation to be distributed throughout the fetal body. The heart, and the circulation of blood through it, are far different in fetal life from what they are after the child takes an independent life. The blood, with its toxins,

is slow to reach the vital organs of the fetus. Indeed, the unborn child is safeguarded on every hand.

For the privilege of taking oxygen directly into our lungs we pay with a greater susceptibility to the poison influences of toxins.

When a fetus dies from poisoning through the mother by strychnine, it may be killed by the severe muscular contractions peculiar to convulsions caused by the drug; yet this is not very probable, so long as it is protected from contractions by a fluid cushion--the aniniotic fluid.

It is said that numerous observations establish that the bacillus of Eberth may pass through the placenta, but does not produce any lesion in the fetus, any alteration of Peyer's patches, nor any splenic hypertrophy, but causes a true septicemia. This is splendid proof of my contention that typhoid fever is the product of malpractice, and that all specific poisons--diseases with a specific poisoning--rest on one and the same basis--namely, septicemia--the septic base being chemically changed to suit the environment. A puerperal, typhoid, or traumatic septicemia, as well as a luetic infection, are all forms of sepsis, but featured by the environments under which they develop. Chaos reigns when specific individuality is given to all the different manifestations of putrefaction--septic poisoning. Our present system of treatment is made inefficient by a fallacious conception of causation.

Infection and contagion received a hard blow when it was discovered that, in the case of twins, one may be born with smallpox and the other not; and that the child is often behind the mother in point of time in the development of diseases.

Vaccinated mothers, living in an epidemic, may fail to develop the disease smallpox, and yet will give birth to children covered with pustules. This indicates that the mother's body is contaminated with the epidemic influence, or the infection could not be transmitted to the child. This also goes to show that, in all epidemic influences, those who do, not develop the tangible symptoms may be affected subjectively, having the disease in a subjective form, and how childish are all efforts at quarantine and immunization other than increasing resistance by raising the health standard.

So-called hereditary syphilis and tuberculosis are large subjects, the literature of which runs into tomes; but until the writers on these diseases shall know as much as high school boys, will know in a few years from now of the evils of bad habits in eating, clothing, and care of the mind and body generally, I shall not apologize to them for denouncing as rubbish their whole compilation on disease in general ,and syphilis in particular.

So long as wrong eating, wrong thinking, wrong care of the body--the use of tea, coffee, tobacco, and alcoholics-so long as the mind and body of our patients can be steeped in lasciviousness and sensuality, and all these disease-producing habits count for nothing with expert clinicians when they are weighing cause and effect to determine a correct diagnosis, why should I, or any other rational-minded physician, give any serious consideration to their conclusions as set forth in textbooks? Why are not their conclusions based on premises which have been robbed of their vital potency?

I charge the leading teachers of the profession of today with gross carelessness in making a diagnosis. They all know and acknowledge the evils of bad habits; but, in making a diagnosis, the effects of a vicious life are ignored entirely, and blood secretions, excretions, and pathological specimens are sent to bacteriologists, on whose findings a diagnosis is made and a cut-and-dried--specific--treatment is prescribed. The X-ray is used, and on its shadows is based a diagnosis, without a thought, or any consideration whatever, being given to the influence of the daily habits of the patient on causing the effects which the X-ray traces.

I have said that the pursuit of present-day diagnoses and treatment is a "fool's paradise." If it is not, why isn't it?

A life of lasciviousness and sensuality leads directly to degenerating diseases, such as tabes dorsalis; yet the leaders of the profession see nothing, think nothing, believe nothing, write nothing, and teach nothing, except that the disease is caused by syphilis and must be treated for syphilis, notwithstanding this treatment is a failure and they know it will fail. In the face of this, they *would* have laws passed to force their specific or anti-syphilitic treatment, and no other, at the pain of imprisonment for the culprit who would dare repudiate their dainnable pessimism.

The treatment standardized by the inhabitants of this fool's paradise (medical) will necessarily make their cures (?) correspond with their pessimistic prognosis. Perhaps it would be better to say that the treatment is logical--in keeping with the erroneous etiology,

From a modem medical view-point, there is but one toxin that counts in analyzing syphilis, and that is the toxin of syphilis. The modem medical gentleman may dive down into the worst human muck, but if he cannot find syphilitic infection, or the least excuse for suspecting it, he will issue a clean bill-of-health, to be put in escrow for ninety-nine years. If at the end of that time a Wassermann test, used every year, has shown negative, a certificate declaring the victim pure will be delivered to him "to have and to hold" for the remainder of his natural lifetime.

A syphilitic suspect is held under surveillance, and tested often enough and long enough to develop in him a syphilophobia, after which he will stand without being tied to any syphilomaniac.

To the uninitiated what I say may appear to be exaggeration, or perhaps entirely false; but the truth is that I cannot exaggerate on the fallacious teachings of modern medical science on syphilis--they are so false that they are beyond belief. The reason why medical fallacy has evolved to such dimensions on the subject of syphilis is because it is backed by law and the small voice of truth is frowned down.

'The majority of doctors who subscribe to the fallacy have no opinions, but they stand up and are counted for any ridiculous theories advanced by the "scientific" heads. In this way the stupid, unthinking majority governs; and when ignorance rules, insane delusion often sets the pace. 'The most dangerous delusions are those that are accepted by the lay minds as scientific.

When parents live in such a manner as to keep themselves enervated to the point of having imperfect metabolism--the point of having secretions and excretions more or less inhibited; when their personal habits are sensual, and the state of the alimentary canal is that of acetous fermentation in the stomach, and putrefactive fermentation in the bowels, their physical state is that of chronic toxin poisoning.

Acetous fermentation in the stomach and upper part of the small intestine has an inhibiting effect on the dehydrating process that takes place in the walls of the stomach, duodenum or small intestine, and liver. In the lower small intestine and the large intestine putrefaction takes place, and the toxins absorbed from this depraved condition is a constant source of poisoning. The lymphatic system arrests the absorbed toxins, and neutralizes them to a certain extent; but the body's immunization eventually becomes so overworked that glandular inflammations become the rule rather than the exception. This is the state that in time evolves the tubercular diathesis, which is described elsewhere under the head of "Diatheses." And, in thinking of diathesis, it should not be forgotten that more is meant than an average susceptibility; indeed, it means a fated certainty that tuberculosis will develop if the same habits of body and mind are practiced by the offspring that were practiced by the parents in developing acid fermentation in the stomach and putrefactive fermentation in the bowels. Without this inherited tendency to develop tuberculosis, no amount of association with people sick of pulmonary tuberculosis will cause its development.

When a subject showing so much degeneration of the vital processes is unfortunate in becoming acutely infected by any type of septic poisoning, ranging from venereal infection, through the infectious fevers, to infected injuries and surgical operations, his system will prove a

favorable culture-medium for the spread of the poisoning. The infectious fevers will develop the worst types. Venereal infections will act very severely, glandular inflammations will spread rapidly, and the system will show little resistance. Treatment will be slow in bringing about a change for the better. Anti-syphilitic medication, without correcting errors in eating, must fail.

Infectious fevers show a great mortality among such subjects. These are the subjects with whom modern syphilitic treatment plays such havoc. The most degenerated of this type are sterile; those who can pass nature's censorship and propagate are curable, and there is no transmission except an acute susceptibility to take on tuberculosis or syphilis, when the habits which lead to degeneracy are formed. A proper environment would lead away from such tendencies; but this influence seldom exists so long as children remain with parents, and parents remain ignorant of the health laws, and continue to practice vitiating habits. Children born. of such parents not only have a tendency to take on parental habits, but they are educated into them.

Postnatal influences cause degeneracies that are often ascribed to prenatal influences and inheritance.

The degenerating habits of the average parents during the gestation period, or during that period when a family is being raised, are quite enough to build a tuberculous or syphilitic diathesis. Excess in eating and excess in venery develop such a state of toxin poisoning that children are born more or less incumbered with flesh, and with such a sensitive state that they have little resistance. They soon develop toxemia; their lymphatic system takes on adenitis and lymphatic inflammations very easily. These are the children who develop borderland symptoms of scrofula, tuberculosis, and syphilis--they can satisfy the physician who is a syphilomaniac with all the thrills of a great discoverer.

Toxin poisoning from excessive eating, enervation from excessive venery and a lascivious mind, and poisoning from stimulants and improper clothing, housing, etc., build a state of body where no, symptoms are lacking for those who are ready to suspect tuberculosis, syphilis, or any degenerate state.

Errors in locating cause are the most tragic features of modern diagnosis. One of the most stupendous blunders of the day in medical science is in giving specificity to disease and ignoring the basic causes which make specific causes operative.

It is easy to graft specificity on a constitutional derangement, such as described above; but without some such cause the body proves a withering desert to the seeds of disease that fall upon it. To be specific and explicit: A child may be born with the tuberculous diathesis, yet it need not, because of that diathesis, develop and die of tuberculosis. Diathesis means susceptibility and inclination to take a given disease. Sterility prevents disease per se from being born.

Parents with vicious habits may deliver an incumbered child across the quarantine line drawn by nature, but nature's health officers are too loyal to evolution to allow the smuggling of infections into life. Degenerative processes must be manufactured on this side of conception.

Children born of parents who are too young are often degenerates. The cause, however, is psychological rather than physical. The first child is often a degenerate, as are only boys in large families of girls, and only girls in large families of boys. But the degeneracy is postnatal and psychical.

Physical degeneracy starts oftener from a psychological influence than from physical influences. However, both often start together, and walk hand in hand to the destruction of health and even life.

A babe is born. It is fed every two or three hours, night and day. It is disturbed in its sleep--in

its brainand body-building--by being put on exhibition to every friend who knows so little as to call in person on the puerperal mother, instead of sending a small note of one line conveying good wishes, and one flower (not a bouquet). Good wishes by telephone, or a personal card or note, with one flower, is all the personal attention any mother should receive from a friend, except her own family, for three months after the birth of the child.

Disturbing babies to look at them, kiss them, and shake them up to see how lovely their eyes are, and what exquisite little feet and hands they have, is nothing more than a delicious bit of hysteria and humbuggery practiced much too often for the good of the puerperal mothers and the babies; for right here is where the building of pathology of infants and heredity is begun.

The foundation of nervous irritability and indigestion starts at once, marked by constipation, white curds in stools, colic, and night and day crying.

Benevolent Assimilation--a Conservative Force

There is a tendency for pronounced types of any diathesis to grow weaker and weaker until unfit to reproduce; then they die out.

As stated often before, disease is not transmissible, but enervation is, Enervation means lost power of resistance, and when resistance is low, the influences which lower it find the high-bred diathetic easy prey, so to speak.

In breeding lap-dogs, the lower their nerve energy and the less, their resistance, the more popular they are among dog fanciers. The nearer death from fatty degeneration the stock at the stock shows is, the more it is admired and the greater is the premium.

One day years ago I was crossing Boston Commons. Moving along in front of me, at a snail's pace, was a woman far gone with fatty degeneration. When I was within ten steps of heir, she turned and said in a lackadaisical voice: "Darling, do you want mamma to wait for you?" I looked in the direction of her eyes, and saw an exophthalmic dog, whose weight certainly contrasted with that of its "mother," for she probably weighed two hundred, and her offspring could not have exceeded six to nine ounces.

The dog's breeding had left it with scarcely enough nerve energy to stand on its legs. It had eyes, but it saw not, and it had life, but it lived not. It was a case of nervous diathesis. It was bred almost out of existence.

Children may be born of parents who come from parents with strong, well-marked diatheses--with low resistance to influences which pervert nutrition--and if the diathesis favors tuberculosis, that disease will develop; if the diathesis is that of gout, the children will develop rheumatism and other gouty affections.

Children of tubercular diathesis, when bred down until they are very enervated, have but little resistance, and when they are abused in a way to pervert nutrition, they develop some form of tuberculosis. All they need to start the morbid process is to be vaccinated with cowpox, which is a bovine type of syphilis. Just what the difference is, the highest medical authorities do not know; the only apparent difference being that one develops in the human being and the other develops in the cow.

In a pronounced type of scrofulous diathesis, vaccination is all that is needed to set up a tuberculous or syphilitic morbid process that will be pushed on by wrong life to destruction of health and life while the victim is quite young.

Vaccination may start a morbid glandular derangement that will favor the development of all the catarrhal diseases peculiar to child-life.

Of course, infections from toxin absorption in the intestine are common to children of diathetic

type.

Children from a long line of ancestry favoring the development of the scrofulous, tuberculous, or syphilitic diathesis are weaklings, with flabby muscles, who develop adenoids and enlarged tonsils early. They develop skin diseases of an impetigo variety, and their lymphatic glands are very prone to take on inflammatory enlargements.

There are many fatal diseases developing in these children before and at puberty because their resistance is low and they are subjected to the same disease-producing habits as those from whom they inherit their type of health.

According to Darwin, this is the way the unfit are made to disappear.

A dyscrasia or diathesis is the sum of erroneous living practiced through generations. Diseases peculiar to a diathesis are not long in developing when the strain is pure and inbred; but where a beautiful tuberculous girl, with long, silky eyelashes and well-rounded body and limbs, compels an Apollo of the sanguine, vital temperament to fall in love with her, the tuberculous strain is diluted and the half-tuberculous children are given power to live; whereas, if the girl had attracted a young man, like herself, of tuberculous diathesis, the children of such a union would be born to die early.

Influence of Chronic Intoxications

Chronic food poisoning from the habit of overeating causes enervation. This state favors the development of any disease to which the one suffering from enervation is prenatally inclined. Anything that enervates those with a diathetic inclination will drive them into developing whatever disease their diathesis inclines them to develop.

Children born of parents enervated from chronic intoxications often start life with a great show of brilliancy; they are bright--indeed, precocious. But they soon come to an end, settling into disease or intellectual mediocrity. The cause for this may be one of many influences. The children are born and start life under domestic influences--a style of living--that have ended in alimentary, alcoholic, or other forms of inebriety in their parents; and the most natural thing for the children to do is to follow the parents in dietetic errors, and then, as they grow older, they adopt the coffee and tea habits, and perhaps later the tobacco and alcohol habits.

Excess in any one line paves the way for excess in other lines. Intoxication-be it from the absorption of toxins in the bowels from overeating, nicotine in the mouth, or alcohol in the stomach--develops enervation; and the more enervated a subject becomes, the more craving he has for more and greater varieties of stimulants, until the nervous system and nutrition are impotent. During the early stages, when the nervous system has strong reactive power, the mind is unusually bright--children show precocity; but the evil day of enervation, followed with prostration, must and does come. Then dullness follows brightness; will is lost; eccentricities come to the surface. The real artist may continue to produce in a way to please those who are not critical, but certainly not to please the artist himself, if he were normal.

Debauchery is not confined to physical stimulants. Ecstasy is mental debauchery. All cases of extraordinary precocity are types of mental diathesis brought on from idea--drunkenness. The emotions are fed with a consuming eagerness to drink at the fountain of all knowledge; the idea and desire become consuming; an ecstatic state is developed; and as a result we see the boy Christ "sitting in the midst of the doctors, both hearing them and asking them questions." On being asked by his simple-minded parents to explain why he was away from home, his answer was:

"Why look ye for me? Wist ye not that I must be about my father's business?" He was not understood, because the moral mind cannot look through the veil of ecstasy.

Only a short time ago the world of education was astonished by a boy of eleven years of age

lecturing to the Harvard professors on the fourth dimension. This is a type of ecstasy--mental inebriety. The enervation that must follow may show the will and all the positive elements of his character impotent; or the reaction may be so great as to sweep this precocious youth out of life.

These cases of premature--or, rather, extraordinary--mental developments were prepared for precociousness before birth. The parents developed a mental diathesis, and as soon as these youths were subjected to mental stimulation they developed mental inebriety.

Children, when once launched on the road of intoxication traveled by parents, will speed up and go much more rapidly and come to an end much sooner.

All habits--mental or physical, moral, immoral, or unmoral--are just so many varieties of intoxications; and, when indulged in without restraint, enervation, and the consequent perverted nutrition, follow. The children resulting are stamped with a diathesis which makes it easy for them to develop in the habits of parents.

As disease has no individuality per se, but is, first, last, and all the time, simply a state of health, all efforts in the line of healing worth anything are those that remove habits which lower the standard of health.

Moderation in all things builds a self-controlling diathesis that enables children to control themselves. Poise is as transmissible as any other habit.

Convulsions follow in the wake of parental drunkenness. Infantile paralysis is the effect of wrong nursing, and endemic or epidemic influences, on a child that is stamped with neurosis as a diathesis.

Unless we can fully comprehend the truth that normal children cannot be made sick; that such diseases as infantile paralysis take hold only of children who have been prepared by parental excess--perhaps excessive venery before and during the pregnant period, plus table excesses, and maybe alcoholics--we need not hope to build an immunization that will do away with epidemics. The part played by vaccination in breaking down resistance should never be forgotten.

Epilepsy is a neurosis built by parents and transmitted to children. Alcoholism is supposed to be the chief among all intoxications that build the neurosis in children which leads to epilepsy. In all probability, excessive venery stands at the top of all causes.

Saturnism (Lead Poisoning).--When the mother is poisoned, she usually aborts. When the father is poisoned, C. Paul found that out of one hundred and forty pregnancies more than eighty were abortions. Among the children born alive, one-third died the first year and one-third more before the third year. Those children who live to maturity are liable to have all kinds of nervous diseases.

One thing is always observed, namely: when degeneration is established from the use of any stimulants, sterility prevents propagation.

Hereditary Syphilis.--That symptoms produced by toxic poisoning caused by ordinary sensuality in those of scrofulous diathesis are often ascribed to hereditary syphilis cannot be successfully disputed. This I have demonstrated so often in my practice that the truth is common-place. For example: The abortion habit is curable by correcting vicious dietetic habits and venereal excesses. Pemphigus, when located on the soles of the feet, is declared to be absolutely characteristic; but the truth is that such skin diseases are developed prenatally and after conception, and are due to perverted nutrition brought on the mother from the sensual indulgences too common in, if not characteristic of, pregnant women.

The average woman's nutrition is perverted before conception, because of the universal habit of overeating and overindulgence in licensed sensuality. Add to this state the sensual

indulgences above referred to, and countenanced by good society and everybody's religion, and we have the ground-work for all the diseases to which the human offspring is heir. Modify this picture of perverted nutrition by poverty, squalor, and the corresponding psychology; then add the complicating influences exercised on these types by fear, hopelessness, dispair, and a disorganizing medication, as practiced by the representatives of modem medical science, and no imagination, it matters not how vivid, can picture a pathological inferno with more types of loathsomeness than evolves from the states here described--all, too, without anything more "specific" being added.

Where the above pathology is pushed to organic degeneration, sterility prevents its propagation; but there are enough functional diseases manifesting in the fetus, built by licentiousness in parents since conception, to satisfy the imaginings and perverted reasoning of our most pronounced types of syphilomaniacs.

Perhaps those who read my argument will say: "Why shall we accept one man's opinion against the opinion of the whole profession?" What can the whole profession know about a subject that it has not investigated? If the whole profession has, refused to watch the progress of perverted nutrition, as it develops under the sway of sensuality, and has not refrained from the use of medication, how is it to know what uncomplicated pathology is?

If the profession has refused to watch the progress of disease under fasting, or light dieting, and no medication, how is it to know what I know after years of such "watchful waiting?"

No man's opinion is worth anything on a subject about which he knows nothing, and to multiply such an opinion by a hundred, a thousand, or a million like opinions does not change the worthlessness of the first opinion. A fallacy multiplied by a hundred million minds does not make a truth. To force Galileo to abjure the Copernican theory ninety years after it had been published by Copernicus did not make the world flat.

Hereditary syphilis is a bugbear, the offspring of original sin, the fall of man, and like relics of the child-mind.

Hereditary syphilis is a disease made this side of conception, and is not transmissible. The child that is born with symptoms of disease is infected after conception.

It is a fact that we have the scrofulous diathesis, which means that the people coming under this head are more inclined to develop tubercular diseases, syphilis, and the thousand-and-one small diseases and symptoms that come under the head of scrofula, tuberculosis, and syphilis, than they are to develop symptoms of gouty diathesis.

It is worth while to try to comprehend that evolution had the preponderance of power, that the cosmic urge is on the side of development, and that there is a point beyond which degeneracy cannot go-and that point is conception. This is so true that no analytical mind can be in doubt when the great and profound truths of history are known and well digested.

Syphilis is a filth disease--a disease of clothes and sensuality. Man is slow in learning how to wear clothes--his morality transcends his estheticism. From a health point of view, a filthy man is much safer nude than clothed.

Syphilis is a disease reaching back far beyond the birth of the idea of specific treatment. Long before modem medical science, with its dogmatic, fatalistic teachings regarding "universal taint" and hereditary syphilis, King David confessed to his God: "There is no soundness in my flesh . . . no rest in my bones, because of my sin ... My wounds stink and are corrupt because of my foolishness . . . My loins are filled with a loathsome disease, and there is no soundness in my flesh . . . the light of mine eyes . . . is gone from me. My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off."

This confession was by David for his people. The symptoms were those of syphilis. If the

Jewish people were so diseased as to be shunned in that early day, before mercury, potash, "606," Wassermann tests, plays on the order of "Damaged Goods," and all the other insanities and inanities were discovered, what prevented the race from being wiped out? If circumcision was all the treatment, except fasting, it would be well for the wiseacres of the medical profession of today to tell us why the disease needs more attention today. Every other disease known to antiquity has grown lighter, if it has not become extinct, in the march of civilization.

The literature that has grown up on the subject of syphilis and its mystical habits is weird, and so eminently scientific that nothing can possibly evolve out of science to equal it, unless it would be a cure for the dreadful disease. But this is obviously impossible; hence the glorious achievement of the scientifico-syphilo-maniacs is likely to stand unparalleled in all medical history.

If I should undertake to refute all the freakish pathological phenomena attributed to syphilis, I should be occupied for the remainder of my days, and then leave the subject unfinished.

The following I give as a sample of myriads of analogies: "The microbe may remain inactive in some corner of the organism, and become active several years later, on the occasion of a traumatism or any other cause." This can be duplicated in those who are autotoxemic, and who are jotted out of "status quo" by an unusual shock.

We might tolerate the profession's syphilomania if it were not so pessimistic and fatalistic. But from years of experience we know that nature can throw off every disease that has not become organic; all that is necessary in the line of treatment is to remove every influence that is obstructive to the body's functioning. We know that the body is busy throwing out toxins, and if there is an accumulation--if elimination is not equal to accumulation--all that is necessary is rest (physiological rest), and nature quickly returns to the normal. There is no stimulation to elimination that equals physiological, physical, and mental rest.

That drugs will bring about elimination is true; but they bring a disappointing relief, for they excite to action and leave the organs more enervated. As a consequence, a relapse follows--or an apparent relapse; for, as a matter of fact, such relief is disease-building.

Hereditary tuberculosis and hereditary syphilis are analogous when found in a syphilitic or scrofulous diathesis--in a scrofulous subject coming from a father and mother of tubercular diathesis; but when one parent is scrofulous and the other gouty, the heredity is a modified scrofula or syphilis.

There is no hereditary tuberculosis. As stated before, diathesis means a tendency to develop given symptoms of diseases. Disease per se cannot cross the line drawn by sterility. To make an exact statement, diathesis means that health will deviate in a definite manner.

A child with the tuberculous diathesis well established may develop utero-tuberculous derangements.

Pronounced unmixed types of diathesis are hard to find. The tuberculous and gouty stand out more plainly and are recognized by the unskilled. A pronounced diathesis predetermines the type of diseases to which the subject is heir. The advantage of knowing to what class a child belongs, is that mistakes in climate, food, clothing, and occupation may not be made.

The tubercular diathesis should live out-of-doors, and be fed fruits and vegetables--very little animal food. The gouty diathesis develops gout, eczema, neuralgias, neurasthenia, etc. Animal food, with fruit and raw vegetables, should be the diet.

Both diatheses need grain during the developing period.

Arthritism, or gouty diathesis, presents the following characteristics: gout, eczema, nervous derangements, such as neuralgia, hemicrania, hypochondria, neurasthenia, gas, diabetes, gravel,

stone in the liver, kidneys, and bladder. When the father has gout, the son has asthma, and the daughter develops arthritis deformans. A child of this diathesis has headache at puberty, and may develop asthma or rheumatism; at about middle life, gout develops, and he dies of apoplexy.

It is said that gifted people--geniuses--are of a gouty diathesis, and are very inclined to develop single faculties to their own destruction.

The scrofulous diathesis starts with catarrh; nose, throat, and ear diseases; tubercular joint and bone diseases; catarrhal inflammations of all mucous membranes; glandular diseases.

Congenital malformations are said to start from infections. No doubt the nervous systems of the mothers have much to do with fetal development.

Fetal development is a large and interesting subject, but not necessary to this book. The readers who are interested should go to their public libraries, where they will find textbooks on the subject.

Physiological heredity is the innate power of the cell to reproduce a successor.

Ribot declares it to be a biological law that enables living beings to repeat themselves in their offspring.

There are two laws, however: first, the law of conservation--retaining ancestral type; and, second, that of evolution.

Conservation is the greater. Indeed, when we see with what tenacity humanity clings to all beliefs and customs, we sometimes wish that nature would relax her vigilance. But when we see how necessary it is for great resistance to be present all the time to prevent disease--degeneration--from crossing the lines drawn by heredity or transmission, we are made to rejoice that degeneration cannot be transmitted.

There is a temptation to write on the subject of reproduction and other features of heredity, but space will not permit. Darwin, Ribot, Haeckel, Weissmann, and many others will furnish the reader material out of which he may formulate his own belief.

10. Inflammation

Definition.--A burning. Any local influence that disturbs cell nutrition may be said to lower its standard of life or health, and this state we call disease. The phenomena are hyperemia, pain, heat, swelling, redness, and disordered function--impaired nutrition.

When the influence is traumatic (a wound or injury), there are two reactions which follow--namely, local and general. The local reaction causes a change in the nutrition of the cells injured and in their neighbor-cells. The general or systemic reaction causes a general nutritive change in keeping with the severity of the local injury. An injury may be so small that the general reaction is nil; yet, if the reparative process is interfered with because of inhibition of elimination and drainage, the systemic reaction may be so great as to cause death.

The simplest wound is a cut. When left to nature, the wound gapes. The wise mind will interpret nature's speechless signs about as follows: Nature is always conservative, and if there were danger in a wound standing open, it would be natural for the mechanism to close it, the same as the blood vessels close to stop bleeding. The blood vessels contract and retract, causing the flow of blood to be very light; then, on account of the slight flow of blood, a clot forms in the mouth of the cut vessel, which seals it most effectually. Where the blood vessels are torn or twisted apart they do not bleed. In certain diseased states the blood will not clot, and bleeding continues. It may be objected that wounds to blood vessels do sometimes bleed the injured to death. Yes, that is true. Every conservative provision of nature can be, and sometimes is,

overcome, but that does not alter the fact that nature places a special guard over each one of the body's vital functions, the normal action of each and every one being necessary to total full health of the body, and that each guard must be vanquished before the function over which it presides can be deranged or checked.

If microbes were dangerous to open wounds, they would not be in the atmosphere, in us and about us. If it were not for the reciprocal relationship existing between the microbes (organized ferment) and the enzymes (unorganized ferment), cell development could not take place, and tissue growth and reparation of injuries could not be brought about.

If the microbes could not get into a wound, either at the front or at the rear--either from the outside of the body through the medium of the atmosphere into the wound, or through the lungs into the blood, and, by virtue of the circulation of the blood, into the wound--healing could not take place. Organized ferments are as necessary to life as unorganized ferments. We know that cooked food, boiled water, and canned fruits are not so wholesome as foods not cooked. The false notion is sometimes advanced that uncooked vegetables are disease-producing. This is true only when the uncooked vegetables are diseased.

To kill the vitamin or enzymes in fruit, vegetables, or meat, by cooking, destroys the reciprocal balance between enzymes and microbes, resulting in decomposition. If, however, the cooked products are placed in vacuum, they will remain without change.

The Lister dressing places wounds in a state free from the access of germs; hence there is no danger from interfering with nature's plan of open drainage. But if the dressing is imperfect, allowing the germs to enter, and does not allow free drainage, the balance between germs and enzymes--between organized ferments and unorganized ferments--is lost, and the result is decomposition with infection, which ends repair, and sloughing of the parts takes place. If the sloughing establishes drainage, a reciprocity--a balancing of activities--between microbes and enzymes is once more established, and healing proceeds; but if sloughing does not take place and drainage fails to be established, organized ferments (microbes) gain the mastery over the unorganized ferments (enzymes), decomposition and disorganization of the blood take place, with the generation of sepsis which paralyzes the nerve centers, causing death in a very short time. If feeding is pushed "to keep up the strength and supply waste," the enzymes are used up, reparation of the wound--healing--does not take place, and the reparative material breaks down into pus.

The activity of the circulation in and about an injury takes place as one of the reactive phenomena following the shock of an injury, and causes swelling, pain, redness, and heat. This is a normal inflammation, necessary to reparation. To secure healing material, a surplus of blood must be taken to an injured part; and so much is taken that the environment of an injury is filled to overflowing-for nature is prodigal. This is the cause of the swelling, pain, redness, and heat; and the pressure on the nerves causes pain--the pain of inflammation. A surplus of blood means a surplus of heat; but so long as the chemistry of the elements is physiologically maintained, the temperature--inflammation--will not be above the normal visceral temperature, and the healing will then proceed normally. On the other hand, if the nutrition of the wound is perverted by having the waste retained, microbic fermentation takes place, which changes the chemistry, and decomposition supplants composition or healing. Normal inflammation, due to the fermentation caused by enzymes, is supplanted by abnormal inflammation, due to the fermentation caused by microbes. The first phenomenon is health as it appears when the reparative processes are working without a handicap; while the second is health as it appears when the reparative processes are working under a handicap.

Physiology and pathology are not opposing forces. They are two phases of life, and health is the thermometer. Health may register high, and it may register low; but the degrees between the extremes of full physiological health and full pathological death mark the standard of health.

Instead of the microbe per se being pathologic, it is physiologic and necessary to the life and

health of the cell, or the great aggregation of cells known as man.

The great importance of drainage is obvious when the above facts are considered, and such facts should enable the analytical mind to know that organized ferments (microbes) have no more to do with inflammation than unorganized ferments (enzymes). The real cause is obstruction to the normal operations of repair. If microbes must be pent up in a wound before they can set up their peculiar fermentation, then the cause of the pent-up condition is the cause of the morbid process.

Irritation and overfeeding cause too much secretion, and too much secretion is disease-producing.

Enzymes are secreted by all the organs and tissues of the body. When they are secreted in less quantities than normal, disease results. It would not be the truth to say that enzymes are disease-producing; yet too little or too much will result in imperfect metabolism.

Food is stimulating and body-building, but when eaten in too great quantities it is disease-building. It would not be the truth, however, to declare that food is disease-producing. Unless microbes can produce a specific disease without unnatural environments to aid, it cannot be truthfully said that they are disease-producing; if they are, then every benign influence may be said to be disease-provoking, because disease follows its perversion. The air is irritating to a fresh wound, but the irritation must be for a good purpose. It is; it checks the discharge of serum, and dries the surface of the wound so that reparation can take place behind the protection. The dry covering acts as a stay or fixation expediency, to secure the quiet necessary for healing. If the sealing-in of the wound is too close, and danger of infection threatens, an itching takes place, which forces rubbing or scratching, and this breaks enough of the covering to allow the escape of pent-up pus and waste matter.

Thus we see that nature is not afraid of air, nor of the dust and microbes which it carries. We see that nature does a splendid job, and her theory and practice are sound as science. The only objection is that her work in healing wounds is severely crude at times, and that it may be improved upon--only, however, in manual dexterity. The surgeon may lend nature his hands, but nature certainly does not need his brains. A good combination is for nature to lend the doctor the wisdom to carry out what she would do if she had hands.

Not long ago I read the extraordinary advice of stitching a wound together without the preliminary of cleansing, and without any attention to drainage except massaging the edges of the wound. All I have to say about such a procedure is that the Lord is on the side of that surgeon, and permits him to exploit the laws of nature in a most grotesque fashion.

A safe plan for surgeons who are not "anointed of the Lord" is carefully to drain all wounds that are sewed up, and, if quick healing is desired, to keep the parts as quiet as possible; indeed, keep fingers away from the wound, and especially those of the patient. If these precautions are not observed, the surgeon may find, after it is too late, that he may say with Pope:

> Pretty in amber to observe the forms
> Of hairs, or straws, or dirt, or grubs, or worms.
> The things, we know, are neither rich nor rare;
> But wonder how the devil they all got there!

It is just possible that the great physician who penned the surgical heresy referred to was posing and, for the sake of being thought original, suffered his logic to run counter to natural law and order. And again we are made to agree with David: "Verily, every man at his best state is altogether vanity." Selah!

Hands, with nature's wisdom, will clear the wound. Place a drain in the bottom of it, in such a manner as to secure perfect drainage; then bring the wound together, closing the gap and

coaptating the cut surfaces as nearly as possible; then apply a general dressing that will not interfere with drainage, but will lend support and steadiness, so that healing will not be interrupted by unnecessary motion. This is nature's wisdom turned to account.

Healing is interfered with by inflammation, or the causes that lead to inflammation.

We have seen that the first reactions stop bleeding, and cover the wound with serum and fibrin, which protect the surface by giving it rest from continuous irritation from air, dust, and insects.

If the cut surfaces are brought together, the healing must end much sooner than if a bridge of tissue must be built to span the gap.

The Wound and Natures Mechanism

Nutritive material is brought in abundance to a wound, caused by the irritation of the injury. Irritation, pain, redness, and swelling follow injury. At first, irritation causes contraction of blood vessels. This stops hemorrhage. As a result of the contraction--overstimulation--reaction sets in; the overstimulated blood vessels are enervated, and because of the enervation they relax and fill with blood; then exudation takes place. The cell-building elements cover the cut or mutilated surface, and crowd the border so much that there is a heavy discharge through the drain, if the wound has been properly dressed or has been left open. Where drainage is unobstructed, the healing behind the barrage of nutritive material thrown out moves along without a halt. The proportion of enzymes and nutritive material furnished by a healthy, not overfed, wounded individual insures rapid renewal of tissue. If obstruction takes place, microbic fermentation is set up in the pent-up surplus. This is a conservative process; for it thins the discharge, irritates the wound, and causes an extra amount of serum to be exuded. The purpose is to melt down any incrustations and new-made tissue that is obstructing drainage. When this fails, and the microbic fermentation gains the mastery over the enzymic fermentation that is protecting the healing surface, then the enemy--toxin or septic poison--pushes its way into the circulation, and septicemic fever and death follow very quickly.

Inflammation is almost nil when a wound is in a state of health; for it must not be forgotten that wounds, as well as all the phenomena we call disease, are different states of health. The strategic move for preserving the health of the wound, when it becomes obstructed, is little short of a miracle in appearance; yet it is the most natural workingout of cause and effect. We have seen that, unless the obstruction is overcome, the state of health will be lowered until it ends in death. In obstruction to wounds, nature destroys to make alive.

All nutritive changes which we call disease are due to influences which increase, decrease, or pervert cell-life; every symptom called disease is a conservative move; and, when not understood, or suppressed as doctors (not physicians) do, harm follows.

Inflammation is due to the local speeding-up of the nutritive processes caused by injury. The injury may be physical or chemical--a cut, tear, bruise, bum, blister, or a local irritant of any kind. When a wound is healing normally, the heat is about that of the normal viscera--namely, 99° to 100' F. When the temperature exceeds 100°, there is something going wrong--either the drainage is not perfect or the patient is eating too much.

The phenomena of inflammation are pain, heat, redness, and swelling.

Where the increase of heat is not more than one or two degrees above normal--above the temperature under the tongue--all is well with the wound.

The whole question of wound infection hinges on drainage. Any wound that drains well may be smeared with the most virulent septic poison without infection. The infecting agent must be rubbed into the wound so that it will be pushed into, or below, the granular surface. The infecting material must find a lodgment so secure that the flushing--enzymic--serums cannot

dissolve and wash it away.

Injuries in canals, tubes, ducts, and air passages will heal normally if drainage is not obstructed; but, when obstructed, the usual conservative methods of nature may further obstruct, and death may result from a rational therapeutic measure mechanically obstructed in its execution.

It is painful to watch members of the medical profession floundering about in a vain endeavor to save a patient from death from septicemia by injecting into the veins or subcutaneously a solution of salt, or a hastily prepared serum, regardless of the fact that the source of the infection has not been discovered; or, if it has, no adequate effort is being put forth to overcome it. What must be the conclusion when such floundering is observed? Obviously, that either the medical gentlemen are acting, or they have not a very accurate knowledge of the principles involved.

If the case is one of septicemia, following abortion, an intra-uterine douche of an hour's duration (hot salt water) is the first thing to do; and it should be repeated every three hours, if the patient continues to live. The douche removes the infecting material, establishes drainage, relieves the nervous system, brings on relaxation, lowers the tension that is interfering with all the life-processes, and, neither last nor least, places the organism in the most favorable state for resumption of secretion and excretion. A hot bath of from thirty to forty minutes' duration will prove a great auxiliary to the douches. Certainly no food should be given; for the work of elimination and neutralizing the poison--antidoting the organized ferments by the unorganized ferments, the germs by the enzymes--must not be hindered by interrupting the enzymic activities of repair with an intake of food, which, under the circumstances, is wholly superfluous and disease-producing.

Why does an injury or a local irritant or irritation cause inflammation at one time and not at another?

It is all a question of natural immunization; and natural immunization has for its elements an alkaline state of the blood, a normal nerve energy, and an optimistic psychology.

The blood, if normal, is alkaline and well charged with enzymes.

When an injury is received, there is first a shock, which causes a constriction of blood vessels. In time there must come a reaction, and the reaction equals the shock--the dilation of the tissues (blood vessels) will be equal to the contraction from shock. This means congestion or crowding of the parts, and, as in the case of a congested thoroughfare, traffic or the function of trade is impaired--too much blood is in the parts, causing an exudation, There can be no rest or standing-still; the exudates must be excreted, thrown out, or reabsorbed. To fit these exudates for absorption, they must be treated with enzymes, in order to fit them to reenter the circulation. If there is enervation and a lack of enzymes, then it will be "up to" bacterial fermentation to prepare the exudate for expulsion from the body. If there is no break in continuity--if there is no open wound--then the bacterially treated exudate must be absorbed into the general circulation, causing infection; or the infection will be corralled by walling in the devitalized territory and lining the inclosure with an impervious pyrogenc membrane. The pus that forms is retained--not allowed to escape into the general circulation; for, if it should, it would cause pyemia. If the body's natural resistance is too low to fortify it in this way--if it cannot localize and immunize the infecting material--then general infection takes place and the victim dies of septicemia.

Anything-any influence that causes irritation--attracts an extra flow of blood to the point of irritation. The engorged blood vessels exude a fluid. This fluid must get out of the body. If it cannot, it must be digested and reenter the circulation; or it must be bacterially liquefied and carried out of the body through the open wound. If there is no point of escape, an abscess must form, as described above, or general systemic infection must take place.

If the point of irritation is the pleura, the exudate may accumulate, and, from lack of bacterial

influence, the fluid is neither digested and absorbed, nor decomposed and converted into an abscess of the pleura, nor absorbed, creating septic fever and death; but remains a bland, innoxious fluid in the pleura.

The life of man, from his entrance to his exit in this world, is a process of metabolism. If this process is done well, he has health and well-being; if the process is carried out badly, he has impaired health.

Metabolism is carried on well or badly. When well done, we say that the individual is well--healthy; when badly done, then man is sick. Health and disease are states, not entities.

Inflammations of Mucous Membranes.--The simple forms of inflammation are those caused by the toxins generated by the influence of organized ferments on carbohydrate foods. When no more food is taken than can be utilized by the body--than can be fitted for assimilation by the unorganized ferments (enzymes)--the body in all its parts remains in a state of health called normal. Secretions and excretions are nearly enough balanced to insure health.

If, by mental or physical habits, nerve energy is lowered--if enervation is pronounced--secretion and excretion sink below the normal; this lowers enzymic production and increases the amount of waste products circulating in the fluids of the body. If the usual amount of food is eaten. digestion will not be perfectly carried out. A certain amount will be left over and above this amount that can be digested. This left-over material must undergo microbic fermentation.

If the organism is abused by overeating, overclothing, or living in too hot houses, or when the body is especially enervated, and is then exposed to low temperatures, or passing from hot houses, hot beds, to cold air--winter --temperature--irritation of the mucous membranes of all exposed canals results, until catarrhal inflammations become a constant state of the most exposed of these membranes.

Catarrhal inflammation of mucous membranes may be considered an index of the state of digestion and assimilation. The catarrhal sign means an oversupply of food--in some cases an oversupply of food and improper food. as well as improper combinations.

This catarrhal state is general and is the culture-medium for the development of all sorts of affections which we call disease.

For children to develop the affection known as diphtheria, all they need, in addition to their general catarrhal state, is a sudden change in clothes, weather, environment, and other influences, which brings on enervation; then add to these influences an unusual meal, or an unusual amount of meat, sugar, and rich cooking, such as served on holidays.

A child may be very enervated from whatever the cause, but it will not develop diphtheria unless it is poisoned by an oversupply of animal proteid.

11. Septicemia and Pyemia

Septicemia is poisoning from putrefaction. The poisoning may be slight and local, or it may be general and so intense that it overwhelms the patient, causing death in a few hours, and certainly in a few days.

A type of local as well as general septicemia may be furnished by puerperal subjects.

An injury at childbirth--a simple tear in the neck of the womb--may be bathed in a putrefactive lochia. The puerperal woman may not be kept clean--douches are neglected until the discharge is allowed to become septic. The torn part is submerged in this putrefaction, and enough is absorbed to set up a local inflammation and derange the blood so as to ruin the mother's milk for the infant, perhaps causing convulsions; or, if not so bad, then the milk may cause such a derangement of the stomach and bowels as to force weaning. In the mother's case, she may get

off with a local ulceration, an endocervicitis, or an endometritis; or she may develop a phebitis (milk-leg), and systemic infection may follow, leaving the way clear for a general or organic diathesis to establish a predisposed disease--namely, tuberculosis in one or more of its many phases, kidney, heart, or nervous diseases, or gout in the various forms.

When the septic infection is great (as it is when the womb is misplaced and drainage imperfect), absorption to a fatal amount is no infrequent happening.

There is a cut-and-dried classification of toxernias which corresponds to a bacterial classification that is legionary. To minds which respond only to the mystical, intricate, complex, and infinitely imaginative, bacteriology, with its infinite variety of germs of diseases--its theory of bacteriemia and bacterio-toxemia--certainly must be satisfying to a superlative degree.

Bacteriemia.--Bacteriemia is where the bacteria invade the entire organism and develop septicemia, without causing the special lesions; or they locate in viscera or tissue, and cause purulent foci (pyemia).

Bacteriemia, then, is general infection. In bacterio-toxemia the bacteria remain localized and secrete toxins, causing intoxication. This is an ingenious explanation which, defined, is a distinction without a difference. Indeed, according to the same authorities, the blood will not tolerate bacteria; it kills them, or forces them to ensconce in the tissues of the body,

Pyemia is distinguished from septicemia by the germs locating in the tissues and becoming purulent foci. True pyemia is exclusively ensconced in the tissues, while in septicemia the microbe is present in all parts of the organism. 'These are bacteriological teachings.

The only theory that appears logical--consistent with the unity of scientific knowledge and philosophy--and works out satisfactorily in a clinical way, is that bacteria, or organized ferments, begin their work where enzymes, or unorganized ferments, leave off. When physiological fermentation leaves off, pathological fermentation begins. In nature's economy, one is as necessary as the other; for one process is organizing and the other is disorganizing: one is evolution, the other is dissolution.

The old demonistic idea of warring forces--of good and bad being locked in mortal combat--is worthy of the childmind, but certainly ill becomes enlightened interpretation.

Science is nature defined. It is possessed of rigid necessity and absolute universality. Philosophy is the unifying of all knowledge--all science--into a logical unit. Unless fragmentary knowledge can be unified into a consistent whole with all other knowledge, such knowledge is not truth. Philosophizing is trying out knowledge--it is testing and proving the truth of experience.

According to the logic of absolute science and philosophy, a unitary cause of disease must act under all circumstances, and it must continue to act so long as cause and the object on which it acts are occupying the same environment. If this cause acts only under special and favorable circumstances, then it is not a cause, but one of a series of causes, any one of which is as important as any other. To build a system of cause and cure on one causative factor, taken from a multiple of factors, is building a fool's paradise. And that is exactly what our so-called specific cause is in our bacteriological system.

Germs of fermentation take on specificity from the toxins--chemical medium--which they themselves cause to generate in a given compound of elements. Single elements are proof against fermentation; only compounds are susceptible to organized or unorganized ferments. Organized ferments dissolve organized compounds, and fit them for elimination; the toxin is a resultant of the action of the ferment on the compound. The toxin is potential in the compound, but not in the germ.

It is true that the withholding of food from a septic patient ends the septic fever. Fasting stops

disease, because fuel for fermentation is withheld. Bacteria appear to be unable to cause fermentation when the organization is normal in energy and possessed of sufficient unorganized ferments to digest all the food taken into it.

In the light of these facts, the proper treatment for toxin poisoning--septic or pyemic poisoning, syphilitic or gonorrheal poisoning (the toxins representing the decomposition of several tissues in the body)--is to withhold food until nature has eliminated all toxins. Then feeding for the first week should be fresh, uncooked fruits and vegetables.

Septicemia--Infection always means that there is retention of a superfluous amount of reparative material. and confinement of this material in the womb, or in wounds, or in excretory canals or ducts, until putrefaction takes place. If the amount of infection is not overwhelming, and fatal, it may end in suppurative inflammation and formation of septic abscesses.

Milk fever, traumatic fever, putrefactive fermentation, syphilitic and gonorrheal infections, are different forms of septicemic inflammations. The distinguishing characteristics are furnished by the tissue involved, To make my meaning clear, think of the action of organized ferments (bacteria) on carbohydrates and fats. The result is to develop an acid which is more or less an intoxicant, but very unimportant compared with the toxins generated by the ferment on protein--meat--substances containing sulphur and nitrogen. It is probable, however, that excessive fermentation in the digestive tract of carbohydrates does impart a putrefactive change in the proteid tissues of the body and is the cause of offensive odors, hardening of tissues, inducing sclerosis and cancer.

Sclerosis.--Sclerosis means hardened tissue. Tissue in that state is very feebly vascular. It is white, firm. and resistant, grating under the knife. Keloid, which is an exaggerated development of scar tissue, is a form of sclerosis. Cirrhosis of the liver is a type of sclerosis, and atrophy of the liver is another form.

Organs that have been hardened from inflammation sometimes take on compensatory hypertrophy (enlargements). Then is presented normal tissue endeavoring to replace hard tissue, and this modifies the form of the organ.

Fistulas are the result of a hardening of the walls of an opening through which pus has been discharging. Instead of the walls on an abscess closing and healing, a hardening of the walls takes place, and the result is fistula.

When urethritis has continued for months, the walls of the canal harden at those points where the inflammation has continued. The result is hardening or stricture. Stricture of the urethra may form with no more to irritate the mucous membrane than unusually strong urine from meat eating.

When an irritation has continued for months or years, as in continuous acidity of the stomach, a chronic inflammation is produced, enlarging, and then hardening. If the offense to the tissue is continued, the end of the degenerative process will be cancer. Cancer is a form of spontaneous gangrene. When tissues have hardened to such an extent as to cut off the oxygen supply, there is nothing left but dry atrophy. If, however, there are islands of tissue throughout the mass of **atrophying hypertrophy** which still receive nourishment, life will continue until the hardening encroaches on the inlets of food to such an extent that nourishment is shut off. Then decomposition takes place, with the development of toxins; following which comes, slowly but surely, systemic infection.

An acidosis of a subtle form may develop a general hardening of tissues. If the circulatory system is most involved, death will come from atheromatous diseases--arteritis, endocarditis, apoplexy, paralysis, or arteriosclerosis. If the glandular system is most involved, then tuberculosis may follow. If serous tissue is most involved, perhaps cancer will be the ending of life.

The probabilities are that when syphilis, tuberculosis, gangrene, sclerosis, hypertrophy, atrophy, and all the various forms of infections and so-called contagions, are understood, they will prove to be different forms of one and the same thing; namely, sclerosis--or infection, inflammation, gangrene, death; and the various causes are all different forms of one and the same thing. Multi-specific causations, followed by multi-specific effects, as a basis on which to build a rational theory and practice of healing, are so out of keeping with the teachings of science and philosophy that it is a continuous surprise that such a system can receive the endorsement and support of as large a body of intelligent professional men as are found banded together under the banner of modem medical science.

'The whole phenomenon or complex of life, health, and disease may be summed up in three words; namely; digestion, nutrition, infection.

Reparation of Lesions.--When an injury has broken down and destroyed cell-life--when inflammation from any cause has broken down and destroyed cell-life--reparation cannot be perfect. The destroyed cells will be supplanted by sclerose tissue. This scar, or cicatrix, is more or less of a menace to the health and life of the tissue in which it is located, depending, of course, on the vital importance of the organ or tissue. If of the valves of the heart, the ending will be fatal without a rational treatment begun in time; if of the neck of the womb, a cancer may be the ending, if proper treatment is not instituted in time; if a gland of the breast be the injured part, then, without proper treatment, cancer will end all; if a stricture of the urethra, and neglected, bladder, and possibly kidney, disease may be the consequence; if a catarrhal thickening of the mucous membrance of the bile duct, and its obstruction is not relieved, stone in the gall bladder will result; if the hardening is of the spinal cord, ataxia and other forms of paralysis may result. The affections that result from hardening can only end with those limitations of tissues and organs of the body; and offenses to the tissues and organs of the body which may cause cicatrical tissue end only with the sum of everything in the environment of man capable of injuring his body and mind.

The lower the order of tissue life, the more power it has for regenerating. In a few animals it is possible to remove a portion of the liver, spleen, or kidney, and it will be rebuilt. It is said that the mutilated organs are reproduced according to their normal type. In spite of this fact, their lives are short compared with that of man, who has a very limited power of reproduction.

Intoxications of All Kinds.--Psychological intoxications--drunk on ideas, emotionalisms--and physical intoxications, such as alcoholic, tobacco, coffee, tea, acidosis from fermentation of carbohydrates, sugar, and fats, and toxin infections from the putrefaction of nitrogenous compounds--proteins; auto- intoxications caused by checked elimination from enervation brought on from overwork and worry; perverted nutrition, causing activities to start up in diatheses--all have an aging effect on the tissues of the body. Alcohol, when used in small quantities, has the effect of hardening the arteries, and when used in large quantities it produces fatty degeneration. When used in small quantities continually, the effect is to produce cirrhosis. Tobacco, coffee, and tea harden tissue. These drugs also produce arterial pressure.

A regular diet of bread, meat, preserves, cake, pie, puddings, coffee, and tea will bring on sclerosis by first creating toxemia.

Where Sclerosis Gets Its Origin.--Primarily a cell is produced under almost ideal conditions. It has been seen that health is a state that only approximates the ideal. Under the most favorable circumstances, a cell is approximately ideally developed. The state of nutrition that favors cell development means the normal balancing of energy, unorganized (enzymes) and organized (germs) ferments, and food (building material). If nerve energy runs low, enzymic power is weakened, cell-building drags, building material accumulates, obstruction takes place, and it is necessary for organized ferments to start an abnormal elimination. This means fermentation, irritation, inflammation, ulceration, sclerosis, cancer, and death.

The microbe acts as traffic police in keeping the avenues of the body cleared. This clearing-out

process causes the death and disorganization of a few cells in the midst of the fray, This results in the formation of cicatrices; **and here is where sclerosis originates.**

This scarring process, this hardening of tissue, goes on rapidly in those who live in a way to keep cell development more or less retarded by overstimulation from toxins autogenerated or brought in from without. When a cell is destroyed, a cicatrix is formed. When cicatrices multiply because of a continuance of cause, the accumulation may be so great as to destroy the nutrition of important parts by cutting off the circulation.

Impaired nutrition of important organs is brought about in this way; nephritis, hepatitis, and inflammation of other organs is brought about in this way. It should be understood that an inflammatory process started in this way grinds out to its end very slowly. It may end in hypertrophy, atrophy, cancer. etc.

Arteriosclerosis.--This affection may be general, with special emphasis placed on one or more of the viscera.

Just which special organs will be most affected will depend upon which have borne the stress of wrong life. If the brain and spinal cord have been kept hyperemic from venereal excess, or overstimulation--overstimulated from toxins taken in or toxins autogenerated--then apoplexy or ataxia will follow.

The affection is the last state of the effects of morbid stimulation, either mental or physical, or both. This derangement of the arteries is quite natural, for toxins are circulated throughout the body. The walls, or coats, of the arteries are infected and forced into degeneration sooner than other parts of the body. The highly complex tissues of the body, such as the brain and spinal cord, take on sclerotic change sooner than others.

This affection may begin early in life, but it is seldom absent in the aged, and it is common in adults.

Arteriosclerosis is seldom equally distributed. The parts most affected are those most used. Those whose occupation requires head work will develop hard arteries of the brain. The degeneration in the brain will be that of softening; when of the extremities, it will be dry or senile gangrene.

Symptoms are first dizziness, dyspnea of an asthmatic order, somnolence after eating, and hemicrania. Asthma and headache are the first symptoms in many; and these symptoms point to kidney affection. In women there are sudden congestions and sensations of heat, which pass as symptoms of change of life.

On examination, the heart gives out a tympanic click along with the second sound, with intermittent systolic and diastolic murmur. (See Heart Symptoms.) The arteries are hard; the sphygmomanometer indicates an elevated pressure of about twenty centimeters.

In the second stage there are many local manifestations. Whichever viscus (organ) in any of the four great cavities of the body (for instance, the brain in the cranial; lungs or heart in the thoracic; liver, intestine, or kidneys in the abdominal; and uterus in the pelvic) is the victim of special stress, in arteriosclerosis it will appear to be the cause of discomfort and sickness. If the stomach is the most vulnerable organ, then the subject will be treated for indigestion, dyspepsia, ulceration, or possibly other so-called diseases; if the intestine or reproductive organs are the hyperemic centers, these will be vandalized surgically; if the lungs are the most vulnerable organ, that organ will be the cynosure of the professional eyes of those who are consulted; the same will be true of the breast and other organs.

These various diseases (?)--symptoms or affections, more correctly speaking--are transitory and intermittent, and are in evidence only when the sclerotic subject has been imprudent, and when, through overwork, worry, excessive eating, or sensual indulgence, excessive, functional activity

has been brought on. The correct prescription is simply abstinence, followed by greater moderation. Sclerosis means aging, and all nature cries out for rest or moderation. Indeed, rest is the price of continuing in life, and death is the penalty for not resting.

Arteriosclerosis is not a disease that can be cured, but it can be held in check, and the subject made comfortable and quite efficient. It should not be forgotten, however, that the leading prescriptions are proscriptions. The object in treating such subjects is to encourage "status quo".

The organs of the body are sufficiently nourished when not pushed beyond the daily habits; but when speeded up, they do not receive enough blood to be supplied with the oxygen immediately necessary for a quick extra demand or nourishment required for the increased demand. Exercise makes a demand for more nourishment, and hardened tissues work slowly at best; hence great care must be taken not to overwork a sclerosed subject with hardened arteries.

Sudden speeding-up of the digestive organs, and of the heart and arteries, causes spasmodic breathing, clouding of the brain, and inhibits the kidneys, causing transitory uremia, evidenced by heavy drowsiness at inopportune moments when it is embarrasing to appear sleepy. After dinner the sclerosed subject will get heavy and sleepy, in spite of his endeavors to stay awake.

Arteriosclerosis manifests itself early in those of gouty diathesis. It must be understood, however, that toxin poisoning is necessary. Children and young people, as well as adults, must have the overeating habit; they must be in the habit of eating beyond their enzymic capacity. This, of course, necessitates bacterial fermentation of all superfluous nutritive material, and the generation of toxins. When this becomes an established habit, the blood becomes charged with toxins, and necessarily the intima (the internal coat of the arteries) and the endocardium (lining membrane of the heart) must become diseased.

Arteriosclerosis in the first stage presents, as one of the first symptoms, dizziness; dyspnea of an asthmatic character, somnolence after meals, and hemicrania (migraine--pain in one side of the head) are others. The observing physician, in examining all asthmas and hemicranias, will be on the lookout with a view of ascertaining if there is arteriosclerosis as the probable cause. If of a sclerotic origin, there may be a kidney change. In women there may be hot flashes--sudden congestions and heat-flashes--attributed to change of life, when sclerosis is the real cause.

To prove that the above symptoms are due to sclerosis, the heart must give out a tympanitic click at its second sound, and not always murmurs both systolic and diastolic.

The second stage presents organic disturbances, which come and go in keeping with excessive functioning.

The limping and stiffness accompanying this stage of sclerosis are called rheumatism--rheumatic stiffness. Inactivity is followed by claudication, (limping), stiffness, and more or less tenderness, which pass off shortly. Asystole (feebleness of the heart with dilation) presents itself intermittently; so do cerebral clouding and uremia.

The third stage is characterized by the localizing or organizing change. The heart may be the vulnerable organ, and the diagnosis may be sclerotic myocarditis. The heart becomes weaker and weaker, marked by asystole (shortened and weaker systolic contractions), which means that there are dilation and feebleness.

The arterial type is characterized by vascular dilation, with formation of aneurisms, and embolism is imminent.

The cerebral type is marked by unilateral headache, dizziness, etc. This type is liable to terminate in softening, or hemorrhage in the cerebrum, or the meninges. This ending is called cerebral apoplexy.

The renal type of arteriosclerosis is marked by nephritis, with polyuria, slight albuminuria,

palpitation of the heart, tension of arteries, and galloping murmurs, Death occurs from uremia, uremic convulsions, gradual weakening of the heart, and sometimes from apoplexy of the lungs.

Treatment.--Why should drugs be given? Can drugs add to life, or stop a habit that lowers the health standard? The habits of life that are using up nerve energy must be reformed. Those who are predisposed by diathetic heredity to develop the disease early should get away from family habits, both mental and physical, as soon as possible. Why should not a son or daughter develop affections like those of father and mother, when living in the same environment and practicing the same daily habits?

12. Tumors--Definition of*

(*To my lay readers: Do not fail to read this subject, even if it contains a few technical terms.)

Tumors are divided into benign (innocent) and malignant (dangerous to life).

Benign tumors may be considered as hyperplasias of any of the organs of the body. Hyperplasia means the overmolding of organs--hypertrophy--overnourishment; or, to speak in every-day parlance, an enlarged organ. A type of benign tumor, or hyperplastic development, is seen in what is called a keloid tumor. This tumor develops in scar tissue.

Histology.--Tissue science--the study of the structure of tissue.

Tissue.--The elements of a part of organ; for example, skin tissue, muscle tissue, glandular tissue, etc.

The keloid is described as an exuberant fibrous production, caused by the hyperplasia brought about by inflammation. Such growths are more inclined to develop in those who eat heartily and of gross or greasy foods, and who do not exercise enough to stimulate the required elimination.

Histology tells us that simple or benign tumors are made up of tissues having normal arrangement as to structure, or which are sufficiently normal to resemble somewhat the tissues from which they are developed.

Adenoma (a tumor of a gland) is found to have glandular structure. The cells proliferate (bear offspring--generate) and fill the alveoli (the cells of a gland; these cells may be likened to a bunch of grapes). They remain inclosed by the limiting membrane of the gland in which they develop, and show no tendency to invade surrounding tissue. This means that, no matter how large the tumor gets, it is always encompassed within the gland-covering.

Malignant Tumors have a different arrangement of structure; indeed, they are chaos itself--King Disorder reigns supreme. The cells, which vary in form and size, are inclosed in membranes--alveoli (the skin of the grapes--the covering of each gland-cell) of independent growth. These growths break through the retaining membranes (skin of the grapes) and invade any and all environmental (surrounding) tissue. As "war is hell" turned loose in social fife, or in civilized life, so is the histological insanity known as cancer. Indeed, cancer has not even the order or system of so-called civilized warfare. It is more on the order of guerrilla warfare, or a war of extermination.

Embryological Tumors.--A class of tumors due to defective development. They may be divided into those that start before birth and those that develop after birth.

Teratology is a branch of biology that treats of malformations. In the study of embryological tumors there is described the phenomenon of two spermatozoa penetrating into one ovule, which gives birth to two beings when development is normal; but when, from some cause, one remains rudimentary (fails to develop), it may become inclosed in its well-developed fellow and in future evolve into a tumor. This anatomical and physiological perversion has been offered as an explanation of all neoplasms--new-growths or tumors.

Is it strange that, in an organism so infinitely complex, and subjected to such an infinite number of unfavorable influences, as the human body, there should be many blasted cells, or defects in glandular development, in the course of physical development? Certainly not. Then, when health is impaired-nutrition perverted-it is not !strange that these defects should take on independent growth and become tumors, or abnormal growths.

It is also reasonable to believe that, so long as the organism remains in a state approaching the normal, it can dominate any tendency which these blasted cells (be they congenital or caused by postnatal injury) have for taking on their pathological trend. But when enervation is lowered and elimination imperfect, causing chronic intoxication, these defective developments, or crippled tissues, find in this perversion the encouragement to grow--to take on pathological activity--for, being defective, if they develop at all, it must be in keeping with their histological bias.

This blasting of cell- or gland-life, when it occurs in the skin or ordinary tissues of the body, usually ends in the development of benign tumors; but when it takes place in the higher type of glandular structure, and then meets with the necessary pathological nourishment--namely, chronic autotoxemic poisoning--it may start a state of anarchy--malignant disease.

This is perhaps more true of the lymphatic system. The reason for this is that the best and worst nourishment is found in the lymphatic glands of the body.

The lymphatic glands may be likened to quarantine stations--places where all suspicious characters--infections--are held up until they can be dismissed with a clean bill-of-health. The lymphatic glands in the groin arrest the infection of venereal disease that threatens to invade the organism, and hold it long enough to immunize it. When the amount of infection is great, and the immunizing power of the glands is inadequate, suppuration takes place, the infection being thrown out of the body by way of a heavy pus discharge. In this phenomenon, life-preservation is a grand struggle against mortality. Years after glands have been altered in their structure from suppurative inflammation, degenerative activity may spring up, and malignant disease (cancer) may develop and run rapidly to a fatal termination.

The lymphatic glands in the lungs arrest toxin infection that has been absorbed in the bowels. When their power to antidote the infection is not equal to the task put upon them, inflammation and suppuration take place, with systemic poisoning. This disease is called tuberculosis. The bacillus tuberculosis is a scavenger germ, and not the infecting agent. The infecting agent is a toxin developed in the bowels.

If the bacilli tuberculosis are like all other scavenger germs, they depend upon toxins for their specificity, and the infecting agent comes in by way of bowel absorption.

When resistance is low--when enervation is pronounced--the resulting autotoxemia so weakens the immunizing power of the glandular system that blasted or defective cells, from any cause, may be encouraged to take on pathological development; which means benign tumor, or malignant tumor--cancer.

Where there are no blasted or defective anatomico-physiological structures, the organs with the most defective functioning will bear the brunt of the incoming infections, and the following diseases may develop; tuberculosis of any part of the body, glandars, syphilis, scrofula, scurvy, etc.

Cancer must jump the bounds of glandular limitation before life is overwhelmed by its cachexia (blood-poisoning).

Cancer.--So long as the cancerous process is going on within the limiting membrane of the gland, its growth is restricted; but after it breaks this membrane, its growth is unrestrained, and the pathological metabolism taking place in the growth quickly sets up the cancerous cachexia.

The reason why the removing of a cancerous growth or disease fails to cure, is because the cancer has potentized the surrounding tissue with its toxin.

The conservative power of the body limits the infection as long as possible to the lymphatic glands. Why? Because the glands have more immunizing power than ordinary tissue. The spread of all infecting diseases is along lymphatic chains; but after lymphatic restraint is lost--broken--all the fluids of the body become infected, and life is destroyed very quickly.

That is the manner of poisoning by cancer, which is a form of sepsis. The difference between traumatic septicemia, puerperal septicemia, and the septicemia of cancer, is the slowness of the infection from cancer. However, if the cancerous tissue is torn or cut, freeing its infection from the limiting membrane, cachexia, or septicemia, will develop rapidly. If the wound into the cancerous tissue is open and drains well, absorption will be very limited; but if located away from the eye, where drainage and cleanliness must be an unknown quantity and quality, cachexia (septic poisoning) will spread rapidly. Indeed, patients will die from septicemia as quickly when developed from cancerous tissue as when developed from injured normal tissue.

Cancerous tissue will not unite--once severed, always severed. Torn, bruised, or severed cancerous tissue does not drain well, but tends to break down very rapidly. Bruised and torn cancerous tissue differs from healthy tissue in that the malignant tissue does not contract and retract, forcing waste fluids out of the bruised and torn channels to drain, but the fluids remain, flooding the parts, forcing rapid decomposition and absorption, and causing acute cachexia (septicemia) and death.

The reason why cancer cannot be cured is obvious. If all infected glands could be extirpated before the limiting membrane of any of them has been broken, and the growth has passed out and become mingled with the surrounding tissue, largely devoid of immunizing power, the disease could be cured; but this possibility is almost nil, for large lymphatic glands are surrounded by many small ones, and, while removing the large ones is an easy matter, small ones are overlooked and left to continue the work of the larger ones that have been removed.

The worst feature of the operation is that some of the infected glands are injured. This allows the cancer to spread in non-glandular tissue without resistance, which quickly involves the fluids of the entire body.

This is why people often do not live so long when operated upon for cancer as when left without an operation.

Where do cancerous diseases get the infection that initiates their evolution? From putrefaction taking place in the large intestine. The infecting material is absorbed; and if the cause (decomposition in the bowels) is only temporary, and not of frequent occurrence, no permanent harm will result. But if imprudent eating is continued until the latency of a pathological process in gland structure is rendered dynamic, then a morbific process is set up that is called malignant or cancerous.

If the disease could be detected early enough, and removed, a cure would follow. But often the disease is not suspected until fatally developed.

Before malignancy can develop in any part of the body, it is necessary for it to be potentized by exogenous or autogenerated infection. And since infection must be septic in character, but absorbed so slowly as to bring on cachexia, the cancer must begin to break down before the fluids of the body become infected by the poison.

Before a morbid process can evolve, resistance must be broken down. What is the nature of the resistance that is lost before cachexia is developed? The immunizing power--the power on the part of the body to generate its own immunizing agents.

Immunizing power has but little to do with physical force or strength. A very weak man

physically may have the power to protect himself from the disintegrating influences of his environment, while a very strong man may not.

Histogenetic Tumors ("histo," web or tissue; "genetic" (from "genesis"), generation).--In biology, the process or function of cells and cell-products.

This class of tumors are not supposed to be of embryonic origin, but develop from connective, muscular, nervous, or epithelial tissue.

The sarcoma, which grows very rapidly and becomes very large, is considered as standing between a malignant and a benign tumor.

Myxoma belongs to the mucous tissue. Fibroma belongs to the fibrous tissue. Lipoma belongs to adipose tissue. Condroma develops from cartilage. Osteoma grows from bone.

Vascular, lymphatic, angiomatous, endotheliomatous, and lymphaornatous tumors are produced from serous membranes derived from the lymphatic system.

Muscular tissue gives origin to two species of tumors--namely, leiomyomata a n d rhabdomyomata--which correspond to the non-striped and the striped muscle fiber.

Adenoma.--A benign tumor that has its origin in canals, ducts, and follicles of glands which have become stopped up, causing a cyst (sac) to form that is filled with a perverted secretion. Sometimes the lining membranes of these little cavities take on an excessive growth and end in what are called simple tumors. Such tumors do no harm, except for their unsightliness, when developed on exposed parts of the body, or from size. The tissues of these tumors always resemble those of the structure from which they are built. They have no tendency to break through their retaining membrane, which, of course, was originally the lining membrane of the passage that became plugged up.

This is not true of epithelioma (a true cancer). This disease respects no restrictions; it breaks through and invades any tissue, spreads in all directions, and leaves destruction behind it.

When Does a Cancer Become a Cancer?--That simple adenomatous tumors, and epitheliomatous degeneration, are related much as cause and effect, there appears to be convincing proof. In other words, cancer at the start is not always cancer. The question, then, is: When does it become cancer?

In the stomach there is first irritation from acid, due to overeating. If the overeating is persisted in, the acidity continues to irritate, until subacute inflammation is established. If the causes are not removed, the next stage is ulceration; then, further, degeneration into malignancy.

What can be the difference between last year's ulceration and this year's cancer?

That "cancer" is not always cancer, every experienced physician must have acknowledged to himself, if not to others. The question to be settled, then, is: What is the cause of the transformation?

I have thought that in ulceration the blood-vessels and lymphatics are sealed by adhesive inflammation before the sloughing or necrosis of their involved portions takes place, leaving them intact to perform their function of supplying reparative material; whereas in cancer the ulceration involves the bloood-vessels and glands so far distant from the surface of the ulceration that oxygen and nourishment are cut off and putrefaction is established, following which systemic infection (cancer cachexia) is established, which in time inhibits all physiological processes.

The cause of rapid fatality in some cases is the slight resistance given by some tissue to the spread of the disease, while in others it is the extension of the disease into parts where drainage

is cut off, forcing absorption and the rapid development of cachexia--blood-poisoning.

Another thought may be considered; namely, the state of the patient may be that of premature aging, and the blood vessels and tissues are sclerotic-hardened to such an extent that they offer no resistance to an ulcerative process. Under such conditions, the system can hardly be expected to generate anti-bodies for self-protection.

No doubt there are many factors in the process of evolving cancer. Those who would sidestep the trouble of thinking may say that germs cause the disease; but to the discerning, germs are a poor excuse for accounting for any disease.

In the building of all morbid processes, the chemic changes that take place in tumor-building must be known before the cause can be understood.

Cancer, tuberculosis, and other diseases appear to run in families. So do certain habits. Domestic peculiarities are confined to family strains. The relationship of given types of disease to strains or family peculiarities should be given attention until understood.

A peculiar style of eating, cooking, mixing, clothing, bathing, and thinking will be followed by a peculiar style of disease.

Like causes produce like effects--only, however, when everything is equal. When every phase of cause is known, the effect may be modified by changing the object on which the cause operates. For example: The sun, moon, and stars, or the astronomical bodies in general, we assume, are always the same; which, so far as the comfort and life of man are concerned, is not true. The subject on which these influences are spent--man, for instance--can be changed so that the fixed influences do not act the same; hence the effect cannot be the same. The sun does not act on the drunkard the same as on a sober man. The gluttonous and the temperate are acted upon differently by extraneous influences. Those of limited reasoning power consult the stars regarding their coffee-drinking, what clothing they should wear, and how to invest; when to bull and bear the market, and about their health; also when and whom to marry; in fact, regarding daily, monthly, and yearly affairs. There is no material difference, as far as ultimate results are concerned, whether sun, gods, planets, or devil be consulted--whether the Bible, the Koran, astrology, or other deific sciences be studied for the purpose of determining what is foreordained for man, domestically and socially.

All of which is as unscientific as to start children in the kindergarten in the study of mathematics.

If man ever finds God, he will begin the study with man; and if he ever finds man, he will begin the study with cell-life. If man ever finds the cause of his health and disease, he will find it by understanding the laws of his being; and if he is ever saved, he will save himself by obeying those laws. Yes, obeying every one--the most insignificant,

Man did not find the stars until he found the telescope; and he did not understand the, composition of stars until he discovered the spectrum.

There is but one door open to knowledge, and that is the ABC; and not the ABC of one department, but the ABC's of all departments. 'The ABC of God-knowledge is the laws of life. Unfortunately the study of God was begun with God; and, from the very nature of the subject, had to start with a hypothesis--a hypothetical God. As a consequence, no two people have the same God. A hypothesis must always be in keeping with the mental development of the individual.

Starting with a hypothetical Deity, it is not strange that many attributes, and even essential principles, have been left out. Those that concern us more than any other are natural laws--laws that minister to man's physical well-being. That these are left out of all theologies goes without saying, when we see theologians everywhere breaking the laws of health and life as ruthlessly

as though they belonged to the devil. Ministers--moral teachers--know no more of nature than their parishioners; and they are not ashamed of their ignorance. Yet nature is God's expression; and if we know nothing of God's expression, how can we say that we love something we know nothing about?

All this infidelity and atheism of our deistical students would not be, if the study of God would begin at the ABC of the subject, instead of starting with the graduation exercises.

In regard to diseases, modem medical science, often starts at the finish--to diagnose them. In order to find out all about the disease that killed the patient, a post-mortem is held, and the morbid findings are given out as diagnosis. A cancer is found; a fibroid tumor is found; an abscess is found; but the causes that produced these diseases have passed. The laws which were broken still exist, however; and, when broken again in the same way, like diseases will result, no matter whether or not the interpretation of the stars or the deities agrees.

It is of far greater importance to know the chemical needs of the brain than to know the ethical laws of society.

It is more needful to know the mechanical and chemical laws governing the growth of a fibroid tumor than to know the most scientific surgical technique necessary for their successful removal; because removing the tumor is nothing more than removing a symptom, which is very often quite remote from the cause.

Fibroid Tumor-Cause of

The erstwhile opinion of medical men was that back of the exciting cause of a tumor was that of inclusion during embryonic life: non-employed cells are enveloped in active cell-development; then in after-life they take on activity. That this was professional guesswork is evident, now that the latest guess is that tumors are caused by germs.

There are authors of standing who do not agree with the germ theory of tumor-development.

Every little while a laboratory scientist jumps into print with the announcement that the cancer germ has been developed in fish or mice by inoculation; and he enjoys an hour's fame, after which his little bubble of discovery reverts to oblivion.

No tumor can develop without obstruction to the circulation--without a local influence that disturbs nutrition and elimination.

It is safe to start with the hypothesis that, if full health is enjoyed, there can be no tumor-development.

The first thing necessary for the development of any form of disease is enervation, which always inhibits elimination; following which autotoxemia develops.

Fibroid Tumors of the Womb are developed about as follows: A young woman develops intestinal indigestion from imprudent eating. The catching-cold habit, with catarrh of the mucous membranes, follows. Soon there is developed intestinal putrefaction, which, being absorbed, causes infection. The pelvic lymphatics become involved. As there is more or less congestion of the mucous membrane lining the uterus and its neck, this condition is made more pronounced each month because of menstruation and the toxins being absorbed in the bowels, The uterine engorgement causes, longer and more profuse menstruation; painful menstruation begins, growing more pronounced month by month. Pain forces the calling of a physician, who on examination finds a flexed womb. The flexion is caused by a thickening of one side of the womb, which forces a flexion to the opposite side. The more thickening, the more obstruction to the circulation and the more bent is the neck of the womb; and the more bent is the neck, the more the canal is obstructed to the menstrual flow.

As the womb is flexed more and more, the circulation is more and more interfered with. The flexed side fails to receive the proper amount of nourishment, and the thickened side receives all that the uterine artery and other vessels can bring; but the return vessels fail to carry back the full amount, and, as a result, hypertrophy takes place--the parts are overnourished. Nature undertakes to organize the surplus; and she does--and we call it fibroid tumor. These growths grow rapidly or slowly, according to the amount of obstruction.

A growth may fill the pelvis and abdomen in five years; and again in some other women it may require twenty years to develop a tumor the size of an orange.

Injuries at childbirth often become the first cause of tumor, next to putrefactive infection from intestinal indigestion.

Another cause: A catarrhal inflammation locates at an old placental site, as a result of toxemia. Thickening and induration follow, impeding the efferent circulation. The more growth, the more pressure and obstruction, until the new-growth--fibroid tumor--is large enough to become a cause of its own growth, by impeding the circulation through its weight and pressure.

This work of overgrowth is pushed along rapidly by overeating, which means overnourishing; the surplus being organized into tumor.

Overeating and improper eating often cause gas distention of the bowels. The pressure from gas crowds and misplaces the womb. From such misplacements enough obstruction to uterine circulation may take place to cause hypertrophic enlargement, which is fibroid enlargement.

Constipation may cause enough pressure on the womb to start imperfect circulation, and later fibroid growth.

Wherever there is impeded circulation, new-growth must take place; and that means tumor. The kind of tumor will depend on the character of the tissues involved.

Add to these causes sclerosis, and malignant diseases may follow. That is, the benign tumors may become malignant.

Can they be cured?

Treatment.--Remove the cause, which can be done when understood. The circulation must be restored by removing the cause of the obstruction. Very few tumors require removal by the knife; for, if the cause is removed, the tumor will gradually disappear.

13. Synergies

Synergy means the unity of the organism under favorable or unfavorable influences.

In social life, an injury to one man is an injury to all; and so it is with the organs of the body--if one is injured, all are injured. Any influence that modifies function or structure of one part of the body influences the entire structure.

Family habits may be of such a character as to throw More stress on one organ than on another. The sequel is the development of an organic diathesis. (See subject of "Diatheses.") When this is true, the hundred-per-cent organs in the organism lend their influence in various ways to do vicarious work for the weak organ.

When the organism is enervated from the thousand-and-one influences incident to life, and intoxication has brought on such a state of the metabolism that the organism is overwhelmed by waste--excretory--products, it is then that inherited diathesis takes on activity. If the diathesis is tubercular, gouty, neurotic, or of any of the special organs of the body, it is in keeping with the laws of health and life for the affection peculiar to the diathesis to spring up. If the causes are not

removed, the affection will remain functional for a time; then organic change will take place. It is then that affections become diseases; it is then that an irritation and an inflammation from indigestion become ulceration of the bowels or stomach, and the ulcer perforates, and death ensues from peritonitis caused by the perforation. The peritonitis was caused by perforation; perforation was caused by ulceration; ulceration was caused by inflammation; inflammation (catarrh) was caused by irritation; irritation was caused by indigestion; indigestion was caused by fermentation; fermentation was caused by enervation; and enervation was caused by the thousand-and-one influences which build or destroy the body and mind of men, depending upon whether they are wisely or unwisely applied.

When one organ gives down--when the blood is deprived of the proper amount of building salts--the whole organism is deprived of the necessary building salts. When imprudent eating--sugar-eating, cake-eating, rich-meat and gravy-eating--has been practiced so long that enzymic fermentation is not equal to the task of physiologically digesting the intake, then it is that organic ferments--bacteria, microbes--set up pathologic fermentation, which is slightly toxic when developed in the carbohydrates and fats, but putrefactive and decidely toxic in the animal products. The organized ferments cause a souring of fruits, vegetables, and starches; the acid builds irritations and catarrhal inflammations of mucous membranes; and in this way the stomach may become the exciting cause of organic depression and catarrhal affections of all the organs of the body.

It is very hard for average physicians to get away from the idea that each organ acts in an isonomic manner--that organs break away from the union of organs and develop a disease without the consent of the general government. This is not only false, but it is absurd. When from inherited weakness, or from injury, a part--an organ or a tissue--is below the general standard, it becomes the seat or center of affection when the general standard of health is lowered. When enervation is brought about, and, because of the enervation, metabolism is impaired, elimination becomes imperfect, and, to autotoxemia, toxins from imperfect digestion are added. The system, under these circumstances, becomes so toxemic that the inherited weaknesses, either organic or systemic, take on disease. The disease, however, is an affection; for the cause lies back in bloodmaking and nutrition.

In the tuberculous diathesis the lungs or other vulnerable organs of the body give down with tuberculosis when the general health is impaired and resistance broken. The gouty diathesis favors the development of any type of gouty disease that is in keeping with the vulnerability of organs and tissue of the body. The disease may be articular. If so, joint rheumatism will be the type of the disease. It may be the arteries, in which case arteritis with hardening will occur. The kidneys or liver may be the weakest points; then urinary calculus or gallstones will form.

There is a unity of sympathies and a unity of action. The nerves, the muscles, the motor cells, the blood vessels, and the organs generally are in reality a unit. The muscles and the cells cannot function without the nerves, and if the nerves be enervated from overwork or poison, they fail to function properly. Then the muscles become weak, waste is retained, the cells fail to renew, and degeneration takes place.

To overcome any disease, restoration of nerve energy is of first consideration.

A giving-down of some of the bony structure from injury or from disease, may cause more or less distortion of the entire anatomy. The distortion requires an anatomical readjustment-an endeavor to change the mechanism to meet the new requirements. In the changes that take place, important organs--such as the heart, lungs, etc.--may be forced to take on disease because of the interference with their normal functioning.

The body is at work readjusting every minute. The forces of health and life are at work in the line of readjusting and idealizing all the time. Nature--physiological energies--is all expended in healing--repairing and building. Man needs no doctor, so far as healing is concerned; he needs instruction in knowing how to avoid abusing his body, and how to live to conserve his energies.

If a bone is misplaced, it must be righted. If an artery is cut, it must be tied. Nature heals the bone when broken, if it is kept quiet long enough. If a large artery is tied, nature dilates and enlarges collateral arteries, so that the parts temporarily ill nourished will soon receive a full supply of nourishment.

All malformations are met with readjustments to give collateral aid.

Extirpation of the ovaries produces atrophy of the uterus and often of the mammae.

When the eating habits are such as to crowd and disturb the liver function--impair its function of preparing urea and sugar for further use in the economy--we see kidney affections springing up as a consequence. The cure must get back to the cause--namely, remove nerve leaks and correct imprudent eating. If the remedy is neglected until the liver, kidneys, or pancreas take on organic change, then a cure is often impossible.

The muscular system and the liver are allies. Exercise uses up energy (sugar), which the liver furnishes. If the muscular system is not worked, the liver becomes engorged with glucose, or the glucose is sent to the circulation to be excreted by the kidneys.

Exercise is necessary where there is too great a supply of carbohydrate foods. Either the intake of starch and sugar must be limited, or work must equal the eating.

An organ, when enlarged, may, by pressure, affect other organs. An enlarged liver may impair the stomach and other organs. A dilated stomach, or gas-distended bowels, may create affections of the heart, lungs, or pelvic organs from pressure. Indeed, intra-abdominal pressure may be the cause of heart palpitation, asthma, hay fever, bladder and urethral irritation, falling of the womb, and displacements of other organs.

Because of compression from fat or gas distention, the excretory ducts, such as the bile-duct, are partially obstructed, In gouty subjects the formation of biliary calculi is liable to, follow; in tubercular subjects, tubercular inflammations, etc.

Where compression of a nerve is continuous, neuralgia, spasms, paralysis, and nutritive changes take place.

The part of the body most affected by nerve compression is the head and spine--the face rather than the head. The cerebro-spinal nerves pass out through various passages and foramina (small openings in bone). These openings are liable to have their caliber narrowed from a thickening of the walls from injury and consequent deposit of reparative material. So many are the ailments due to this cause that whole systems of healing have grown up, exploiting this etiological factor into a marvelous universal cause of all diseases.

The tendency for man to allow large sections of his body to lie fallow is the cause of much nerve compression, and consequent pain and sympathetic disturbances. When men stop their boyish exercises and settle into a routine business, only those parts of their bodies are exercised that are used in their business; the rest become fallow. A neglected part in time takes on deposits, and naturally grooves, foramina, and narrow openings between bones will become the repositories of deposits. This brings on compressions, with consequent impingement on the blood vessels and nerves. To secure relief, the patient must exercise the parts, or employ someone to massage; or, what is better, call a physician of one of the bone manipulating schools, who will relieve the nerve pressure. The members of these schools are wonderfully adept in bringing quick relief. But unless the patient--the one relieved--is taught the necessity of right living--taught the necessity of exercise, and how to eat to secure proper elimination--someone will have to be employed all the time to manipulate the unused parts of the body so as to keep down deposits and keep the body comfortable. It is not necessary for people to become athletes in order to avoid taking on these deposits. Athletes have their troubles-namely, over-development, which is not conducive to the best health and long life.

Compression of the pneurnogastric nerve may start up a pneumonia. Certainly there is much stomach derangement due to this cause. From such compression, stomach irritation, inflammation, ulceration, and cancer may follow. Cancer may result from compression on a small artery, causing the territory supplied by it to become ischemic (local anemia). From the same cause, neurosis or gangrene may result. It should not be lost sight of that wrong eating-haphazard eating-bringing on toxemia, has much to do with the manner of degeneration.

Compression on an excretory duct causes a backing-up of excretions; and, if it is of long duration, the blood win not be drained of that particular excretion. Other organs may do vicarious work. When compression is removed, the injured organ may have developed a sick habit and may never get back to the normal. This is daily observed by busy physicians in affections of the liver, kidneys, and pancreas.

When tissues such as the neck or body of the womb, or the pylorus of the stomach, etc., suffer from irritation and hyperplasia, cutting off a normal supply of blood, the effect is to cause an ischemia (anemia) of a small territory of tissues supplied by the arteries compressed. If the ischemia is pronounced, the result may be necrosis or gangrene. If the compression is of such a character as to affect only the venous circulation--the return blood to the lungs--the parts become hypertrophied, the tissues harden, the carbon and oxygen gases fail to exchange. Irritation, inflammation, ulceration, and cancer are different phases of the degeneration that will follow. The chronic state of the tissues from venous stasis is sclerosis. Fibroid tumor of the uterus is a type. It is obvious to the reflective mind that if this change of tissue can take place in the musculature of the womb, stomach, and other organs, when the circulation is interfered with, the same change can and does take place in the muscular tissue of other parts of the body, including the coats of the arteries. The change is brought about by cell compression caused by the irritation brought on from toxins generated in the intestine or f r o m chronic autotoxemia.

Compression of nerves causes neuralgia, spasms, paralysis, disturbances of nutrition, and at times fatal infections.

Compression or section of the pneumogastric nerve is followed by pneumonia.

Cancer of any part of the body in time infects the whole body through the autogenerated toxins--the toxins resulting from the degeneration of the neoplastic growth. The fact that neoplasms of all kinds owe their existence to local obstruction of nutrition should not be forgotten, nor the fact that perverted nutrition is characteristic of the life of these tumors, or growths. The chemistry of these growths is not in keeping with their environments, and it is liable to sudden and destructive changes. When the change of nutrition is great enough to cause a breaking-up or disorganization, the fluids pass into the environmental tissues; and, as the blood and lymphatics have power to oppose and neutralize the infectious infiltration, the spread of the toxin is held in check. But a time soon comes when the body's defenses are overcome; then cachexia rules and the body dies.

Malignant growths are built by obstructing the normal nutrition of otherwise healthy tissues of the body, but which, when abused, soon take on a chemistry in keeping with the sum of their elements plus fermentation. As these perverted tissues are on the descending plane--on the involuting route--it is only a question of time when degeneration will take place and such powerful toxins will be formed that the life of the body, which unfortunately becomes host for the erstwhile innocent neoplasm, will be destroyed.

Cancers are not malignant at their beginning. A fever is not septic at the start. Vaccination excites tuberculosis only in the tuberculous disthesis--it simply arouses the diathesis into activity. Perverted nutrition of the liver is not stone building at first. Hyperemia of the brain is not apoplectic at its beginning. Worry, over-worked emotions, and chronic toxemia ultimately become arteriosclerosis. Yeast and dough may become bread by baking. Organized germs and a beefsteak may end in putrescence, and the generation of toxins that may destroy life. Bacteria cannot poison without the meat, and the meat's toxic potentiality cannot evolve without the

germ. Two atoms of hydrogen are not water; one atom of oxygen is not water; but when the two are combined, water is made. Disease, health, life, and everything pertaining to animal existence, depend upon physiological chemistry for their existence. The immunization practiced on our hundreds of thousands of soldiers will prove to be the exciting cause for lighting up many latent pathologic diatheses; or planting purulent or septic foci which will develop into many unaccountable diseases by and by--diseases which the pension boards will not reckon as so many obligations of our government. Well may the helpless discerning say: "What will the harvest be?"

Neoplastic cells and pathogenic microbes, which are credited by the profession generally as being the cause of cancer, are not creative. All they can possibly do is to become elements in a chemical compound whose individuality is a so-called disease of some kind--cancer or syphilis, if you please.

Heart weakness may be brought on from many causes: fear, overworked emotions, anything that uses up nerve energy and produces its consequent autotoxemia; habitual overeating, and its consequent toxemia; intoxications from tobacco, coffee, tea, alcoholics; enervation from excessive venery. 'The result of heart weakness may be stasis in the brain, liver, kidneys, or pancreas.

Drugs or palliatives of any kind that stimulate the heart muscles relieve the headache, torpid liver, albumin or sugar in the urine; and the edemas (dropsical symptoms) disappear. The arterial tension is temporarily restored, and the patient is well, so far as his feelings are concerned. But the cure is palliative, and will soon prove but a short respite. There is but one cure, and that is to remove the cause. If this is done before organized changes have taken place, the cure will be permanent; if too late for a cure, then comfort and increased length of life may be expected. Those who have headaches often relieve themselves with coffee, or take a drug prescribed by a physician, and they call their reliefs cures; but, alas! the "cure" builds more heart disease, and hurries the end.

Embolism is a sudden occlusion of a blood vessel by a small body traveling in the circulatory system.

A strong organism is not given to gathering moss, so to speak, as we see in the case of the old oaken bucket. However, there is a very strong tendency for the development of emboli from deposits taking place in the heart, on the valves of the heart, and in the blood vessels, when there has been toxin infection running on for years. This occurs when the blood fails to carry a normal amount of enzymes.

A normal blood digests all clots which form from whatever cause. When foreign bodies succeed in gaining entrance into the circulation, they must be very resistant if they are not digested and made a part of the blood. The same is true of the lymphatic circulation. The lymphatic glands have the power of benevolently assimilating toxins that are absorbed.

Emboli are divided into exogenous and endogeenous--those entering the body and those developed in the body.

Endocarditis ends in atheromatous productions which open into the general circulation. The same occurs in arteritis. This accounts for many sudden and unexpected deaths.

Blood clots form on the interior of the blood vessels. They are caused by injury and various diseased conditions. Inflammation of the aorta may at almost any time furnish an embolus. that will swing into the circulation and cause a fatal obstruction.

Inflammation of veins is very liable to cause emboli. Phlebitis is caused by infection, This disease is very prone to cause embolism. It should never be forgotten that, if it were not for man's great immunizing power, he would be unable to protect himself against the many

invasions of his organism.

Course of Emboli: Emboli follow a regular route. Those of the arteries start from a lesion of the pulmonary veins, of the left heart, or of the aorta. They pass into the left carotid. They stop at the sylvian, and produce hemiplegia with aphasia. The embolus may follow the aorta, and may stop in the splenic, the renal, or the iliac arteries.

Effects of Embolism: Arrest may be in the heart. In this case sudden death may occur. A reflex syncope is produced, due to the excitation of the endocardium.

Pulmonary apoplexy may be caused by an embolus.

Softening is a common effect of embolism. Apoplexy is another effect.

When emboli are very small, only headache, dizziness, or some mental disturbance may result.

Partial or complete blindness may result from embolism of the central artery of the retina.

There are fatty and gaseous emboli.

Nerve Connections.--Compression of nerves may cause pain in distant parts.

Irritation of the biliary or urinary passages may cause nausea and vomiting.

Inflammation of the neck of the uterus or misplaced uterus may cause pain in the back of the head.

Excitement may produce paralysis, fainting, and other nervous derangements.

Red cheeks and lung irritation go together. Red cheeks may accompany congestion of lungs and hepatic colic.

Salivation goes with irritation of the stomach. Excessive flow of urine accompanies sciatic neuralgia. Stricture of the urethra, cystic irritation, and prostatic irritation may cause pain in the sciatic nerve.

Hepatic colic causes change in the circulation of the blood in lungs. The heart is also influenced. It may become insufficient, systole occurs, and edema may follow.

The kidneys affect the heart; the heart affects the lungs; the liver and the kidneys affect themselves.

The physician should trace the successive changes that take place. It is necessary to know the morbid sympathies. It should not, however, be understood that organs take on disease per se.

The cause of an organ becoming diseased is usually abuse of some kind. The stress of life rests more heavily on one organ than on another. Whenever an organ goes wrong, others are affected through sympathy. Then, after functional derangement has gone on for a certain length of time, organic changes take place; after which organic disease becomes a cause of other affections.

Inflammation.--Diphtheroid gangrene is declared by bacteriology to depend upon microbic infection; yet at the same time it is declared that a specific diphtherogenetic microbe does not exist. This certainly is true of every so-called specific disease.

Gangrene is the resultant of a morbid process of sufficient virulence to cause the death of the tissues involved in the inflammation. Necessary to this process must be lowered vitality, lost immunization, and a chemical change on the order of disintegration.

"Pseudomembranous sore throat may be produced by numerous microbes." Just the reverse is

true. The chemical changes taking place in the throat, from the initial inflammation to ulceration, on to gangrene and sloughing, due to the influence of the fermentation initiated by organized ferments in the nitrogenous tissues involved. Then these organized ferments take on an individuality and personality in keeping with the chemical medium resulting from the diseased process. In a breaking-down process there are all stages represented. Then why should not these organized ferments--microbes of fermentation--be found in all stages of transformation, from the simple germs of fermentation on to the virulent types found in putrefaction and gangrene?

It is well to keep in mind that putrescence, or the toxin resulting, is not potential in the microbe, but is potential in the protein, requiring the fermenting influence of the organized ferment to evolve the toxin. On the other hand, protein food has peptone as a potentiality; but without the fermenting influence of the unorganized ferment (enzyme), peptone would not evolve.

The material out of which pseudomembranes, are formed is a fibrogenic exudate--the very same material that is thrown out on abraded surfaces, or into solutions of continuity in any and all wounds. The quantity thrown out is always abundant, but the amounts are greater where the local irritation is great.

In pseudomembranous inflammation of the throat everything should be done to avoid breaking or loosening the membrane; for the more it is interrupted, the greater the local poisoning, and the more toxins there will be swallowed to be neutralized by the stomachic secretions.

Positively nothing is to be put into the child's mouth; not a drop of water, for swallowing must be avoided. The act of swallowing breaks the membranous protection. The old treatment of gargling and swabbing was barbarous and, for intelligent people, criminal.

Thirst must be controlled by frequent small enemas of water. Nourishment is not life-saving, as many think, but positively disease- and death-provoking.

Every patient, when prostrated with a disease, has locally or generally passed from enzymic control to bacterial control. All efforts of cure must be in the line of crossing back to enzymic control. This may be done if the intoxication from bacterial fermentation can be controlled before enervation is so profound that the nerve centers are paralyzed.

If the patient is plethoric, and the gastro-intestinal canal is full, and kept full, of food, the bacterial fermentation must thrive so long as such a state is continued. The enzymic production is at a halt, and every particle of food taken into the body becomes an ally to organized fermentation.

Stop food, and wash out the bowels daily; otherwise let the patient alone, except for gentle rubbing and bathing for comfort. High fever means much bacterial fermentation, and should be controlled by baths and the withholding of food.

The fact that the temperature declines with the consumption, or rather with the exhaustion, of the food supply should be proof sufficient to convince the skeptical that feeding the sick is encouraging disease.

A membrane is a protectorate--not simply a protector. For under this membrane is the process of repair, which requires rest, and the control of bacterial fermentation, and an enzymic influence sufficient to encourage all development. There must be enough retrograde fermentation to destroy obstructive accumulation, and enough constructive fermentation to fit the necessary amount of exudate for reparative work. This process requires a covering--a membrane-to protect from traumatic injury and an oversupply of bacteria or organized ferment.

From the foregoing explanation it is obvious how dangerous is the old-time practice of swabbing and gargling the throat. No wonder the mortality was great, and no wonder the

antitoxin treatment has proved such a success. Its success, however, has been of a negative character--on the order of the lesser evil. If the antitoxin has any influence--if it is not inert--it certainly must make a change in the nervous system; and this change must be reconciled, and an equilibrium or readjustment take place, before a normal healing process can be resumed.

The unreasoning cannot see that food is disease-producing from every point of view--from every conceivable influence which it may have on the subject. If this is true of food, why may it not be true of every influence, even though theoretically it is beneficial? It is the same rule that applies in all warfare; namely, the efforts put forth in times of peace for the upbuilding of the morale of a people become treason when attempted while the country is at war. Feeding in disease is treason to the body's government.

Suppuration.--Suppuration is of three kinds: phlegmonous, caseous, and thin pus.

Phlegmonous pus--or what is known as laudable pus--is a yellowish-wbite, creamy, thick, odorless liquid. It is met with in phlegmons and suppurating pleurisies.

Caseous pus resembles soft cheese.

Thin pus is a serous liquid which exhales a fetid odor.

The color of pus varies from a light yellow to an orange, brownish red, or greenish. The coloring may be from bile or blood.

Pus in sputum sinks in water, Pus in urine precipitates with the addition of ammonia. The microscope will reveal pus cells.

Bacteriology gives many pyrogenic agents, but there is much distinction without differences. A ferment and a protein end in fermentation, inflammation, and suppuration. The chemistry of the compound does the rest. Chemistry is the determining factor.

Purulent Foci.--Suppuration may exist in a tooth, in the antrum, in the ear, or elsewhere. When once formed, it may become incysted and take on a fatty degeneration. It may extend toward a hollow organ, as a suppurating appendix, if left alone, will surely insinuate an opening into the gut--a natural cure.

Pus has a tendency to follow tendons and aponeuroses. or muscular interstices, vascular or nerve sheaths. Nature controls pus by the action of enzymes, which keep it laudable. It is only when the organism becomes acid--when acidosis develops--that pus foci begin to break down, the pus becomes thin, and begins to poison the organism. it is then that organized ferments preponderate over the enzymes in the purulent foci. It is then that latent inflammations of a specific character take on activity and are said to be developing the various stages. Why this latent stage? Because the life of the patient is not sufficiently correct to allow a complete cure; hence in from ten to twenty or thirty years, when protection is prostrate, the focal points take on activity and the organism give down to an old enemy.

Chyliform collections are found principally in serous membranes. They occur from rupture of a vessel or even of the thoracic duct. In most cases, however, they are due to a primary purulent collection whose microbes have succumbed to the supply of unorganized ferments furnished by a healthy organism (enzymes) sufficiently to cause a granulo-fatty degeneration. The fat is freed and emulsified, giving the liquid a milky appearance.

If the liquid is absorbed, a cheesy mass remains, which may take on calcareus transformation. Tubercles sometimes take on this change or cure.

Symptoms of a purulent focus are pain, heat, redness, swelling. Pain is the first symptom. It is caused by an increased flow of blood to the part, which causes swelling and heat, as well as the redness.

The pain is of a pulsating character. In time the pulsating pain gives way to a feeling of constriction, due to stretching of the nerves. After pus forms, the pain may subside, to appear only upon pressure. Cold abscesses are considered tubercular. They form without causing much reaction. I have seen reputable physicians confuse sarcoma and cold abscesses.

Gangrene.--Defined, gangrene is mortification or putrefaction of tissue. The process is named necrobiosis. It is declared to be of microbic origin. It is well, however, to be reminded that microbes are always secondary causes, and to declare that a given disease is of microbic origin is to leave the question of real cause in the air, from which it will never come down for a thinking mind until it is furnished an adequate cause. The fact that there is no specific gangrenous microbe is proof that, following the cause of the devitalizing of a given tissue, any organized ferment is sufficient to cause putrefaction of the dead tissue. The colon bacillus is sufficient to set up putrefaction or gangrene of the undigested food in the intestine.

When a part is dead, it must either desiccate or putrefy. Where there is heat and moisture it rots; and that is what gangrene is. The causes leading to death of tissue may be mechanical, physical, chemical, or animate: mechanical when a part is killed by machinery; physical when a part is killed by strong acid, excessive cold, or excessive heat; and animate when a part is killed by bacteria. It should not be forgotten, however, that germs must be aided by a forerunner which first devitalizes. The animate agents follow all agents that devitalize.

Anything that cuts off blood or nerve supply may devitalize to such an extent that germs may finish the destruction.

Fermentation of food may cause sufficient intoxication to destroy tissue. Then gangrene follows.

If it is understood that any putrefactive process, it matters not what the cause, is gangrenous, it will not be necessary to go into detail and name all the diseases which end in the death, or gangrene, of isolated spots of tissue or integument. Suffice it to say that the infections from typhoid fever, syphilitic chancre, gonorrheal bubo, septicemic fever, etc., are all putrefactive--gangrenous--infections.

Every diathesis takes advantage of systemic enervation to use these foci as centers from which to spread its peculiar type of disease.

If those who have suffered infection--an invasion--from a septic disease of any type (so-called contagious or infectious) will live in such a manner as to encourage elimination and an increase of nerve energy, these internal foci will be destroyed--will be used as fuel; and then it may be said that a blood poisoning--a specific disease--is cured.

A cure cannot be made by drugs, because a drug adds nothing to nutrition. A drug may irritate an organ and force artificial functioning, as in purging the bowels. But what does really take place? The bowels are forced to empty, but their functioning is inhibited, and, if the abuse is continued, they will cease functioning entirely. This is true of all medication and all organs affected by drugs. The so-called eliminating drugs irritate, but do not eliminate. They depress, enervate, and join with the enemies of the body in breaking down resistance and establishing infection rule over the entire body, or what "Damaged Goods" so graphically describes as the inevitable taint.

I here and now call upon all truth that is potential in medical science to bear witness to the statement I am about to make; namely: The human body is fully able to eliminate all infections, if it is given reasonable care in the lines of feeding, bathing, clothing, and mental poise. If, from an inherited diathesis, the constitution cannot resist the breaking-down influence of an infection, even when aided by the best of dietetic and hygienic care, the only possible results from medication and baths must be further enervation and less resistance to septic (specific) infection. Nature can eliminate and readjust, if permitted to rest physically and physiologically.

If proper care--a care that favors a better elimination and tissue renewal--fails to rid the body of septic foci, it is a beggarly reasoning power that ran believe that a medication which impairs nutrition and hardens tissue--causes a gingivitis (shedding of teeth) and ulceration of glands and bones, and even blindness--can act favorably and persuade or force a health standard that does not exist and is not potential in an organism.

The consensus of medical opinion holds to the superstition that by some magical power the drugs mercury, arsenic, iodin, potash, or a mysterious compounding--a synthetical blend--of drugs, can be made to go on a still hunt through the organism and drag out of their hidings all septic foci and expel them from the body, "Some dream," I admit; but no unprejudiced mind can find any proof for it in any of the fundamentals of medical science yet recorded.

Tubercles.--Those desiring an extensive bacteriological history of tubercles should procure a monograph on the subject.

All germs of a bacterial or microbic character are capable of generating fermentation in an environment favorable to their functioning; namely, a crowded nutrition, or overworked enzymic fermentation; threatening fatal obstruction to physiologic processes or devitalized tissue from injury.

When enervation is great, those who have purulent foci deposited from septic fevers, syphilitic ulcer or chancre, gonorrheal bubo or stricture, or chronic colitis with putrefactive fermentation, will develop affections in keeping with their diatheses. If they have the tuberculous diathesis, or if they are predisposed to take on glandular inflammation of a scrofulous nature, the type of their disease will be tubercular, which may be developed in any tissue of the body. If the diathesis should be of a nature to develop sclerosis, heart and arterial diseases will develop.

So long as any and all affections (so-called diseases) are permitted to develop only after the body's natural immunization is exhausted, it is very far-fetched to declare that a process which is wholly house-cleaning--wholly an emergency auxiliary to a physiological process--is disease-producing, or the cause of disease. Indeed, disease is a state, and those influences that increase or decrease the comfort of that state are causes of health and disease. Organized ferments are a part of a necessary and a properly organized environment for man. This is equally true of enzymes, food, sunshine, and other elements. Indeed, like every entity in the environment, each can be made man's friend or enemy, food or bane. Food is necessary to health and life, yet it is made man's greatest enemy.

For those with a diathesis there is but one immunization--namely, good health. Instead of seeking cures, prevention is the rational work--not extermination of germs, which is obviously impracticable, even if it were possible. And prevention is encompassed in one word-namely, moderation.

The control of tuberculosis must begin in childhood, if not before. Proper feeding, bathing, and clothing, along with enough intelligence to put such knowledge into practice, will stamp out the disease.

Localization and Evolution of Tuberculosis.--Theories of localized tuberculosis other than of the lungs are quite plausibly worked out. Of course, the pulmonary variety of tuberculosis is pretty generally conceded to come from inspiring infected air, or from taking the germ into the stomach with food. The bacilli introduced by the inspired air ingraft themselves in the apices of the lungs. The reason for this particular localization is attributed to the limited expansion of this part of the chest, and especially the weakness of the expirating movement. The natural sciences--especially mechanics--are frequently used by medical science in reinforcing a theory; but the student should not allow plausible argument to paralyze his real effort at getting at the truth.

If the theories of scientific medicine regarding tuberculosis were true, there could be no plausible reason given why tuberculosis, syphilis, or a fatal contagion had not depopulated the

earth; and certainly, if the theories of bacteriology were true, there could be no good reason given why germs had not prevented the populating of the earth.

The fatal weakness about all the germ science is that it cannot give a good reason why man is not extinct, if its theories of causation are true; and, on the other hand, if all it boasts of its great art and science be true, why disease is not stamped out.

Why do not all people who inhale bacilli develop the corresponding disease? Why are there people who cannot be made to take tuberculosis, and why are there a small percentage: who cannot be prevented from taking the disease? The answer to these questions will give a good working hypothesis on which to base a rational theory of causation.

The theories advanced in the various chapters in this book certainly are plausible, and the fact that, when applied, they work is all the proof that rationality needs. Bigotry and prejudice have never been, nor ever will be, convinced that the other fellow is not an ignoramus.

The theories of diathesis, enervation, and autotoxemia, when applied to tuberculosis, work out and rationally explain the cause, and certainly give the only depend prevention or immunization.

The various types of tubercular diseases--the classified tubercular diseases--are easily explained when it is known that this infection cannot be made to infect a gouty diathesis, but that it is easy to cultivate all types of tubercular affections--graft them, so to speak--on the tubercular diathesis.

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9. Pathology of the Fetus

As stated before, nature has put her eternal ban on the hereditary transmission of degeneracy.

Let us reiterate that there is no disease per se. What we call disease is an unideal state of health. What we recognize as health is a greater or less degree of approximation to an ideal state of comfort of mind and body. Few have perfect health; few realize their ideal standard; many are disappointed, and go through life singing, "Beyond this vale of tears." Those who think that man can escape all discomfort fail to understand the necessary educational influences of pain and discomfort.

Of course, the state known as health is a slight deviation from perfect health, functionally. But when functioning has been diverted from approximate health long enough to cause organized change of the character we call disease, this is degeneration, and is not transmissible.

Children are born with organs approximately perfect; or, as a result of accidents or injuries, they are monstrosities--deviations from normal physical development--and are frequently disposed of at the instant of birth because of their unfitness for independent existence; for example, headless children, or children born minus other vital organs.

The state of health which we call disease is not transmissible. Sterility stands between the unfit and propagation, No doubt children are born into environments unfit for proper development, but the vileness is all on this side of conception.

Diseases and deformities, up to monstrosities, are the results of traumatic influences. Disease-producing influences, such as toxin poisoning, may destroy life after it is started; but, at the time of conception, nature's health standard must have been satisfied, or it could never get by the censors who pass on proper conceptions. All sorts of detrimental influences may reach and influence fetal development; but life is started right--for certainly no organic disease in parents can be transmitted.

Drug-prescribing physicians have harmed unborn infants by medicating their mothers. Any influence that harms the mother must harm the fetus more or less. An overfed and incumbered mother will have an incumbered child.

It is said that mercury accumulates in the placenta. Why should it not find the fetus through the blood? The placenta is a filler which stands between the child and the ordinary blood derangements of the mother; but drugs, and especially mercury, arsenic, and iodid of potash, have a way of insinuating their toxic presence beyond the placental guard, there to deface the holiest of holies, and send it into the world a blot upon creation--a false witness against the purity of conception.

That the fetus and mother are united in bonds which allow a reciprocal exchange of physical and chemical influences, there is no question. For illustration: If a mother's uterus be opened, exposing a fetus, and a fatal dose of strychnin be injected into the fetus, fatal convulsions will be produced in the mother, while the child escapes; and, if sufficiently developed, the child may be extracted from the mother and saved--showing that it can stand a larger dose than the mother.

This statement is quoted from Sabory. It is not reasonable to suppose that a fetus can stand a larger dose of drugs than the mother; but the fact that the mother may be killed through the child, while the child is saved, is proof that every protection possible is thrown about the fetus. In this case the drug is taken up and sent to the placenta, and from the placenta to the mother's lungs and heart, before it can be returned through the general circulation to be distributed throughout the fetal body. The heart, and the circulation of blood through it, are far different in fetal life from what they are after the child takes an independent life. The blood, with its toxins,

is slow to reach the vital organs of the fetus. Indeed, the unborn child is safeguarded on every hand.

For the privilege of taking oxygen directly into our lungs we pay with a greater susceptibility to the poison influences of toxins.

When a fetus dies from poisoning through the mother by strychnine, it may be killed by the severe muscular contractions peculiar to convulsions caused by the drug; yet this is not very probable, so long as it is protected from contractions by a fluid cushion--the aniniotic fluid.

It is said that numerous observations establish that the bacillus of Eberth may pass through the placenta, but does not produce any lesion in the fetus, any alteration of Peyer's patches, nor any splenic hypertrophy, but causes a true septicemia. This is splendid proof of my contention that typhoid fever is the product of malpractice, and that all specific poisons--diseases with a specific poisoning--rest on one and the same basis--namely, septicemia--the septic base being chemically changed to suit the environment. A puerperal, typhoid, or traumatic septicemia, as well as a luetic infection, are all forms of sepsis, but featured by the environments under which they develop. Chaos reigns when specific individuality is given to all the different manifestations of putrefaction--septic poisoning. Our present system of treatment is made inefficient by a fallacious conception of causation.

Infection and contagion received a hard blow when it was discovered that, in the case of twins, one may be born with smallpox and the other not; and that the child is often behind the mother in point of time in the development of diseases.

Vaccinated mothers, living in an epidemic, may fail to develop the disease smallpox, and yet will give birth to children covered with pustules. This indicates that the mother's body is contaminated with the epidemic influence, or the infection could not be transmitted to the child. This also goes to show that, in all epidemic influences, those who do, not develop the tangible symptoms may be affected subjectively, having the disease in a subjective form, and how childish are all efforts at quarantine and immunization other than increasing resistance by raising the health standard.

So-called hereditary syphilis and tuberculosis are large subjects, the literature of which runs into tomes; but until the writers on these diseases shall know as much as high school boys, will know in a few years from now of the evils of bad habits in eating, clothing, and care of the mind and body generally, I shall not apologize to them for denouncing as rubbish their whole compilation on disease in general ,and syphilis in particular.

So long as wrong eating, wrong thinking, wrong care of the body--the use of tea, coffee, tobacco, and alcoholics-so long as the mind and body of our patients can be steeped in lasciviousness and sensuality, and all these disease-producing habits count for nothing with expert clinicians when they are weighing cause and effect to determine a correct diagnosis, why should I, or any other rational-minded physician, give any serious consideration to their conclusions as set forth in textbooks? Why are not their conclusions based on premises which have been robbed of their vital potency?

I charge the leading teachers of the profession of today with gross carelessness in making a diagnosis. They all know and acknowledge the evils of bad habits; but, in making a diagnosis, the effects of a vicious life are ignored entirely, and blood secretions, excretions, and pathological specimens are sent to bacteriologists, on whose findings a diagnosis is made and a cut-and-dried--specific--treatment is prescribed. The X-ray is used, and on its shadows is based a diagnosis, without a thought, or any consideration whatever, being given to the influence of the daily habits of the patient on causing the effects which the X-ray traces.

I have said that the pursuit of present-day diagnoses and treatment is a "fool's paradise." If it is not, why isn't it?

A life of lasciviousness and sensuality leads directly to degenerating diseases, such as tabes dorsalis; yet the leaders of the profession see nothing, think nothing, believe nothing, write nothing, and teach nothing, except that the disease is caused by syphilis and must be treated for syphilis, notwithstanding this treatment is a failure and they know it will fail. In the face of this, they *would* have laws passed to force their specific or anti-syphilitic treatment, and no other, at the pain of imprisonment for the culprit who would dare repudiate their dainnable pessimism.

The treatment standardized by the inhabitants of this fool's paradise (medical) will necessarily make their cures (?) correspond with their pessimistic prognosis. Perhaps it would be better to say that the treatment is logical--in keeping with the erroneous etiology,

From a modem medical view-point, there is but one toxin that counts in analyzing syphilis, and that is the toxin of syphilis. The modem medical gentleman may dive down into the worst human muck, but if he cannot find syphilitic infection, or the least excuse for suspecting it, he will issue a clean bill-of-health, to be put in escrow for ninety-nine years. If at the end of that time a Wassermann test, used every year, has shown negative, a certificate declaring the victim pure will be delivered to him "to have and to hold" for the remainder of his natural lifetime.

A syphilitic suspect is held under surveillance, and tested often enough and long enough to develop in him a syphilophobia, after which he will stand without being tied to any syphilomaniac.

To the uninitiated what I say may appear to be exaggeration, or perhaps entirely false; but the truth is that I cannot exaggerate on the fallacious teachings of modern medical science on syphilis--they are so false that they are beyond belief. The reason why medical fallacy has evolved to such dimensions on the subject of syphilis is because it is backed by law and the small voice of truth is frowned down.

'The majority of doctors who subscribe to the fallacy have no opinions, but they stand up and are counted for any ridiculous theories advanced by the "scientific" heads. In this way the stupid, unthinking majority governs; and when ignorance rules, insane delusion often sets the pace. 'The most dangerous delusions are those that are accepted by the lay minds as scientific.

When parents live in such a manner as to keep themselves enervated to the point of having imperfect metabolism--the point of having secretions and excretions more or less inhibited; when their personal habits are sensual, and the state of the alimentary canal is that of acetous fermentation in the stomach, and putrefactive fermentation in the bowels, their physical state is that of chronic toxin poisoning.

Acetous fermentation in the stomach and upper part of the small intestine has an inhibiting effect on the dehydrating process that takes place in the walls of the stomach, duodenum or small intestine, and liver. In the lower small intestine and the large intestine putrefaction takes place, and the toxins absorbed from this depraved condition is a constant source of poisoning. The lymphatic system arrests the absorbed toxins, and neutralizes them to a certain extent; but the body's immunization eventually becomes so overworked that glandular inflammations become the rule rather than the exception. This is the state that in time evolves the tubercular diathesis, which is described elsewhere under the head of "Diatheses." And, in thinking of diathesis, it should not be forgotten that more is meant than an average susceptibility; indeed, it means a fated certainty that tuberculosis will develop if the same habits of body and mind are practiced by the offspring that were practiced by the parents in developing acid fermentation in the stomach and putrefactive fermentation in the bowels. Without this inherited tendency to develop tuberculosis, no amount of association with people sick of pulmonary tuberculosis will cause its development.

When a subject showing so much degeneration of the vital processes is unfortunate in becoming acutely infected by any type of septic poisoning, ranging from venereal infection, through the infectious fevers, to infected injuries and surgical operations, his system will prove a

favorable culture-medium for the spread of the poisoning. The infectious fevers will develop the worst types. Venereal infections will act very severely, glandular inflammations will spread rapidly, and the system will show little resistance. Treatment will be slow in bringing about a change for the better. Anti-syphilitic medication, without correcting errors in eating, must fail.

Infectious fevers show a great mortality among such subjects. These are the subjects with whom modern syphilitic treatment plays such havoc. The most degenerated of this type are sterile; those who can pass nature's censorship and propagate are curable, and there is no transmission except an acute susceptibility to take on tuberculosis or syphilis, when the habits which lead to degeneracy are formed. A proper environment would lead away from such tendencies; but this influence seldom exists so long as children remain with parents, and parents remain ignorant of the health laws, and continue to practice vitiating habits. Children born. of such parents not only have a tendency to take on parental habits, but they are educated into them.

Postnatal influences cause degeneracies that are often ascribed to prenatal influences and inheritance.

The degenerating habits of the average parents during the gestation period, or during that period when a family is being raised, are quite enough to build a tuberculous or syphilitic diathesis. Excess in eating and excess in venery develop such a state of toxin poisoning that children are born more or less incumbered with flesh, and with such a sensitive state that they have little resistance. They soon develop toxemia; their lymphatic system takes on adenitis and lymphatic inflammations very easily. These are the children who develop borderland symptoms of scrofula, tuberculosis, and syphilis--they can satisfy the physician who is a syphilomaniac with all the thrills of a great discoverer.

Toxin poisoning from excessive eating, enervation from excessive venery and a lascivious mind, and poisoning from stimulants and improper clothing, housing, etc., build a state of body where no, symptoms are lacking for those who are ready to suspect tuberculosis, syphilis, or any degenerate state.

Errors in locating cause are the most tragic features of modern diagnosis. One of the most stupendous blunders of the day in medical science is in giving specificity to disease and ignoring the basic causes which make specific causes operative.

It is easy to graft specificity on a constitutional derangement, such as described above; but without some such cause the body proves a withering desert to the seeds of disease that fall upon it. To be specific and explicit: A child may be born with the tuberculous diathesis, yet it need not, because of that diathesis, develop and die of tuberculosis. Diathesis means susceptibility and inclination to take a given disease. Sterility prevents disease per se from being born.

Parents with vicious habits may deliver an incumbered child across the quarantine line drawn by nature, but nature's health officers are too loyal to evolution to allow the smuggling of infections into life. Degenerative processes must be manufactured on this side of conception.

Children born of parents who are too young are often degenerates. The cause, however, is psychological rather than physical. The first child is often a degenerate, as are only boys in large families of girls, and only girls in large families of boys. But the degeneracy is postnatal and psychical.

Physical degeneracy starts oftener from a psychological influence than from physical influences. However, both often start together, and walk hand in hand to the destruction of health and even life.

A babe is born. It is fed every two or three hours, night and day. It is disturbed in its sleep--in

its brainand body-building--by being put on exhibition to every friend who knows so little as to call in person on the puerperal mother, instead of sending a small note of one line conveying good wishes, and one flower (not a bouquet). Good wishes by telephone, or a personal card or note, with one flower, is all the personal attention any mother should receive from a friend, except her own family, for three months after the birth of the child.

Disturbing babies to look at them, kiss them, and shake them up to see how lovely their eyes are, and what exquisite little feet and hands they have, is nothing more than a delicious bit of hysteria and humbuggery practiced much too often for the good of the puerperal mothers and the babies; for right here is where the building of pathology of infants and heredity is begun.

The foundation of nervous irritability and indigestion starts at once, marked by constipation, white curds in stools, colic, and night and day crying.

Benevolent Assimilation--a Conservative Force

There is a tendency for pronounced types of any diathesis to grow weaker and weaker until unfit to reproduce; then they die out.

As stated often before, disease is not transmissible, but enervation is, Enervation means lost power of resistance, and when resistance is low, the influences which lower it find the high-bred diathetic easy prey, so to speak.

In breeding lap-dogs, the lower their nerve energy and the less, their resistance, the more popular they are among dog fanciers. The nearer death from fatty degeneration the stock at the stock shows is, the more it is admired and the greater is the premium.

One day years ago I was crossing Boston Commons. Moving along in front of me, at a snail's pace, was a woman far gone with fatty degeneration. When I was within ten steps of heir, she turned and said in a lackadaisical voice: "Darling, do you want mamma to wait for you?" I looked in the direction of her eyes, and saw an exophthalmic dog, whose weight certainly contrasted with that of its "mother," for she probably weighed two hundred, and her offspring could not have exceeded six to nine ounces.

The dog's breeding had left it with scarcely enough nerve energy to stand on its legs. It had eyes, but it saw not, and it had life, but it lived not. It was a case of nervous diathesis. It was bred almost out of existence.

Children may be born of parents who come from parents with strong, well-marked diatheses--with low resistance to influences which pervert nutrition--and if the diathesis favors tuberculosis, that disease will develop; if the diathesis is that of gout, the children will develop rheumatism and other gouty affections.

Children of tubercular diathesis, when bred down until they are very enervated, have but little resistance, and when they are abused in a way to pervert nutrition, they develop some form of tuberculosis. All they need to start the morbid process is to be vaccinated with cowpox, which is a bovine type of syphilis. Just what the difference is, the highest medical authorities do not know; the only apparent difference being that one develops in the human being and the other develops in the cow.

In a pronounced type of scrofulous diathesis, vaccination is all that is needed to set up a tuberculous or syphilitic morbid process that will be pushed on by wrong life to destruction of health and life while the victim is quite young.

Vaccination may start a morbid glandular derangement that will favor the development of all the catarrhal diseases peculiar to child-life.

Of course, infections from toxin absorption in the intestine are common to children of diathetic

type.

Children from a long line of ancestry favoring the development of the scrofulous, tuberculous, or syphilitic diathesis are weaklings, with flabby muscles, who develop adenoids and enlarged tonsils early. They develop skin diseases of an impetigo variety, and their lymphatic glands are very prone to take on inflammatory enlargements.

There are many fatal diseases developing in these children before and at puberty because their resistance is low and they are subjected to the same disease-producing habits as those from whom they inherit their type of health.

According to Darwin, this is the way the unfit are made to disappear.

A dyscrasia or diathesis is the sum of erroneous living practiced through generations. Diseases peculiar to a diathesis are not long in developing when the strain is pure and inbred; but where a beautiful tuberculous girl, with long, silky eyelashes and well-rounded body and limbs, compels an Apollo of the sanguine, vital temperament to fall in love with her, the tuberculous strain is diluted and the half-tuberculous children are given power to live; whereas, if the girl had attracted a young man, like herself, of tuberculous diathesis, the children of such a union would be born to die early.

Influence of Chronic Intoxications

Chronic food poisoning from the habit of overeating causes enervation. This state favors the development of any disease to which the one suffering from enervation is prenatally inclined. Anything that enervates those with a diathetic inclination will drive them into developing whatever disease their diathesis inclines them to develop.

Children born of parents enervated from chronic intoxications often start life with a great show of brilliancy; they are bright--indeed, precocious. But they soon come to an end, settling into disease or intellectual mediocrity. The cause for this may be one of many influences. The children are born and start life under domestic influences--a style of living--that have ended in alimentary, alcoholic, or other forms of inebriety in their parents; and the most natural thing for the children to do is to follow the parents in dietetic errors, and then, as they grow older, they adopt the coffee and tea habits, and perhaps later the tobacco and alcohol habits.

Excess in any one line paves the way for excess in other lines. Intoxication-be it from the absorption of toxins in the bowels from overeating, nicotine in the mouth, or alcohol in the stomach--develops enervation; and the more enervated a subject becomes, the more craving he has for more and greater varieties of stimulants, until the nervous system and nutrition are impotent. During the early stages, when the nervous system has strong reactive power, the mind is unusually bright--children show precocity; but the evil day of enervation, followed with prostration, must and does come. Then dullness follows brightness; will is lost; eccentricities come to the surface. The real artist may continue to produce in a way to please those who are not critical, but certainly not to please the artist himself, if he were normal.

Debauchery is not confined to physical stimulants. Ecstasy is mental debauchery. All cases of extraordinary precocity are types of mental diathesis brought on from idea--drunkenness. The emotions are fed with a consuming eagerness to drink at the fountain of all knowledge; the idea and desire become consuming; an ecstatic state is developed; and as a result we see the boy Christ "sitting in the midst of the doctors, both hearing them and asking them questions." On being asked by his simple-minded parents to explain why he was away from home, his answer was:

"Why look ye for me? Wist ye not that I must be about my father's business?" He was not understood, because the moral mind cannot look through the veil of ecstasy.

Only a short time ago the world of education was astonished by a boy of eleven years of age

lecturing to the Harvard professors on the fourth dimension. This is a type of ecstasy--mental inebriety. The enervation that must follow may show the will and all the positive elements of his character impotent; or the reaction may be so great as to sweep this precocious youth out of life.

These cases of premature--or, rather, extraordinary--mental developments were prepared for precociousness before birth. The parents developed a mental diathesis, and as soon as these youths were subjected to mental stimulation they developed mental inebriety.

Children, when once launched on the road of intoxication traveled by parents, will speed up and go much more rapidly and come to an end much sooner.

All habits--mental or physical, moral, immoral, or unmoral--are just so many varieties of intoxications; and, when indulged in without restraint, enervation, and the consequent perverted nutrition, follow. The children resulting are stamped with a diathesis which makes it easy for them to develop in the habits of parents.

As disease has no individuality per se, but is, first, last, and all the time, simply a state of health, all efforts in the line of healing worth anything are those that remove habits which lower the standard of health.

Moderation in all things builds a self-controlling diathesis that enables children to control themselves. Poise is as transmissible as any other habit.

Convulsions follow in the wake of parental drunkenness. Infantile paralysis is the effect of wrong nursing, and endemic or epidemic influences, on a child that is stamped with neurosis as a diathesis.

Unless we can fully comprehend the truth that normal children cannot be made sick; that such diseases as infantile paralysis take hold only of children who have been prepared by parental excess--perhaps excessive venery before and during the pregnant period, plus table excesses, and maybe alcoholics--we need not hope to build an immunization that will do away with epidemics. The part played by vaccination in breaking down resistance should never be forgotten.

Epilepsy is a neurosis built by parents and transmitted to children. Alcoholism is supposed to be the chief among all intoxications that build the neurosis in children which leads to epilepsy. In all probability, excessive venery stands at the top of all causes.

Saturnism (Lead Poisoning).--When the mother is poisoned, she usually aborts. When the father is poisoned, C. Paul found that out of one hundred and forty pregnancies more than eighty were abortions. Among the children born alive, one-third died the first year and one-third more before the third year. Those children who live to maturity are liable to have all kinds of nervous diseases.

One thing is always observed, namely: when degeneration is established from the use of any stimulants, sterility prevents propagation.

Hereditary Syphilis.--That symptoms produced by toxic poisoning caused by ordinary sensuality in those of scrofulous diathesis are often ascribed to hereditary syphilis cannot be successfully disputed. This I have demonstrated so often in my practice that the truth is common-place. For example: The abortion habit is curable by correcting vicious dietetic habits and venereal excesses. Pemphigus, when located on the soles of the feet, is declared to be absolutely characteristic; but the truth is that such skin diseases are developed prenatally and after conception, and are due to perverted nutrition brought on the mother from the sensual indulgences too common in, if not characteristic of, pregnant women.

The average woman's nutrition is perverted before conception, because of the universal habit of overeating and overindulgence in licensed sensuality. Add to this state the sensual

indulgences above referred to, and countenanced by good society and everybody's religion, and we have the ground-work for all the diseases to which the human offspring is heir. Modify this picture of perverted nutrition by poverty, squalor, and the corresponding psychology; then add the complicating influences exercised on these types by fear, hopelessness, dispair, and a disorganizing medication, as practiced by the representatives of modem medical science, and no imagination, it matters not how vivid, can picture a pathological inferno with more types of loathsomeness than evolves from the states here described--all, too, without anything more "specific" being added.

Where the above pathology is pushed to organic degeneration, sterility prevents its propagation; but there are enough functional diseases manifesting in the fetus, built by licentiousness in parents since conception, to satisfy the imaginings and perverted reasoning of our most pronounced types of syphilomaniacs.

Perhaps those who read my argument will say: "Why shall we accept one man's opinion against the opinion of the whole profession?" What can the whole profession know about a subject that it has not investigated? If the whole profession has, refused to watch the progress of perverted nutrition, as it develops under the sway of sensuality, and has not refrained from the use of medication, how is it to know what uncomplicated pathology is?

If the profession has refused to watch the progress of disease under fasting, or light dieting, and no medication, how is it to know what I know after years of such "watchful waiting?"

No man's opinion is worth anything on a subject about which he knows nothing, and to multiply such an opinion by a hundred, a thousand, or a million like opinions does not change the worthlessness of the first opinion. A fallacy multiplied by a hundred million minds does not make a truth. To force Galileo to abjure the Copernican theory ninety years after it had been published by Copernicus did not make the world flat.

Hereditary syphilis is a bugbear, the offspring of original sin, the fall of man, and like relics of the child-mind.

Hereditary syphilis is a disease made this side of conception, and is not transmissible. The child that is born with symptoms of disease is infected after conception.

It is a fact that we have the scrofulous diathesis, which means that the people coming under this head are more inclined to develop tubercular diseases, syphilis, and the thousand-and-one small diseases and symptoms that come under the head of scrofula, tuberculosis, and syphilis, than they are to develop symptoms of gouty diathesis.

It is worth while to try to comprehend that evolution had the preponderance of power, that the cosmic urge is on the side of development, and that there is a point beyond which degeneracy cannot go-and that point is conception. This is so true that no analytical mind can be in doubt when the great and profound truths of history are known and well digested.

Syphilis is a filth disease--a disease of clothes and sensuality. Man is slow in learning how to wear clothes--his morality transcends his estheticism. From a health point of view, a filthy man is much safer nude than clothed.

Syphilis is a disease reaching back far beyond the birth of the idea of specific treatment. Long before modem medical science, with its dogmatic, fatalistic teachings regarding "universal taint" and hereditary syphilis, King David confessed to his God: "There is no soundness in my flesh . . . no rest in my bones, because of my sin ... My wounds stink and are corrupt because of my foolishness . . . My loins are filled with a loathsome disease, and there is no soundness in my flesh . . . the light of mine eyes . . . is gone from me. My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off."

This confession was by David for his people. The symptoms were those of syphilis. If the

Jewish people were so diseased as to be shunned in that early day, before mercury, potash, "606," Wassermann tests, plays on the order of "Damaged Goods," and all the other insanities and inanities were discovered, what prevented the race from being wiped out? If circumcision was all the treatment, except fasting, it would be well for the wiseacres of the medical profession of today to tell us why the disease needs more attention today. Every other disease known to antiquity has grown lighter, if it has not become extinct, in the march of civilization.

The literature that has grown up on the subject of syphilis and its mystical habits is weird, and so eminently scientific that nothing can possibly evolve out of science to equal it, unless it would be a cure for the dreadful disease. But this is obviously impossible; hence the glorious achievement of the scientifico-syphilo-maniacs is likely to stand unparalleled in all medical history.

If I should undertake to refute all the freakish pathological phenomena attributed to syphilis, I should be occupied for the remainder of my days, and then leave the subject unfinished.

The following I give as a sample of myriads of analogies: "The microbe may remain inactive in some corner of the organism, and become active several years later, on the occasion of a traumatism or any other cause." This can be duplicated in those who are autotoxemic, and who are jotted out of "status quo" by an unusual shock.

We might tolerate the profession's syphilomania if it were not so pessimistic and fatalistic. But from years of experience we know that nature can throw off every disease that has not become organic; all that is necessary in the line of treatment is to remove every influence that is obstructive to the body's functioning. We know that the body is busy throwing out toxins, and if there is an accumulation--if elimination is not equal to accumulation--all that is necessary is rest (physiological rest), and nature quickly returns to the normal. There is no stimulation to elimination that equals physiological, physical, and mental rest.

That drugs will bring about elimination is true; but they bring a disappointing relief, for they excite to action and leave the organs more enervated. As a consequence, a relapse follows--or an apparent relapse; for, as a matter of fact, such relief is disease-building.

Hereditary tuberculosis and hereditary syphilis are analogous when found in a syphilitic or scrofulous diathesis--in a scrofulous subject coming from a father and mother of tubercular diathesis; but when one parent is scrofulous and the other gouty, the heredity is a modified scrofula or syphilis.

There is no hereditary tuberculosis. As stated before, diathesis means a tendency to develop given symptoms of diseases. Disease per se cannot cross the line drawn by sterility. To make an exact statement, diathesis means that health will deviate in a definite manner.

A child with the tuberculous diathesis well established may develop utero-tuberculous derangements.

Pronounced unmixed types of diathesis are hard to find. The tuberculous and gouty stand out more plainly and are recognized by the unskilled. A pronounced diathesis predetermines the type of diseases to which the subject is heir. The advantage of knowing to what class a child belongs, is that mistakes in climate, food, clothing, and occupation may not be made.

The tubercular diathesis should live out-of-doors, and be fed fruits and vegetables--very little animal food. The gouty diathesis develops gout, eczema, neuralgias, neurasthenia, etc. Animal food, with fruit and raw vegetables, should be the diet.

Both diatheses need grain during the developing period.

Arthritism, or gouty diathesis, presents the following characteristics: gout, eczema, nervous derangements, such as neuralgia, hemicrania, hypochondria, neurasthenia, gas, diabetes, gravel,

stone in the liver, kidneys, and bladder. When the father has gout, the son has asthma, and the daughter develops arthritis deformans. A child of this diathesis has headache at puberty, and may develop asthma or rheumatism; at about middle life, gout develops, and he dies of apoplexy.

It is said that gifted people--geniuses--are of a gouty diathesis, and are very inclined to develop single faculties to their own destruction.

The scrofulous diathesis starts with catarrh; nose, throat, and ear diseases; tubercular joint and bone diseases; catarrhal inflammations of all mucous membranes; glandular diseases.

Congenital malformations are said to start from infections. No doubt the nervous systems of the mothers have much to do with fetal development.

Fetal development is a large and interesting subject, but not necessary to this book. The readers who are interested should go to their public libraries, where they will find textbooks on the subject.

Physiological heredity is the innate power of the cell to reproduce a successor.

Ribot declares it to be a biological law that enables living beings to repeat themselves in their offspring.

There are two laws, however: first, the law of conservation--retaining ancestral type; and, second, that of evolution.

Conservation is the greater. Indeed, when we see with what tenacity humanity clings to all beliefs and customs, we sometimes wish that nature would relax her vigilance. But when we see how necessary it is for great resistance to be present all the time to prevent disease--degeneration--from crossing the lines drawn by heredity or transmission, we are made to rejoice that degeneration cannot be transmitted.

There is a temptation to write on the subject of reproduction and other features of heredity, but space will not permit. Darwin, Ribot, Haeckel, Weissmann, and many others will furnish the reader material out of which he may formulate his own belief.

10. Inflammation

Definition.--A burning. Any local influence that disturbs cell nutrition may be said to lower its standard of life or health, and this state we call disease. The phenomena are hyperemia, pain, heat, swelling, redness, and disordered function--impaired nutrition.

When the influence is traumatic (a wound or injury), there are two reactions which follow--namely, local and general. The local reaction causes a change in the nutrition of the cells injured and in their neighbor-cells. The general or systemic reaction causes a general nutritive change in keeping with the severity of the local injury. An injury may be so small that the general reaction is nil; yet, if the reparative process is interfered with because of inhibition of elimination and drainage, the systemic reaction may be so great as to cause death.

The simplest wound is a cut. When left to nature, the wound gapes. The wise mind will interpret nature's speechless signs about as follows: Nature is always conservative, and if there were danger in a wound standing open, it would be natural for the mechanism to close it, the same as the blood vessels close to stop bleeding. The blood vessels contract and retract, causing the flow of blood to be very light; then, on account of the slight flow of blood, a clot forms in the mouth of the cut vessel, which seals it most effectually. Where the blood vessels are torn or twisted apart they do not bleed. In certain diseased states the blood will not clot, and bleeding continues. It may be objected that wounds to blood vessels do sometimes bleed the injured to death. Yes, that is true. Every conservative provision of nature can be, and sometimes is,

overcome, but that does not alter the fact that nature places a special guard over each one of the body's vital functions, the normal action of each and every one being necessary to total full health of the body, and that each guard must be vanquished before the function over which it presides can be deranged or checked.

If microbes were dangerous to open wounds, they would not be in the atmosphere, in us and about us. If it were not for the reciprocal relationship existing between the microbes (organized ferment) and the enzymes (unorganized ferment), cell development could not take place, and tissue growth and reparation of injuries could not be brought about.

If the microbes could not get into a wound, either at the front or at the rear--either from the outside of the body through the medium of the atmosphere into the wound, or through the lungs into the blood, and, by virtue of the circulation of the blood, into the wound--healing could not take place. Organized ferments are as necessary to life as unorganized ferments. We know that cooked food, boiled water, and canned fruits are not so wholesome as foods not cooked. The false notion is sometimes advanced that uncooked vegetables are disease-producing. This is true only when the uncooked vegetables are diseased.

To kill the vitamin or enzymes in fruit, vegetables, or meat, by cooking, destroys the reciprocal balance between enzymes and microbes, resulting in decomposition. If, however, the cooked products are placed in vacuum, they will remain without change.

The Lister dressing places wounds in a state free from the access of germs; hence there is no danger from interfering with nature's plan of open drainage. But if the dressing is imperfect, allowing the germs to enter, and does not allow free drainage, the balance between germs and enzymes--between organized ferments and unorganized ferments--is lost, and the result is decomposition with infection, which ends repair, and sloughing of the parts takes place. If the sloughing establishes drainage, a reciprocity--a balancing of activities--between microbes and enzymes is once more established, and healing proceeds; but if sloughing does not take place and drainage fails to be established, organized ferments (microbes) gain the mastery over the unorganized ferments (enzymes), decomposition and disorganization of the blood take place, with the generation of sepsis which paralyzes the nerve centers, causing death in a very short time. If feeding is pushed "to keep up the strength and supply waste," the enzymes are used up, reparation of the wound--healing--does not take place, and the reparative material breaks down into pus.

The activity of the circulation in and about an injury takes place as one of the reactive phenomena following the shock of an injury, and causes swelling, pain, redness, and heat. This is a normal inflammation, necessary to reparation. To secure healing material, a surplus of blood must be taken to an injured part; and so much is taken that the environment of an injury is filled to overflowing-for nature is prodigal. This is the cause of the swelling, pain, redness, and heat; and the pressure on the nerves causes pain--the pain of inflammation. A surplus of blood means a surplus of heat; but so long as the chemistry of the elements is physiologically maintained, the temperature--inflammation--will not be above the normal visceral temperature, and the healing will then proceed normally. On the other hand, if the nutrition of the wound is perverted by having the waste retained, microbic fermentation takes place, which changes the chemistry, and decomposition supplants composition or healing. Normal inflammation, due to the fermentation caused by enzymes, is supplanted by abnormal inflammation, due to the fermentation caused by microbes. The first phenomenon is health as it appears when the reparative processes are working without a handicap; while the second is health as it appears when the reparative processes are working under a handicap.

Physiology and pathology are not opposing forces. They are two phases of life, and health is the thermometer. Health may register high, and it may register low; but the degrees between the extremes of full physiological health and full pathological death mark the standard of health.

Instead of the microbe per se being pathologic, it is physiologic and necessary to the life and

health of the cell, or the great aggregation of cells known as man.

The great importance of drainage is obvious when the above facts are considered, and such facts should enable the analytical mind to know that organized ferments (microbes) have no more to do with inflammation than unorganized ferments (enzymes). The real cause is obstruction to the normal operations of repair. If microbes must be pent up in a wound before they can set up their peculiar fermentation, then the cause of the pent-up condition is the cause of the morbid process.

Irritation and overfeeding cause too much secretion, and too much secretion is disease-producing.

Enzymes are secreted by all the organs and tissues of the body. When they are secreted in less quantities than normal, disease results. It would not be the truth to say that enzymes are disease-producing; yet too little or too much will result in imperfect metabolism.

Food is stimulating and body-building, but when eaten in too great quantities it is disease-building. It would not be the truth, however, to declare that food is disease-producing. Unless microbes can produce a specific disease without unnatural environments to aid, it cannot be truthfully said that they are disease-producing; if they are, then every benign influence may be said to be disease-provoking, because disease follows its perversion. The air is irritating to a fresh wound, but the irritation must be for a good purpose. It is; it checks the discharge of serum, and dries the surface of the wound so that reparation can take place behind the protection. The dry covering acts as a stay or fixation expediency, to secure the quiet necessary for healing. If the sealing-in of the wound is too close, and danger of infection threatens, an itching takes place, which forces rubbing or scratching, and this breaks enough of the covering to allow the escape of pent-up pus and waste matter.

Thus we see that nature is not afraid of air, nor of the dust and microbes which it carries. We see that nature does a splendid job, and her theory and practice are sound as science. The only objection is that her work in healing wounds is severely crude at times, and that it may be improved upon--only, however, in manual dexterity. The surgeon may lend nature his hands, but nature certainly does not need his brains. A good combination is for nature to lend the doctor the wisdom to carry out what she would do if she had hands.

Not long ago I read the extraordinary advice of stitching a wound together without the preliminary of cleansing, and without any attention to drainage except massaging the edges of the wound. All I have to say about such a procedure is that the Lord is on the side of that surgeon, and permits him to exploit the laws of nature in a most grotesque fashion.

A safe plan for surgeons who are not "anointed of the Lord" is carefully to drain all wounds that are sewed up, and, if quick healing is desired, to keep the parts as quiet as possible; indeed, keep fingers away from the wound, and especially those of the patient. If these precautions are not observed, the surgeon may find, after it is too late, that he may say with Pope:

> Pretty in amber to observe the forms
> Of hairs, or straws, or dirt, or grubs, or worms.
> The things, we know, are neither rich nor rare;
> But wonder how the devil they all got there!

It is just possible that the great physician who penned the surgical heresy referred to was posing and, for the sake of being thought original, suffered his logic to run counter to natural law and order. And again we are made to agree with David: "Verily, every man at his best state is altogether vanity." Selah!

Hands, with nature's wisdom, will clear the wound. Place a drain in the bottom of it, in such a manner as to secure perfect drainage; then bring the wound together, closing the gap and

coaptating the cut surfaces as nearly as possible; then apply a general dressing that will not interfere with drainage, but will lend support and steadiness, so that healing will not be interrupted by unnecessary motion. This is nature's wisdom turned to account.

Healing is interfered with by inflammation, or the causes that lead to inflammation.

We have seen that the first reactions stop bleeding, and cover the wound with serum and fibrin, which protect the surface by giving it rest from continuous irritation from air, dust, and insects.

If the cut surfaces are brought together, the healing must end much sooner than if a bridge of tissue must be built to span the gap.

The Wound and Natures Mechanism

Nutritive material is brought in abundance to a wound, caused by the irritation of the injury. Irritation, pain, redness, and swelling follow injury. At first, irritation causes contraction of blood vessels. This stops hemorrhage. As a result of the contraction--overstimulation--reaction sets in; the overstimulated blood vessels are enervated, and because of the enervation they relax and fill with blood; then exudation takes place. The cell-building elements cover the cut or mutilated surface, and crowd the border so much that there is a heavy discharge through the drain, if the wound has been properly dressed or has been left open. Where drainage is unobstructed, the healing behind the barrage of nutritive material thrown out moves along without a halt. The proportion of enzymes and nutritive material furnished by a healthy, not overfed, wounded individual insures rapid renewal of tissue. If obstruction takes place, microbic fermentation is set up in the pent-up surplus. This is a conservative process; for it thins the discharge, irritates the wound, and causes an extra amount of serum to be exuded. The purpose is to melt down any incrustations and new-made tissue that is obstructing drainage. When this fails, and the microbic fermentation gains the mastery over the enzymic fermentation that is protecting the healing surface, then the enemy--toxin or septic poison--pushes its way into the circulation, and septicemic fever and death follow very quickly.

Inflammation is almost nil when a wound is in a state of health; for it must not be forgotten that wounds, as well as all the phenomena we call disease, are different states of health. The strategic move for preserving the health of the wound, when it becomes obstructed, is little short of a miracle in appearance; yet it is the most natural workingout of cause and effect. We have seen that, unless the obstruction is overcome, the state of health will be lowered until it ends in death. In obstruction to wounds, nature destroys to make alive.

All nutritive changes which we call disease are due to influences which increase, decrease, or pervert cell-life; every symptom called disease is a conservative move; and, when not understood, or suppressed as doctors (not physicians) do, harm follows.

Inflammation is due to the local speeding-up of the nutritive processes caused by injury. The injury may be physical or chemical--a cut, tear, bruise, bum, blister, or a local irritant of any kind. When a wound is healing normally, the heat is about that of the normal viscera--namely, 99° to 100' F. When the temperature exceeds 100°, there is something going wrong--either the drainage is not perfect or the patient is eating too much.

The phenomena of inflammation are pain, heat, redness, and swelling.

Where the increase of heat is not more than one or two degrees above normal--above the temperature under the tongue--all is well with the wound.

The whole question of wound infection hinges on drainage. Any wound that drains well may be smeared with the most virulent septic poison without infection. The infecting agent must be rubbed into the wound so that it will be pushed into, or below, the granular surface. The infecting material must find a lodgment so secure that the flushing--enzymic--serums cannot

dissolve and wash it away.

Injuries in canals, tubes, ducts, and air passages will heal normally if drainage is not obstructed; but, when obstructed, the usual conservative methods of nature may further obstruct, and death may result from a rational therapeutic measure mechanically obstructed in its execution.

It is painful to watch members of the medical profession floundering about in a vain endeavor to save a patient from death from septicemia by injecting into the veins or subcutaneously a solution of salt, or a hastily prepared serum, regardless of the fact that the source of the infection has not been discovered; or, if it has, no adequate effort is being put forth to overcome it. What must be the conclusion when such floundering is observed? Obviously, that either the medical gentlemen are acting, or they have not a very accurate knowledge of the principles involved.

If the case is one of septicemia, following abortion, an intra-uterine douche of an hour's duration (hot salt water) is the first thing to do; and it should be repeated every three hours, if the patient continues to live. The douche removes the infecting material, establishes drainage, relieves the nervous system, brings on relaxation, lowers the tension that is interfering with all the life-processes, and, neither last nor least, places the organism in the most favorable state for resumption of secretion and excretion. A hot bath of from thirty to forty minutes' duration will prove a great auxiliary to the douches. Certainly no food should be given; for the work of elimination and neutralizing the poison--antidoting the organized ferments by the unorganized ferments, the germs by the enzymes--must not be hindered by interrupting the enzymic activities of repair with an intake of food, which, under the circumstances, is wholly superfluous and disease-producing.

Why does an injury or a local irritant or irritation cause inflammation at one time and not at another?

It is all a question of natural immunization; and natural immunization has for its elements an alkaline state of the blood, a normal nerve energy, and an optimistic psychology.

The blood, if normal, is alkaline and well charged with enzymes.

When an injury is received, there is first a shock, which causes a constriction of blood vessels. In time there must come a reaction, and the reaction equals the shock--the dilation of the tissues (blood vessels) will be equal to the contraction from shock. This means congestion or crowding of the parts, and, as in the case of a congested thoroughfare, traffic or the function of trade is impaired--too much blood is in the parts, causing an exudation, There can be no rest or standing-still; the exudates must be excreted, thrown out, or reabsorbed. To fit these exudates for absorption, they must be treated with enzymes, in order to fit them to reenter the circulation. If there is enervation and a lack of enzymes, then it will be "up to" bacterial fermentation to prepare the exudate for expulsion from the body. If there is no break in continuity--if there is no open wound--then the bacterially treated exudate must be absorbed into the general circulation, causing infection; or the infection will be corralled by walling in the devitalized territory and lining the inclosure with an impervious pyrogenc membrane. The pus that forms is retained--not allowed to escape into the general circulation; for, if it should, it would cause pyemia. If the body's natural resistance is too low to fortify it in this way--if it cannot localize and immunize the infecting material--then general infection takes place and the victim dies of septicemia.

Anything-any influence that causes irritation--attracts an extra flow of blood to the point of irritation. The engorged blood vessels exude a fluid. This fluid must get out of the body. If it cannot, it must be digested and reenter the circulation; or it must be bacterially liquefied and carried out of the body through the open wound. If there is no point of escape, an abscess must form, as described above, or general systemic infection must take place.

If the point of irritation is the pleura, the exudate may accumulate, and, from lack of bacterial

influence, the fluid is neither digested and absorbed, nor decomposed and converted into an abscess of the pleura, nor absorbed, creating septic fever and death; but remains a bland, innoxious fluid in the pleura.

The life of man, from his entrance to his exit in this world, is a process of metabolism. If this process is done well, he has health and well-being; if the process is carried out badly, he has impaired health.

Metabolism is carried on well or badly. When well done, we say that the individual is well--healthy; when badly done, then man is sick. Health and disease are states, not entities.

Inflammations of Mucous Membranes.--The simple forms of inflammation are those caused by the toxins generated by the influence of organized ferments on carbohydrate foods. When no more food is taken than can be utilized by the body--than can be fitted for assimilation by the unorganized ferments (enzymes)--the body in all its parts remains in a state of health called normal. Secretions and excretions are nearly enough balanced to insure health.

If, by mental or physical habits, nerve energy is lowered--if enervation is pronounced--secretion and excretion sink below the normal; this lowers enzymic production and increases the amount of waste products circulating in the fluids of the body. If the usual amount of food is eaten. digestion will not be perfectly carried out. A certain amount will be left over and above this amount that can be digested. This left-over material must undergo microbic fermentation.

If the organism is abused by overeating, overclothing, or living in too hot houses, or when the body is especially enervated, and is then exposed to low temperatures, or passing from hot houses, hot beds, to cold air--winter --temperature--irritation of the mucous membranes of all exposed canals results, until catarrhal inflammations become a constant state of the most exposed of these membranes.

Catarrhal inflammation of mucous membranes may be considered an index of the state of digestion and assimilation. The catarrhal sign means an oversupply of food--in some cases an oversupply of food and improper food. as well as improper combinations.

This catarrhal state is general and is the culture-medium for the development of all sorts of affections which we call disease.

For children to develop the affection known as diphtheria, all they need, in addition to their general catarrhal state, is a sudden change in clothes, weather, environment, and other influences, which brings on enervation; then add to these influences an unusual meal, or an unusual amount of meat, sugar, and rich cooking, such as served on holidays.

A child may be very enervated from whatever the cause, but it will not develop diphtheria unless it is poisoned by an oversupply of animal proteid.

11. Septicemia and Pyemia

Septicemia is poisoning from putrefaction. The poisoning may be slight and local, or it may be general and so intense that it overwhelms the patient, causing death in a few hours, and certainly in a few days.

A type of local as well as general septicemia may be furnished by puerperal subjects.

An injury at childbirth--a simple tear in the neck of the womb--may be bathed in a putrefactive lochia. The puerperal woman may not be kept clean--douches are neglected until the discharge is allowed to become septic. The torn part is submerged in this putrefaction, and enough is absorbed to set up a local inflammation and derange the blood so as to ruin the mother's milk for the infant, perhaps causing convulsions; or, if not so bad, then the milk may cause such a derangement of the stomach and bowels as to force weaning. In the mother's case, she may get

off with a local ulceration, an endocervicitis, or an endometritis; or she may develop a phebitis (milk-leg), and systemic infection may follow, leaving the way clear for a general or organic diathesis to establish a predisposed disease--namely, tuberculosis in one or more of its many phases, kidney, heart, or nervous diseases, or gout in the various forms.

When the septic infection is great (as it is when the womb is misplaced and drainage imperfect), absorption to a fatal amount is no infrequent happening.

There is a cut-and-dried classification of toxernias which corresponds to a bacterial classification that is legionary. To minds which respond only to the mystical, intricate, complex, and infinitely imaginative, bacteriology, with its infinite variety of germs of diseases--its theory of bacteriemia and bacterio-toxemia--certainly must be satisfying to a superlative degree.

Bacteriemia.--Bacteriemia is where the bacteria invade the entire organism and develop septicemia, without causing the special lesions; or they locate in viscera or tissue, and cause purulent foci (pyemia).

Bacteriemia, then, is general infection. In bacterio-toxemia the bacteria remain localized and secrete toxins, causing intoxication. This is an ingenious explanation which, defined, is a distinction without a difference. Indeed, according to the same authorities, the blood will not tolerate bacteria; it kills them, or forces them to ensconce in the tissues of the body,

Pyemia is distinguished from septicemia by the germs locating in the tissues and becoming purulent foci. True pyemia is exclusively ensconced in the tissues, while in septicemia the microbe is present in all parts of the organism. 'These are bacteriological teachings.

The only theory that appears logical--consistent with the unity of scientific knowledge and philosophy--and works out satisfactorily in a clinical way, is that bacteria, or organized ferments, begin their work where enzymes, or unorganized ferments, leave off. When physiological fermentation leaves off, pathological fermentation begins. In nature's economy, one is as necessary as the other; for one process is organizing and the other is disorganizing: one is evolution, the other is dissolution.

The old demonistic idea of warring forces--of good and bad being locked in mortal combat--is worthy of the childmind, but certainly ill becomes enlightened interpretation.

Science is nature defined. It is possessed of rigid necessity and absolute universality. Philosophy is the unifying of all knowledge--all science--into a logical unit. Unless fragmentary knowledge can be unified into a consistent whole with all other knowledge, such knowledge is not truth. Philosophizing is trying out knowledge--it is testing and proving the truth of experience.

According to the logic of absolute science and philosophy, a unitary cause of disease must act under all circumstances, and it must continue to act so long as cause and the object on which it acts are occupying the same environment. If this cause acts only under special and favorable circumstances, then it is not a cause, but one of a series of causes, any one of which is as important as any other. To build a system of cause and cure on one causative factor, taken from a multiple of factors, is building a fool's paradise. And that is exactly what our so-called specific cause is in our bacteriological system.

Germs of fermentation take on specificity from the toxins--chemical medium--which they themselves cause to generate in a given compound of elements. Single elements are proof against fermentation; only compounds are susceptible to organized or unorganized ferments. Organized ferments dissolve organized compounds, and fit them for elimination; the toxin is a resultant of the action of the ferment on the compound. The toxin is potential in the compound, but not in the germ.

It is true that the withholding of food from a septic patient ends the septic fever. Fasting stops

disease, because fuel for fermentation is withheld. Bacteria appear to be unable to cause fermentation when the organization is normal in energy and possessed of sufficient unorganized ferments to digest all the food taken into it.

In the light of these facts, the proper treatment for toxin poisoning--septic or pyemic poisoning, syphilitic or gonorrheal poisoning (the toxins representing the decomposition of several tissues in the body)--is to withhold food until nature has eliminated all toxins. Then feeding for the first week should be fresh, uncooked fruits and vegetables.

Septicemia--Infection always means that there is retention of a superfluous amount of reparative material. and confinement of this material in the womb, or in wounds, or in excretory canals or ducts, until putrefaction takes place. If the amount of infection is not overwhelming, and fatal, it may end in suppurative inflammation and formation of septic abscesses.

Milk fever, traumatic fever, putrefactive fermentation, syphilitic and gonorrheal infections, are different forms of septicemic inflammations. The distinguishing characteristics are furnished by the tissue involved, To make my meaning clear, think of the action of organized ferments (bacteria) on carbohydrates and fats. The result is to develop an acid which is more or less an intoxicant, but very unimportant compared with the toxins generated by the ferment on protein--meat--substances containing sulphur and nitrogen. It is probable, however, that excessive fermentation in the digestive tract of carbohydrates does impart a putrefactive change in the proteid tissues of the body and is the cause of offensive odors, hardening of tissues, inducing sclerosis and cancer.

Sclerosis.--Sclerosis means hardened tissue. Tissue in that state is very feebly vascular. It is white, firm. and resistant, grating under the knife. Keloid, which is an exaggerated development of scar tissue, is a form of sclerosis. Cirrhosis of the liver is a type of sclerosis, and atrophy of the liver is another form.

Organs that have been hardened from inflammation sometimes take on compensatory hypertrophy (enlargements). Then is presented normal tissue endeavoring to replace hard tissue, and this modifies the form of the organ.

Fistulas are the result of a hardening of the walls of an opening through which pus has been discharging. Instead of the walls on an abscess closing and healing, a hardening of the walls takes place, and the result is fistula.

When urethritis has continued for months, the walls of the canal harden at those points where the inflammation has continued. The result is hardening or stricture. Stricture of the urethra may form with no more to irritate the mucous membrane than unusually strong urine from meat eating.

When an irritation has continued for months or years, as in continuous acidity of the stomach, a chronic inflammation is produced, enlarging, and then hardening. If the offense to the tissue is continued, the end of the degenerative process will be cancer. Cancer is a form of spontaneous gangrene. When tissues have hardened to such an extent as to cut off the oxygen supply, there is nothing left but dry atrophy. If, however, there are islands of tissue throughout the mass of **atrophying hypertrophy** which still receive nourishment, life will continue until the hardening encroaches on the inlets of food to such an extent that nourishment is shut off. Then decomposition takes place, with the development of toxins; following which comes, slowly but surely, systemic infection.

An acidosis of a subtle form may develop a general hardening of tissues. If the circulatory system is most involved, death will come from atheromatous diseases--arteritis, endocarditis, apoplexy, paralysis, or arteriosclerosis. If the glandular system is most involved, then tuberculosis may follow. If serous tissue is most involved, perhaps cancer will be the ending of life.

The probabilities are that when syphilis, tuberculosis, gangrene, sclerosis, hypertrophy, atrophy, and all the various forms of infections and so-called contagions, are understood, they will prove to be different forms of one and the same thing; namely, sclerosis--or infection, inflammation, gangrene, death; and the various causes are all different forms of one and the same thing. Multi-specific causations, followed by multi-specific effects, as a basis on which to build a rational theory and practice of healing, are so out of keeping with the teachings of science and philosophy that it is a continuous surprise that such a system can receive the endorsement and support of as large a body of intelligent professional men as are found banded together under the banner of modem medical science.

'The whole phenomenon or complex of life, health, and disease may be summed up in three words; namely; digestion, nutrition, infection.

Reparation of Lesions.--When an injury has broken down and destroyed cell-life--when inflammation from any cause has broken down and destroyed cell-life--reparation cannot be perfect. The destroyed cells will be supplanted by sclerose tissue. This scar, or cicatrix, is more or less of a menace to the health and life of the tissue in which it is located, depending, of course, on the vital importance of the organ or tissue. If of the valves of the heart, the ending will be fatal without a rational treatment begun in time; if of the neck of the womb, a cancer may be the ending, if proper treatment is not instituted in time; if a gland of the breast be the injured part, then, without proper treatment, cancer will end all; if a stricture of the urethra, and neglected, bladder, and possibly kidney, disease may be the consequence; if a catarrhal thickening of the mucous membrance of the bile duct, and its obstruction is not relieved, stone in the gall bladder will result; if the hardening is of the spinal cord, ataxia and other forms of paralysis may result. The affections that result from hardening can only end with those limitations of tissues and organs of the body; and offenses to the tissues and organs of the body which may cause cicatrical tissue end only with the sum of everything in the environment of man capable of injuring his body and mind.

The lower the order of tissue life, the more power it has for regenerating. In a few animals it is possible to remove a portion of the liver, spleen, or kidney, and it will be rebuilt. It is said that the mutilated organs are reproduced according to their normal type. In spite of this fact, their lives are short compared with that of man, who has a very limited power of reproduction.

Intoxications of All Kinds.--Psychological intoxications--drunk on ideas, emotionalisms--and physical intoxications, such as alcoholic, tobacco, coffee, tea, acidosis from fermentation of carbohydrates, sugar, and fats, and toxin infections from the putrefaction of nitrogenous compounds--proteins; auto- intoxications caused by checked elimination from enervation brought on from overwork and worry; perverted nutrition, causing activities to start up in diatheses--all have an aging effect on the tissues of the body. Alcohol, when used in small quantities, has the effect of hardening the arteries, and when used in large quantities it produces fatty degeneration. When used in small quantities continually, the effect is to produce cirrhosis. Tobacco, coffee, and tea harden tissue. These drugs also produce arterial pressure.

A regular diet of bread, meat, preserves, cake, pie, puddings, coffee, and tea will bring on sclerosis by first creating toxemia.

Where Sclerosis Gets Its Origin.--Primarily a cell is produced under almost ideal conditions. It has been seen that health is a state that only approximates the ideal. Under the most favorable circumstances, a cell is approximately ideally developed. The state of nutrition that favors cell development means the normal balancing of energy, unorganized (enzymes) and organized (germs) ferments, and food (building material). If nerve energy runs low, enzymic power is weakened, cell-building drags, building material accumulates, obstruction takes place, and it is necessary for organized ferments to start an abnormal elimination. This means fermentation, irritation, inflammation, ulceration, sclerosis, cancer, and death.

The microbe acts as traffic police in keeping the avenues of the body cleared. This clearing-out

process causes the death and disorganization of a few cells in the midst of the fray, This results in the formation of cicatrices; **and here is where sclerosis originates.**

This scarring process, this hardening of tissue, goes on rapidly in those who live in a way to keep cell development more or less retarded by overstimulation from toxins autogenerated or brought in from without. When a cell is destroyed, a cicatrix is formed. When cicatrices multiply because of a continuance of cause, the accumulation may be so great as to destroy the nutrition of important parts by cutting off the circulation.

Impaired nutrition of important organs is brought about in this way; nephritis, hepatitis, and inflammation of other organs is brought about in this way. It should be understood that an inflammatory process started in this way grinds out to its end very slowly. It may end in hypertrophy, atrophy, cancer. etc.

Arteriosclerosis.--This affection may be general, with special emphasis placed on one or more of the viscera.

Just which special organs will be most affected will depend upon which have borne the stress of wrong life. If the brain and spinal cord have been kept hyperemic from venereal excess, or overstimulation--overstimulated from toxins taken in or toxins autogenerated--then apoplexy or ataxia will follow.

The affection is the last state of the effects of morbid stimulation, either mental or physical, or both. This derangement of the arteries is quite natural, for toxins are circulated throughout the body. The walls, or coats, of the arteries are infected and forced into degeneration sooner than other parts of the body. The highly complex tissues of the body, such as the brain and spinal cord, take on sclerotic change sooner than others.

This affection may begin early in life, but it is seldom absent in the aged, and it is common in adults.

Arteriosclerosis is seldom equally distributed. The parts most affected are those most used. Those whose occupation requires head work will develop hard arteries of the brain. The degeneration in the brain will be that of softening; when of the extremities, it will be dry or senile gangrene.

Symptoms are first dizziness, dyspnea of an asthmatic order, somnolence after eating, and hemicrania. Asthma and headache are the first symptoms in many; and these symptoms point to kidney affection. In women there are sudden congestions and sensations of heat, which pass as symptoms of change of life.

On examination, the heart gives out a tympanic click along with the second sound, with intermittent systolic and diastolic murmur. (See Heart Symptoms.) The arteries are hard; the sphygmomanometer indicates an elevated pressure of about twenty centimeters.

In the second stage there are many local manifestations. Whichever viscus (organ) in any of the four great cavities of the body (for instance, the brain in the cranial; lungs or heart in the thoracic; liver, intestine, or kidneys in the abdominal; and uterus in the pelvic) is the victim of special stress, in arteriosclerosis it will appear to be the cause of discomfort and sickness. If the stomach is the most vulnerable organ, then the subject will be treated for indigestion, dyspepsia, ulceration, or possibly other so-called diseases; if the intestine or reproductive organs are the hyperemic centers, these will be vandalized surgically; if the lungs are the most vulnerable organ, that organ will be the cynosure of the professional eyes of those who are consulted; the same will be true of the breast and other organs.

These various diseases (?)--symptoms or affections, more correctly speaking--are transitory and intermittent, and are in evidence only when the sclerotic subject has been imprudent, and when, through overwork, worry, excessive eating, or sensual indulgence, excessive, functional activity

has been brought on. The correct prescription is simply abstinence, followed by greater moderation. Sclerosis means aging, and all nature cries out for rest or moderation. Indeed, rest is the price of continuing in life, and death is the penalty for not resting.

Arteriosclerosis is not a disease that can be cured, but it can be held in check, and the subject made comfortable and quite efficient. It should not be forgotten, however, that the leading prescriptions are proscriptions. The object in treating such subjects is to encourage "status quo".

The organs of the body are sufficiently nourished when not pushed beyond the daily habits; but when speeded up, they do not receive enough blood to be supplied with the oxygen immediately necessary for a quick extra demand or nourishment required for the increased demand. Exercise makes a demand for more nourishment, and hardened tissues work slowly at best; hence great care must be taken not to overwork a sclerosed subject with hardened arteries.

Sudden speeding-up of the digestive organs, and of the heart and arteries, causes spasmodic breathing, clouding of the brain, and inhibits the kidneys, causing transitory uremia, evidenced by heavy drowsiness at inopportune moments when it is embarrasing to appear sleepy. After dinner the sclerosed subject will get heavy and sleepy, in spite of his endeavors to stay awake.

Arteriosclerosis manifests itself early in those of gouty diathesis. It must be understood, however, that toxin poisoning is necessary. Children and young people, as well as adults, must have the overeating habit; they must be in the habit of eating beyond their enzymic capacity. This, of course, necessitates bacterial fermentation of all superfluous nutritive material, and the generation of toxins. When this becomes an established habit, the blood becomes charged with toxins, and necessarily the intima (the internal coat of the arteries) and the endocardium (lining membrane of the heart) must become diseased.

Arteriosclerosis in the first stage presents, as one of the first symptoms, dizziness; dyspnea of an asthmatic character, somnolence after meals, and hemicrania (migraine--pain in one side of the head) are others. The observing physician, in examining all asthmas and hemicranias, will be on the lookout with a view of ascertaining if there is arteriosclerosis as the probable cause. If of a sclerotic origin, there may be a kidney change. In women there may be hot flashes--sudden congestions and heat-flashes--attributed to change of life, when sclerosis is the real cause.

To prove that the above symptoms are due to sclerosis, the heart must give out a tympanitic click at its second sound, and not always murmurs both systolic and diastolic.

The second stage presents organic disturbances, which come and go in keeping with excessive functioning.

The limping and stiffness accompanying this stage of sclerosis are called rheumatism--rheumatic stiffness. Inactivity is followed by claudication, (limping), stiffness, and more or less tenderness, which pass off shortly. Asystole (feebleness of the heart with dilation) presents itself intermittently; so do cerebral clouding and uremia.

The third stage is characterized by the localizing or organizing change. The heart may be the vulnerable organ, and the diagnosis may be sclerotic myocarditis. The heart becomes weaker and weaker, marked by asystole (shortened and weaker systolic contractions), which means that there are dilation and feebleness.

The arterial type is characterized by vascular dilation, with formation of aneurisms, and embolism is imminent.

The cerebral type is marked by unilateral headache, dizziness, etc. This type is liable to terminate in softening, or hemorrhage in the cerebrum, or the meninges. This ending is called cerebral apoplexy.

The renal type of arteriosclerosis is marked by nephritis, with polyuria, slight albuminuria,

palpitation of the heart, tension of arteries, and galloping murmurs, Death occurs from uremia, uremic convulsions, gradual weakening of the heart, and sometimes from apoplexy of the lungs.

Treatment.--Why should drugs be given? Can drugs add to life, or stop a habit that lowers the health standard? The habits of life that are using up nerve energy must be reformed. Those who are predisposed by diathetic heredity to develop the disease early should get away from family habits, both mental and physical, as soon as possible. Why should not a son or daughter develop affections like those of father and mother, when living in the same environment and practicing the same daily habits?

12. Tumors--Definition of*

(*To my lay readers: Do not fail to read this subject, even if it contains a few technical terms.)

Tumors are divided into benign (innocent) and malignant (dangerous to life).

Benign tumors may be considered as hyperplasias of any of the organs of the body. Hyperplasia means the overmolding of organs--hypertrophy--overnourishment; or, to speak in every-day parlance, an enlarged organ. A type of benign tumor, or hyperplastic development, is seen in what is called a keloid tumor. This tumor develops in scar tissue.

Histology.--Tissue science--the study of the structure of tissue.

Tissue.--The elements of a part of organ; for example, skin tissue, muscle tissue, glandular tissue, etc.

The keloid is described as an exuberant fibrous production, caused by the hyperplasia brought about by inflammation. Such growths are more inclined to develop in those who eat heartily and of gross or greasy foods, and who do not exercise enough to stimulate the required elimination.

Histology tells us that simple or benign tumors are made up of tissues having normal arrangement as to structure, or which are sufficiently normal to resemble somewhat the tissues from which they are developed.

Adenoma (a tumor of a gland) is found to have glandular structure. The cells proliferate (bear offspring--generate) and fill the alveoli (the cells of a gland; these cells may be likened to a bunch of grapes). They remain inclosed by the limiting membrane of the gland in which they develop, and show no tendency to invade surrounding tissue. This means that, no matter how large the tumor gets, it is always encompassed within the gland-covering.

Malignant Tumors have a different arrangement of structure; indeed, they are chaos itself--King Disorder reigns supreme. The cells, which vary in form and size, are inclosed in membranes--alveoli (the skin of the grapes--the covering of each gland-cell) of independent growth. These growths break through the retaining membranes (skin of the grapes) and invade any and all environmental (surrounding) tissue. As "war is hell" turned loose in social fife, or in civilized life, so is the histological insanity known as cancer. Indeed, cancer has not even the order or system of so-called civilized warfare. It is more on the order of guerrilla warfare, or a war of extermination.

Embryological Tumors.--A class of tumors due to defective development. They may be divided into those that start before birth and those that develop after birth.

Teratology is a branch of biology that treats of malformations. In the study of embryological tumors there is described the phenomenon of two spermatozoa penetrating into one ovule, which gives birth to two beings when development is normal; but when, from some cause, one remains rudimentary (fails to develop), it may become inclosed in its well-developed fellow and in future evolve into a tumor. This anatomical and physiological perversion has been offered as an explanation of all neoplasms--new-growths or tumors.

Is it strange that, in an organism so infinitely complex, and subjected to such an infinite number of unfavorable influences, as the human body, there should be many blasted cells, or defects in glandular development, in the course of physical development? Certainly not. Then, when health is impaired-nutrition perverted-it is not !strange that these defects should take on independent growth and become tumors, or abnormal growths.

It is also reasonable to believe that, so long as the organism remains in a state approaching the normal, it can dominate any tendency which these blasted cells (be they congenital or caused by postnatal injury) have for taking on their pathological trend. But when enervation is lowered and elimination imperfect, causing chronic intoxication, these defective developments, or crippled tissues, find in this perversion the encouragement to grow--to take on pathological activity--for, being defective, if they develop at all, it must be in keeping with their histological bias.

This blasting of cell- or gland-life, when it occurs in the skin or ordinary tissues of the body, usually ends in the development of benign tumors; but when it takes place in the higher type of glandular structure, and then meets with the necessary pathological nourishment--namely, chronic autotoxemic poisoning--it may start a state of anarchy--malignant disease.

This is perhaps more true of the lymphatic system. The reason for this is that the best and worst nourishment is found in the lymphatic glands of the body.

The lymphatic glands may be likened to quarantine stations--places where all suspicious characters--infections--are held up until they can be dismissed with a clean bill-of-health. The lymphatic glands in the groin arrest the infection of venereal disease that threatens to invade the organism, and hold it long enough to immunize it. When the amount of infection is great, and the immunizing power of the glands is inadequate, suppuration takes place, the infection being thrown out of the body by way of a heavy pus discharge. In this phenomenon, life-preservation is a grand struggle against mortality. Years after glands have been altered in their structure from suppurative inflammation, degenerative activity may spring up, and malignant disease (cancer) may develop and run rapidly to a fatal termination.

The lymphatic glands in the lungs arrest toxin infection that has been absorbed in the bowels. When their power to antidote the infection is not equal to the task put upon them, inflammation and suppuration take place, with systemic poisoning. This disease is called tuberculosis. The bacillus tuberculosis is a scavenger germ, and not the infecting agent. The infecting agent is a toxin developed in the bowels.

If the bacilli tuberculosis are like all other scavenger germs, they depend upon toxins for their specificity, and the infecting agent comes in by way of bowel absorption.

When resistance is low--when enervation is pronounced--the resulting autotoxemia so weakens the immunizing power of the glandular system that blasted or defective cells, from any cause, may be encouraged to take on pathological development; which means benign tumor, or malignant tumor--cancer.

Where there are no blasted or defective anatomico-physiological structures, the organs with the most defective functioning will bear the brunt of the incoming infections, and the following diseases may develop; tuberculosis of any part of the body, glandars, syphilis, scrofula, scurvy, etc.

Cancer must jump the bounds of glandular limitation before life is overwhelmed by its cachexia (blood-poisoning).

Cancer.--So long as the cancerous process is going on within the limiting membrane of the gland, its growth is restricted; but after it breaks this membrane, its growth is unrestrained, and the pathological metabolism taking place in the growth quickly sets up the cancerous cachexia.

The reason why the removing of a cancerous growth or disease fails to cure, is because the cancer has potentized the surrounding tissue with its toxin.

The conservative power of the body limits the infection as long as possible to the lymphatic glands. Why? Because the glands have more immunizing power than ordinary tissue. The spread of all infecting diseases is along lymphatic chains; but after lymphatic restraint is lost--broken--all the fluids of the body become infected, and life is destroyed very quickly.

That is the manner of poisoning by cancer, which is a form of sepsis. The difference between traumatic septicemia, puerperal septicemia, and the septicemia of cancer, is the slowness of the infection from cancer. However, if the cancerous tissue is torn or cut, freeing its infection from the limiting membrane, cachexia, or septicemia, will develop rapidly. If the wound into the cancerous tissue is open and drains well, absorption will be very limited; but if located away from the eye, where drainage and cleanliness must be an unknown quantity and quality, cachexia (septic poisoning) will spread rapidly. Indeed, patients will die from septicemia as quickly when developed from cancerous tissue as when developed from injured normal tissue.

Cancerous tissue will not unite--once severed, always severed. Torn, bruised, or severed cancerous tissue does not drain well, but tends to break down very rapidly. Bruised and torn cancerous tissue differs from healthy tissue in that the malignant tissue does not contract and retract, forcing waste fluids out of the bruised and torn channels to drain, but the fluids remain, flooding the parts, forcing rapid decomposition and absorption, and causing acute cachexia (septicemia) and death.

The reason why cancer cannot be cured is obvious. If all infected glands could be extirpated before the limiting membrane of any of them has been broken, and the growth has passed out and become mingled with the surrounding tissue, largely devoid of immunizing power, the disease could be cured; but this possibility is almost nil, for large lymphatic glands are surrounded by many small ones, and, while removing the large ones is an easy matter, small ones are overlooked and left to continue the work of the larger ones that have been removed.

The worst feature of the operation is that some of the infected glands are injured. This allows the cancer to spread in non-glandular tissue without resistance, which quickly involves the fluids of the entire body.

This is why people often do not live so long when operated upon for cancer as when left without an operation.

Where do cancerous diseases get the infection that initiates their evolution? From putrefaction taking place in the large intestine. The infecting material is absorbed; and if the cause (decomposition in the bowels) is only temporary, and not of frequent occurrence, no permanent harm will result. But if imprudent eating is continued until the latency of a pathological process in gland structure is rendered dynamic, then a morbific process is set up that is called malignant or cancerous.

If the disease could be detected early enough, and removed, a cure would follow. But often the disease is not suspected until fatally developed.

Before malignancy can develop in any part of the body, it is necessary for it to be potentized by exogenous or autogenerated infection. And since infection must be septic in character, but absorbed so slowly as to bring on cachexia, the cancer must begin to break down before the fluids of the body become infected by the poison.

Before a morbid process can evolve, resistance must be broken down. What is the nature of the resistance that is lost before cachexia is developed? The immunizing power--the power on the part of the body to generate its own immunizing agents.

Immunizing power has but little to do with physical force or strength. A very weak man

physically may have the power to protect himself from the disintegrating influences of his environment, while a very strong man may not.

Histogenetic Tumors ("histo," web or tissue; "genetic" (from "genesis"), generation).--In biology, the process or function of cells and cell-products.

This class of tumors are not supposed to be of embryonic origin, but develop from connective, muscular, nervous, or epithelial tissue.

The sarcoma, which grows very rapidly and becomes very large, is considered as standing between a malignant and a benign tumor.

Myxoma belongs to the mucous tissue. Fibroma belongs to the fibrous tissue. Lipoma belongs to adipose tissue. Condroma develops from cartilage. Osteoma grows from bone.

Vascular, lymphatic, angiomatous, endotheliomatous, and lymphaornatous tumors are produced from serous membranes derived from the lymphatic system.

Muscular tissue gives origin to two species of tumors--namely, leiomyomata a n d rhabdomyomata--which correspond to the non-striped and the striped muscle fiber.

Adenoma.--A benign tumor that has its origin in canals, ducts, and follicles of glands which have become stopped up, causing a cyst (sac) to form that is filled with a perverted secretion. Sometimes the lining membranes of these little cavities take on an excessive growth and end in what are called simple tumors. Such tumors do no harm, except for their unsightliness, when developed on exposed parts of the body, or from size. The tissues of these tumors always resemble those of the structure from which they are built. They have no tendency to break through their retaining membrane, which, of course, was originally the lining membrane of the passage that became plugged up.

This is not true of epithelioma (a true cancer). This disease respects no restrictions; it breaks through and invades any tissue, spreads in all directions, and leaves destruction behind it.

When Does a Cancer Become a Cancer?--That simple adenomatous tumors, and epitheliomatous degeneration, are related much as cause and effect, there appears to be convincing proof. In other words, cancer at the start is not always cancer. The question, then, is: When does it become cancer?

In the stomach there is first irritation from acid, due to overeating. If the overeating is persisted in, the acidity continues to irritate, until subacute inflammation is established. If the causes are not removed, the next stage is ulceration; then, further, degeneration into malignancy.

What can be the difference between last year's ulceration and this year's cancer?

That "cancer" is not always cancer, every experienced physician must have acknowledged to himself, if not to others. The question to be settled, then, is: What is the cause of the transformation?

I have thought that in ulceration the blood-vessels and lymphatics are sealed by adhesive inflammation before the sloughing or necrosis of their involved portions takes place, leaving them intact to perform their function of supplying reparative material; whereas in cancer the ulceration involves the bloood-vessels and glands so far distant from the surface of the ulceration that oxygen and nourishment are cut off and putrefaction is established, following which systemic infection (cancer cachexia) is established, which in time inhibits all physiological processes.

The cause of rapid fatality in some cases is the slight resistance given by some tissue to the spread of the disease, while in others it is the extension of the disease into parts where drainage

is cut off, forcing absorption and the rapid development of cachexia--blood-poisoning.

Another thought may be considered; namely, the state of the patient may be that of premature aging, and the blood vessels and tissues are sclerotic-hardened to such an extent that they offer no resistance to an ulcerative process. Under such conditions, the system can hardly be expected to generate anti-bodies for self-protection.

No doubt there are many factors in the process of evolving cancer. Those who would sidestep the trouble of thinking may say that germs cause the disease; but to the discerning, germs are a poor excuse for accounting for any disease.

In the building of all morbid processes, the chemic changes that take place in tumor-building must be known before the cause can be understood.

Cancer, tuberculosis, and other diseases appear to run in families. So do certain habits. Domestic peculiarities are confined to family strains. The relationship of given types of disease to strains or family peculiarities should be given attention until understood.

A peculiar style of eating, cooking, mixing, clothing, bathing, and thinking will be followed by a peculiar style of disease.

Like causes produce like effects--only, however, when everything is equal. When every phase of cause is known, the effect may be modified by changing the object on which the cause operates. For example: The sun, moon, and stars, or the astronomical bodies in general, we assume, are always the same; which, so far as the comfort and life of man are concerned, is not true. The subject on which these influences are spent--man, for instance--can be changed so that the fixed influences do not act the same; hence the effect cannot be the same. The sun does not act on the drunkard the same as on a sober man. The gluttonous and the temperate are acted upon differently by extraneous influences. Those of limited reasoning power consult the stars regarding their coffee-drinking, what clothing they should wear, and how to invest; when to bull and bear the market, and about their health; also when and whom to marry; in fact, regarding daily, monthly, and yearly affairs. There is no material difference, as far as ultimate results are concerned, whether sun, gods, planets, or devil be consulted--whether the Bible, the Koran, astrology, or other deific sciences be studied for the purpose of determining what is foreordained for man, domestically and socially.

All of which is as unscientific as to start children in the kindergarten in the study of mathematics.

If man ever finds God, he will begin the study with man; and if he ever finds man, he will begin the study with cell-life. If man ever finds the cause of his health and disease, he will find it by understanding the laws of his being; and if he is ever saved, he will save himself by obeying those laws. Yes, obeying every one--the most insignificant,

Man did not find the stars until he found the telescope; and he did not understand the, composition of stars until he discovered the spectrum.

There is but one door open to knowledge, and that is the ABC; and not the ABC of one department, but the ABC's of all departments. 'The ABC of God-knowledge is the laws of life. Unfortunately the study of God was begun with God; and, from the very nature of the subject, had to start with a hypothesis--a hypothetical God. As a consequence, no two people have the same God. A hypothesis must always be in keeping with the mental development of the individual.

Starting with a hypothetical Deity, it is not strange that many attributes, and even essential principles, have been left out. Those that concern us more than any other are natural laws--laws that minister to man's physical well-being. That these are left out of all theologies goes without saying, when we see theologians everywhere breaking the laws of health and life as ruthlessly

as though they belonged to the devil. Ministers--moral teachers--know no more of nature than their parishioners; and they are not ashamed of their ignorance. Yet nature is God's expression; and if we know nothing of God's expression, how can we say that we love something we know nothing about?

All this infidelity and atheism of our deistical students would not be, if the study of God would begin at the ABC of the subject, instead of starting with the graduation exercises.

In regard to diseases, modem medical science, often starts at the finish--to diagnose them. In order to find out all about the disease that killed the patient, a post-mortem is held, and the morbid findings are given out as diagnosis. A cancer is found; a fibroid tumor is found; an abscess is found; but the causes that produced these diseases have passed. The laws which were broken still exist, however; and, when broken again in the same way, like diseases will result, no matter whether or not the interpretation of the stars or the deities agrees.

It is of far greater importance to know the chemical needs of the brain than to know the ethical laws of society.

It is more needful to know the mechanical and chemical laws governing the growth of a fibroid tumor than to know the most scientific surgical technique necessary for their successful removal; because removing the tumor is nothing more than removing a symptom, which is very often quite remote from the cause.

Fibroid Tumor-Cause of

The erstwhile opinion of medical men was that back of the exciting cause of a tumor was that of inclusion during embryonic life: non-employed cells are enveloped in active cell-development; then in after-life they take on activity. That this was professional guesswork is evident, now that the latest guess is that tumors are caused by germs.

There are authors of standing who do not agree with the germ theory of tumor-development.

Every little while a laboratory scientist jumps into print with the announcement that the cancer germ has been developed in fish or mice by inoculation; and he enjoys an hour's fame, after which his little bubble of discovery reverts to oblivion.

No tumor can develop without obstruction to the circulation--without a local influence that disturbs nutrition and elimination.

It is safe to start with the hypothesis that, if full health is enjoyed, there can be no tumor-development.

The first thing necessary for the development of any form of disease is enervation, which always inhibits elimination; following which autotoxemia develops.

Fibroid Tumors of the Womb are developed about as follows: A young woman develops intestinal indigestion from imprudent eating. The catching-cold habit, with catarrh of the mucous membranes, follows. Soon there is developed intestinal putrefaction, which, being absorbed, causes infection. The pelvic lymphatics become involved. As there is more or less congestion of the mucous membrane lining the uterus and its neck, this condition is made more pronounced each month because of menstruation and the toxins being absorbed in the bowels, The uterine engorgement causes, longer and more profuse menstruation; painful menstruation begins, growing more pronounced month by month. Pain forces the calling of a physician, who on examination finds a flexed womb. The flexion is caused by a thickening of one side of the womb, which forces a flexion to the opposite side. The more thickening, the more obstruction to the circulation and the more bent is the neck of the womb; and the more bent is the neck, the more the canal is obstructed to the menstrual flow.

As the womb is flexed more and more, the circulation is more and more interfered with. The flexed side fails to receive the proper amount of nourishment, and the thickened side receives all that the uterine artery and other vessels can bring; but the return vessels fail to carry back the full amount, and, as a result, hypertrophy takes place--the parts are overnourished. Nature undertakes to organize the surplus; and she does--and we call it fibroid tumor. These growths grow rapidly or slowly, according to the amount of obstruction.

A growth may fill the pelvis and abdomen in five years; and again in some other women it may require twenty years to develop a tumor the size of an orange.

Injuries at childbirth often become the first cause of tumor, next to putrefactive infection from intestinal indigestion.

Another cause: A catarrhal inflammation locates at an old placental site, as a result of toxemia. Thickening and induration follow, impeding the efferent circulation. The more growth, the more pressure and obstruction, until the new-growth--fibroid tumor--is large enough to become a cause of its own growth, by impeding the circulation through its weight and pressure.

This work of overgrowth is pushed along rapidly by overeating, which means overnourishing; the surplus being organized into tumor.

Overeating and improper eating often cause gas distention of the bowels. The pressure from gas crowds and misplaces the womb. From such misplacements enough obstruction to uterine circulation may take place to cause hypertrophic enlargement, which is fibroid enlargement.

Constipation may cause enough pressure on the womb to start imperfect circulation, and later fibroid growth.

Wherever there is impeded circulation, new-growth must take place; and that means tumor. The kind of tumor will depend on the character of the tissues involved.

Add to these causes sclerosis, and malignant diseases may follow. That is, the benign tumors may become malignant.

Can they be cured?

Treatment.--Remove the cause, which can be done when understood. The circulation must be restored by removing the cause of the obstruction. Very few tumors require removal by the knife; for, if the cause is removed, the tumor will gradually disappear.

13. Synergies

Synergy means the unity of the organism under favorable or unfavorable influences.

In social life, an injury to one man is an injury to all; and so it is with the organs of the body--if one is injured, all are injured. Any influence that modifies function or structure of one part of the body influences the entire structure.

Family habits may be of such a character as to throw More stress on one organ than on another. The sequel is the development of an organic diathesis. (See subject of "Diatheses.") When this is true, the hundred-per-cent organs in the organism lend their influence in various ways to do vicarious work for the weak organ.

When the organism is enervated from the thousand-and-one influences incident to life, and intoxication has brought on such a state of the metabolism that the organism is overwhelmed by waste--excretory--products, it is then that inherited diathesis takes on activity. If the diathesis is tubercular, gouty, neurotic, or of any of the special organs of the body, it is in keeping with the laws of health and life for the affection peculiar to the diathesis to spring up. If the causes are not

removed, the affection will remain functional for a time; then organic change will take place. It is then that affections become diseases; it is then that an irritation and an inflammation from indigestion become ulceration of the bowels or stomach, and the ulcer perforates, and death ensues from peritonitis caused by the perforation. The peritonitis was caused by perforation; perforation was caused by ulceration; ulceration was caused by inflammation; inflammation (catarrh) was caused by irritation; irritation was caused by indigestion; indigestion was caused by fermentation; fermentation was caused by enervation; and enervation was caused by the thousand-and-one influences which build or destroy the body and mind of men, depending upon whether they are wisely or unwisely applied.

When one organ gives down--when the blood is deprived of the proper amount of building salts--the whole organism is deprived of the necessary building salts. When imprudent eating--sugar-eating, cake-eating, rich-meat and gravy-eating--has been practiced so long that enzymic fermentation is not equal to the task of physiologically digesting the intake, then it is that organic ferments--bacteria, microbes--set up pathologic fermentation, which is slightly toxic when developed in the carbohydrates and fats, but putrefactive and decidely toxic in the animal products. The organized ferments cause a souring of fruits, vegetables, and starches; the acid builds irritations and catarrhal inflammations of mucous membranes; and in this way the stomach may become the exciting cause of organic depression and catarrhal affections of all the organs of the body.

It is very hard for average physicians to get away from the idea that each organ acts in an isonomic manner--that organs break away from the union of organs and develop a disease without the consent of the general government. This is not only false, but it is absurd. When from inherited weakness, or from injury, a part--an organ or a tissue--is below the general standard, it becomes the seat or center of affection when the general standard of health is lowered. When enervation is brought about, and, because of the enervation, metabolism is impaired, elimination becomes imperfect, and, to autotoxemia, toxins from imperfect digestion are added. The system, under these circumstances, becomes so toxemic that the inherited weaknesses, either organic or systemic, take on disease. The disease, however, is an affection; for the cause lies back in bloodmaking and nutrition.

In the tuberculous diathesis the lungs or other vulnerable organs of the body give down with tuberculosis when the general health is impaired and resistance broken. The gouty diathesis favors the development of any type of gouty disease that is in keeping with the vulnerability of organs and tissue of the body. The disease may be articular. If so, joint rheumatism will be the type of the disease. It may be the arteries, in which case arteritis with hardening will occur. The kidneys or liver may be the weakest points; then urinary calculus or gallstones will form.

There is a unity of sympathies and a unity of action. The nerves, the muscles, the motor cells, the blood vessels, and the organs generally are in reality a unit. The muscles and the cells cannot function without the nerves, and if the nerves be enervated from overwork or poison, they fail to function properly. Then the muscles become weak, waste is retained, the cells fail to renew, and degeneration takes place.

To overcome any disease, restoration of nerve energy is of first consideration.

A giving-down of some of the bony structure from injury or from disease, may cause more or less distortion of the entire anatomy. The distortion requires an anatomical readjustment-an endeavor to change the mechanism to meet the new requirements. In the changes that take place, important organs--such as the heart, lungs, etc.--may be forced to take on disease because of the interference with their normal functioning.

The body is at work readjusting every minute. The forces of health and life are at work in the line of readjusting and idealizing all the time. Nature--physiological energies--is all expended in healing--repairing and building. Man needs no doctor, so far as healing is concerned; he needs instruction in knowing how to avoid abusing his body, and how to live to conserve his energies.

If a bone is misplaced, it must be righted. If an artery is cut, it must be tied. Nature heals the bone when broken, if it is kept quiet long enough. If a large artery is tied, nature dilates and enlarges collateral arteries, so that the parts temporarily ill nourished will soon receive a full supply of nourishment.

All malformations are met with readjustments to give collateral aid.

Extirpation of the ovaries produces atrophy of the uterus and often of the mammae.

When the eating habits are such as to crowd and disturb the liver function--impair its function of preparing urea and sugar for further use in the economy--we see kidney affections springing up as a consequence. The cure must get back to the cause--namely, remove nerve leaks and correct imprudent eating. If the remedy is neglected until the liver, kidneys, or pancreas take on organic change, then a cure is often impossible.

The muscular system and the liver are allies. Exercise uses up energy (sugar), which the liver furnishes. If the muscular system is not worked, the liver becomes engorged with glucose, or the glucose is sent to the circulation to be excreted by the kidneys.

Exercise is necessary where there is too great a supply of carbohydrate foods. Either the intake of starch and sugar must be limited, or work must equal the eating.

An organ, when enlarged, may, by pressure, affect other organs. An enlarged liver may impair the stomach and other organs. A dilated stomach, or gas-distended bowels, may create affections of the heart, lungs, or pelvic organs from pressure. Indeed, intra-abdominal pressure may be the cause of heart palpitation, asthma, hay fever, bladder and urethral irritation, falling of the womb, and displacements of other organs.

Because of compression from fat or gas distention, the excretory ducts, such as the bile-duct, are partially obstructed, In gouty subjects the formation of biliary calculi is liable to, follow; in tubercular subjects, tubercular inflammations, etc.

Where compression of a nerve is continuous, neuralgia, spasms, paralysis, and nutritive changes take place.

The part of the body most affected by nerve compression is the head and spine--the face rather than the head. The cerebro-spinal nerves pass out through various passages and foramina (small openings in bone). These openings are liable to have their caliber narrowed from a thickening of the walls from injury and consequent deposit of reparative material. So many are the ailments due to this cause that whole systems of healing have grown up, exploiting this etiological factor into a marvelous universal cause of all diseases.

The tendency for man to allow large sections of his body to lie fallow is the cause of much nerve compression, and consequent pain and sympathetic disturbances. When men stop their boyish exercises and settle into a routine business, only those parts of their bodies are exercised that are used in their business; the rest become fallow. A neglected part in time takes on deposits, and naturally grooves, foramina, and narrow openings between bones will become the repositories of deposits. This brings on compressions, with consequent impingement on the blood vessels and nerves. To secure relief, the patient must exercise the parts, or employ someone to massage; or, what is better, call a physician of one of the bone manipulating schools, who will relieve the nerve pressure. The members of these schools are wonderfully adept in bringing quick relief. But unless the patient--the one relieved--is taught the necessity of right living--taught the necessity of exercise, and how to eat to secure proper elimination--someone will have to be employed all the time to manipulate the unused parts of the body so as to keep down deposits and keep the body comfortable. It is not necessary for people to become athletes in order to avoid taking on these deposits. Athletes have their troubles-namely, over-development, which is not conducive to the best health and long life.

Compression of the pneurnogastric nerve may start up a pneumonia. Certainly there is much stomach derangement due to this cause. From such compression, stomach irritation, inflammation, ulceration, and cancer may follow. Cancer may result from compression on a small artery, causing the territory supplied by it to become ischemic (local anemia). From the same cause, neurosis or gangrene may result. It should not be lost sight of that wrong eating-haphazard eating-bringing on toxemia, has much to do with the manner of degeneration.

Compression on an excretory duct causes a backing-up of excretions; and, if it is of long duration, the blood win not be drained of that particular excretion. Other organs may do vicarious work. When compression is removed, the injured organ may have developed a sick habit and may never get back to the normal. This is daily observed by busy physicians in affections of the liver, kidneys, and pancreas.

When tissues such as the neck or body of the womb, or the pylorus of the stomach, etc., suffer from irritation and hyperplasia, cutting off a normal supply of blood, the effect is to cause an ischemia (anemia) of a small territory of tissues supplied by the arteries compressed. If the ischemia is pronounced, the result may be necrosis or gangrene. If the compression is of such a character as to affect only the venous circulation--the return blood to the lungs--the parts become hypertrophied, the tissues harden, the carbon and oxygen gases fail to exchange. Irritation, inflammation, ulceration, and cancer are different phases of the degeneration that will follow. The chronic state of the tissues from venous stasis is sclerosis. Fibroid tumor of the uterus is a type. It is obvious to the reflective mind that if this change of tissue can take place in the musculature of the womb, stomach, and other organs, when the circulation is interfered with, the same change can and does take place in the muscular tissue of other parts of the body, including the coats of the arteries. The change is brought about by cell compression caused by the irritation brought on from toxins generated in the intestine or f r o m chronic autotoxemia.

Compression of nerves causes neuralgia, spasms, paralysis, disturbances of nutrition, and at times fatal infections.

Compression or section of the pneumogastric nerve is followed by pneumonia.

Cancer of any part of the body in time infects the whole body through the autogenerated toxins--the toxins resulting from the degeneration of the neoplastic growth. The fact that neoplasms of all kinds owe their existence to local obstruction of nutrition should not be forgotten, nor the fact that perverted nutrition is characteristic of the life of these tumors, or growths. The chemistry of these growths is not in keeping with their environments, and it is liable to sudden and destructive changes. When the change of nutrition is great enough to cause a breaking-up or disorganization, the fluids pass into the environmental tissues; and, as the blood and lymphatics have power to oppose and neutralize the infectious infiltration, the spread of the toxin is held in check. But a time soon comes when the body's defenses are overcome; then cachexia rules and the body dies.

Malignant growths are built by obstructing the normal nutrition of otherwise healthy tissues of the body, but which, when abused, soon take on a chemistry in keeping with the sum of their elements plus fermentation. As these perverted tissues are on the descending plane--on the involuting route--it is only a question of time when degeneration will take place and such powerful toxins will be formed that the life of the body, which unfortunately becomes host for the erstwhile innocent neoplasm, will be destroyed.

Cancers are not malignant at their beginning. A fever is not septic at the start. Vaccination excites tuberculosis only in the tuberculous disthesis--it simply arouses the diathesis into activity. Perverted nutrition of the liver is not stone building at first. Hyperemia of the brain is not apoplectic at its beginning. Worry, over-worked emotions, and chronic toxemia ultimately become arteriosclerosis. Yeast and dough may become bread by baking. Organized germs and a beefsteak may end in putrescence, and the generation of toxins that may destroy life. Bacteria cannot poison without the meat, and the meat's toxic potentiality cannot evolve without the

germ. Two atoms of hydrogen are not water; one atom of oxygen is not water; but when the two are combined, water is made. Disease, health, life, and everything pertaining to animal existence, depend upon physiological chemistry for their existence. The immunization practiced on our hundreds of thousands of soldiers will prove to be the exciting cause for lighting up many latent pathologic diatheses; or planting purulent or septic foci which will develop into many unaccountable diseases by and by--diseases which the pension boards will not reckon as so many obligations of our government. Well may the helpless discerning say: "What will the harvest be?"

Neoplastic cells and pathogenic microbes, which are credited by the profession generally as being the cause of cancer, are not creative. All they can possibly do is to become elements in a chemical compound whose individuality is a so-called disease of some kind--cancer or syphilis, if you please.

Heart weakness may be brought on from many causes: fear, overworked emotions, anything that uses up nerve energy and produces its consequent autotoxemia; habitual overeating, and its consequent toxemia; intoxications from tobacco, coffee, tea, alcoholics; enervation from excessive venery. 'The result of heart weakness may be stasis in the brain, liver, kidneys, or pancreas.

Drugs or palliatives of any kind that stimulate the heart muscles relieve the headache, torpid liver, albumin or sugar in the urine; and the edemas (dropsical symptoms) disappear. The arterial tension is temporarily restored, and the patient is well, so far as his feelings are concerned. But the cure is palliative, and will soon prove but a short respite. There is but one cure, and that is to remove the cause. If this is done before organized changes have taken place, the cure will be permanent; if too late for a cure, then comfort and increased length of life may be expected. Those who have headaches often relieve themselves with coffee, or take a drug prescribed by a physician, and they call their reliefs cures; but, alas! the "cure" builds more heart disease, and hurries the end.

Embolism is a sudden occlusion of a blood vessel by a small body traveling in the circulatory system.

A strong organism is not given to gathering moss, so to speak, as we see in the case of the old oaken bucket. However, there is a very strong tendency for the development of emboli from deposits taking place in the heart, on the valves of the heart, and in the blood vessels, when there has been toxin infection running on for years. This occurs when the blood fails to carry a normal amount of enzymes.

A normal blood digests all clots which form from whatever cause. When foreign bodies succeed in gaining entrance into the circulation, they must be very resistant if they are not digested and made a part of the blood. The same is true of the lymphatic circulation. The lymphatic glands have the power of benevolently assimilating toxins that are absorbed.

Emboli are divided into exogenous and endogeenous--those entering the body and those developed in the body.

Endocarditis ends in atheromatous productions which open into the general circulation. The same occurs in arteritis. This accounts for many sudden and unexpected deaths.

Blood clots form on the interior of the blood vessels. They are caused by injury and various diseased conditions. Inflammation of the aorta may at almost any time furnish an embolus. that will swing into the circulation and cause a fatal obstruction.

Inflammation of veins is very liable to cause emboli. Phlebitis is caused by infection, This disease is very prone to cause embolism. It should never be forgotten that, if it were not for man's great immunizing power, he would be unable to protect himself against the many

invasions of his organism.

Course of Emboli: Emboli follow a regular route. Those of the arteries start from a lesion of the pulmonary veins, of the left heart, or of the aorta. They pass into the left carotid. They stop at the sylvian, and produce hemiplegia with aphasia. The embolus may follow the aorta, and may stop in the splenic, the renal, or the iliac arteries.

Effects of Embolism: Arrest may be in the heart. In this case sudden death may occur. A reflex syncope is produced, due to the excitation of the endocardium.

Pulmonary apoplexy may be caused by an embolus.

Softening is a common effect of embolism. Apoplexy is another effect.

When emboli are very small, only headache, dizziness, or some mental disturbance may result.

Partial or complete blindness may result from embolism of the central artery of the retina.

There are fatty and gaseous emboli.

Nerve Connections.--Compression of nerves may cause pain in distant parts.

Irritation of the biliary or urinary passages may cause nausea and vomiting.

Inflammation of the neck of the uterus or misplaced uterus may cause pain in the back of the head.

Excitement may produce paralysis, fainting, and other nervous derangements.

Red cheeks and lung irritation go together. Red cheeks may accompany congestion of lungs and hepatic colic.

Salivation goes with irritation of the stomach. Excessive flow of urine accompanies sciatic neuralgia. Stricture of the urethra, cystic irritation, and prostatic irritation may cause pain in the sciatic nerve.

Hepatic colic causes change in the circulation of the blood in lungs. The heart is also influenced. It may become insufficient, systole occurs, and edema may follow.

The kidneys affect the heart; the heart affects the lungs; the liver and the kidneys affect themselves.

The physician should trace the successive changes that take place. It is necessary to know the morbid sympathies. It should not, however, be understood that organs take on disease per se.

The cause of an organ becoming diseased is usually abuse of some kind. The stress of life rests more heavily on one organ than on another. Whenever an organ goes wrong, others are affected through sympathy. Then, after functional derangement has gone on for a certain length of time, organic changes take place; after which organic disease becomes a cause of other affections.

Inflammation.--Diphtheroid gangrene is declared by bacteriology to depend upon microbic infection; yet at the same time it is declared that a specific diphtherogenetic microbe does not exist. This certainly is true of every so-called specific disease.

Gangrene is the resultant of a morbid process of sufficient virulence to cause the death of the tissues involved in the inflammation. Necessary to this process must be lowered vitality, lost immunization, and a chemical change on the order of disintegration.

"Pseudomembranous sore throat may be produced by numerous microbes." Just the reverse is

true. The chemical changes taking place in the throat, from the initial inflammation to ulceration, on to gangrene and sloughing, due to the influence of the fermentation initiated by organized ferments in the nitrogenous tissues involved. Then these organized ferments take on an individuality and personality in keeping with the chemical medium resulting from the diseased process. In a breaking-down process there are all stages represented. Then why should not these organized ferments--microbes of fermentation--be found in all stages of transformation, from the simple germs of fermentation on to the virulent types found in putrefaction and gangrene?

It is well to keep in mind that putrescence, or the toxin resulting, is not potential in the microbe, but is potential in the protein, requiring the fermenting influence of the organized ferment to evolve the toxin. On the other hand, protein food has peptone as a potentiality; but without the fermenting influence of the unorganized ferment (enzyme), peptone would not evolve.

The material out of which pseudomembranes, are formed is a fibrogenic exudate--the very same material that is thrown out on abraded surfaces, or into solutions of continuity in any and all wounds. The quantity thrown out is always abundant, but the amounts are greater where the local irritation is great.

In pseudomembranous inflammation of the throat everything should be done to avoid breaking or loosening the membrane; for the more it is interrupted, the greater the local poisoning, and the more toxins there will be swallowed to be neutralized by the stomachic secretions.

Positively nothing is to be put into the child's mouth; not a drop of water, for swallowing must be avoided. The act of swallowing breaks the membranous protection. The old treatment of gargling and swabbing was barbarous and, for intelligent people, criminal.

Thirst must be controlled by frequent small enemas of water. Nourishment is not life-saving, as many think, but positively disease- and death-provoking.

Every patient, when prostrated with a disease, has locally or generally passed from enzymic control to bacterial control. All efforts of cure must be in the line of crossing back to enzymic control. This may be done if the intoxication from bacterial fermentation can be controlled before enervation is so profound that the nerve centers are paralyzed.

If the patient is plethoric, and the gastro-intestinal canal is full, and kept full, of food, the bacterial fermentation must thrive so long as such a state is continued. The enzymic production is at a halt, and every particle of food taken into the body becomes an ally to organized fermentation.

Stop food, and wash out the bowels daily; otherwise let the patient alone, except for gentle rubbing and bathing for comfort. High fever means much bacterial fermentation, and should be controlled by baths and the withholding of food.

The fact that the temperature declines with the consumption, or rather with the exhaustion, of the food supply should be proof sufficient to convince the skeptical that feeding the sick is encouraging disease.

A membrane is a protectorate--not simply a protector. For under this membrane is the process of repair, which requires rest, and the control of bacterial fermentation, and an enzymic influence sufficient to encourage all development. There must be enough retrograde fermentation to destroy obstructive accumulation, and enough constructive fermentation to fit the necessary amount of exudate for reparative work. This process requires a covering--a membrane-to protect from traumatic injury and an oversupply of bacteria or organized ferment.

From the foregoing explanation it is obvious how dangerous is the old-time practice of swabbing and gargling the throat. No wonder the mortality was great, and no wonder the

antitoxin treatment has proved such a success. Its success, however, has been of a negative character--on the order of the lesser evil. If the antitoxin has any influence--if it is not inert--it certainly must make a change in the nervous system; and this change must be reconciled, and an equilibrium or readjustment take place, before a normal healing process can be resumed.

The unreasoning cannot see that food is disease-producing from every point of view--from every conceivable influence which it may have on the subject. If this is true of food, why may it not be true of every influence, even though theoretically it is beneficial? It is the same rule that applies in all warfare; namely, the efforts put forth in times of peace for the upbuilding of the morale of a people become treason when attempted while the country is at war. Feeding in disease is treason to the body's government.

Suppuration.--Suppuration is of three kinds: phlegmonous, caseous, and thin pus.

Phlegmonous pus--or what is known as laudable pus--is a yellowish-wbite, creamy, thick, odorless liquid. It is met with in phlegmons and suppurating pleurisies.

Caseous pus resembles soft cheese.

Thin pus is a serous liquid which exhales a fetid odor.

The color of pus varies from a light yellow to an orange, brownish red, or greenish. The coloring may be from bile or blood.

Pus in sputum sinks in water, Pus in urine precipitates with the addition of ammonia. The microscope will reveal pus cells.

Bacteriology gives many pyrogenic agents, but there is much distinction without differences. A ferment and a protein end in fermentation, inflammation, and suppuration. The chemistry of the compound does the rest. Chemistry is the determining factor.

Purulent Foci.--Suppuration may exist in a tooth, in the antrum, in the ear, or elsewhere. When once formed, it may become incysted and take on a fatty degeneration. It may extend toward a hollow organ, as a suppurating appendix, if left alone, will surely insinuate an opening into the gut--a natural cure.

Pus has a tendency to follow tendons and aponeuroses. or muscular interstices, vascular or nerve sheaths. Nature controls pus by the action of enzymes, which keep it laudable. It is only when the organism becomes acid--when acidosis develops--that pus foci begin to break down, the pus becomes thin, and begins to poison the organism. it is then that organized ferments preponderate over the enzymes in the purulent foci. It is then that latent inflammations of a specific character take on activity and are said to be developing the various stages. Why this latent stage? Because the life of the patient is not sufficiently correct to allow a complete cure; hence in from ten to twenty or thirty years, when protection is prostrate, the focal points take on activity and the organism give down to an old enemy.

Chyliform collections are found principally in serous membranes. They occur from rupture of a vessel or even of the thoracic duct. In most cases, however, they are due to a primary purulent collection whose microbes have succumbed to the supply of unorganized ferments furnished by a healthy organism (enzymes) sufficiently to cause a granulo-fatty degeneration. The fat is freed and emulsified, giving the liquid a milky appearance.

If the liquid is absorbed, a cheesy mass remains, which may take on calcareus transformation. Tubercles sometimes take on this change or cure.

Symptoms of a purulent focus are pain, heat, redness, swelling. Pain is the first symptom. It is caused by an increased flow of blood to the part, which causes swelling and heat, as well as the redness.

The pain is of a pulsating character. In time the pulsating pain gives way to a feeling of constriction, due to stretching of the nerves. After pus forms, the pain may subside, to appear only upon pressure. Cold abscesses are considered tubercular. They form without causing much reaction. I have seen reputable physicians confuse sarcoma and cold abscesses.

Gangrene.--Defined, gangrene is mortification or putrefaction of tissue. The process is named necrobiosis. It is declared to be of microbic origin. It is well, however, to be reminded that microbes are always secondary causes, and to declare that a given disease is of microbic origin is to leave the question of real cause in the air, from which it will never come down for a thinking mind until it is furnished an adequate cause. The fact that there is no specific gangrenous microbe is proof that, following the cause of the devitalizing of a given tissue, any organized ferment is sufficient to cause putrefaction of the dead tissue. The colon bacillus is sufficient to set up putrefaction or gangrene of the undigested food in the intestine.

When a part is dead, it must either desiccate or putrefy. Where there is heat and moisture it rots; and that is what gangrene is. The causes leading to death of tissue may be mechanical, physical, chemical, or animate: mechanical when a part is killed by machinery; physical when a part is killed by strong acid, excessive cold, or excessive heat; and animate when a part is killed by bacteria. It should not be forgotten, however, that germs must be aided by a forerunner which first devitalizes. The animate agents follow all agents that devitalize.

Anything that cuts off blood or nerve supply may devitalize to such an extent that germs may finish the destruction.

Fermentation of food may cause sufficient intoxication to destroy tissue. Then gangrene follows.

If it is understood that any putrefactive process, it matters not what the cause, is gangrenous, it will not be necessary to go into detail and name all the diseases which end in the death, or gangrene, of isolated spots of tissue or integument. Suffice it to say that the infections from typhoid fever, syphilitic chancre, gonorrheal bubo, septicemic fever, etc., are all putrefactive--gangrenous--infections.

Every diathesis takes advantage of systemic enervation to use these foci as centers from which to spread its peculiar type of disease.

If those who have suffered infection--an invasion--from a septic disease of any type (so-called contagious or infectious) will live in such a manner as to encourage elimination and an increase of nerve energy, these internal foci will be destroyed--will be used as fuel; and then it may be said that a blood poisoning--a specific disease--is cured.

A cure cannot be made by drugs, because a drug adds nothing to nutrition. A drug may irritate an organ and force artificial functioning, as in purging the bowels. But what does really take place? The bowels are forced to empty, but their functioning is inhibited, and, if the abuse is continued, they will cease functioning entirely. This is true of all medication and all organs affected by drugs. The so-called eliminating drugs irritate, but do not eliminate. They depress, enervate, and join with the enemies of the body in breaking down resistance and establishing infection rule over the entire body, or what "Damaged Goods" so graphically describes as the inevitable taint.

I here and now call upon all truth that is potential in medical science to bear witness to the statement I am about to make; namely: The human body is fully able to eliminate all infections, if it is given reasonable care in the lines of feeding, bathing, clothing, and mental poise. If, from an inherited diathesis, the constitution cannot resist the breaking-down influence of an infection, even when aided by the best of dietetic and hygienic care, the only possible results from medication and baths must be further enervation and less resistance to septic (specific) infection. Nature can eliminate and readjust, if permitted to rest physically and physiologically.

If proper care--a care that favors a better elimination and tissue renewal--fails to rid the body of septic foci, it is a beggarly reasoning power that ran believe that a medication which impairs nutrition and hardens tissue--causes a gingivitis (shedding of teeth) and ulceration of glands and bones, and even blindness--can act favorably and persuade or force a health standard that does not exist and is not potential in an organism.

The consensus of medical opinion holds to the superstition that by some magical power the drugs mercury, arsenic, iodin, potash, or a mysterious compounding--a synthetical blend--of drugs, can be made to go on a still hunt through the organism and drag out of their hidings all septic foci and expel them from the body, "Some dream," I admit; but no unprejudiced mind can find any proof for it in any of the fundamentals of medical science yet recorded.

Tubercles.--Those desiring an extensive bacteriological history of tubercles should procure a monograph on the subject.

All germs of a bacterial or microbic character are capable of generating fermentation in an environment favorable to their functioning; namely, a crowded nutrition, or overworked enzymic fermentation; threatening fatal obstruction to physiologic processes or devitalized tissue from injury.

When enervation is great, those who have purulent foci deposited from septic fevers, syphilitic ulcer or chancre, gonorrheal bubo or stricture, or chronic colitis with putrefactive fermentation, will develop affections in keeping with their diatheses. If they have the tuberculous diathesis, or if they are predisposed to take on glandular inflammation of a scrofulous nature, the type of their disease will be tubercular, which may be developed in any tissue of the body. If the diathesis should be of a nature to develop sclerosis, heart and arterial diseases will develop.

So long as any and all affections (so-called diseases) are permitted to develop only after the body's natural immunization is exhausted, it is very far-fetched to declare that a process which is wholly house-cleaning--wholly an emergency auxiliary to a physiological process--is disease-producing, or the cause of disease. Indeed, disease is a state, and those influences that increase or decrease the comfort of that state are causes of health and disease. Organized ferments are a part of a necessary and a properly organized environment for man. This is equally true of enzymes, food, sunshine, and other elements. Indeed, like every entity in the environment, each can be made man's friend or enemy, food or bane. Food is necessary to health and life, yet it is made man's greatest enemy.

For those with a diathesis there is but one immunization--namely, good health. Instead of seeking cures, prevention is the rational work--not extermination of germs, which is obviously impracticable, even if it were possible. And prevention is encompassed in one word-namely, moderation.

The control of tuberculosis must begin in childhood, if not before. Proper feeding, bathing, and clothing, along with enough intelligence to put such knowledge into practice, will stamp out the disease.

Localization and Evolution of Tuberculosis.--Theories of localized tuberculosis other than of the lungs are quite plausibly worked out. Of course, the pulmonary variety of tuberculosis is pretty generally conceded to come from inspiring infected air, or from taking the germ into the stomach with food. The bacilli introduced by the inspired air ingraft themselves in the apices of the lungs. The reason for this particular localization is attributed to the limited expansion of this part of the chest, and especially the weakness of the expirating movement. The natural sciences--especially mechanics--are frequently used by medical science in reinforcing a theory; but the student should not allow plausible argument to paralyze his real effort at getting at the truth.

If the theories of scientific medicine regarding tuberculosis were true, there could be no plausible reason given why tuberculosis, syphilis, or a fatal contagion had not depopulated the

earth; and certainly, if the theories of bacteriology were true, there could be no good reason given why germs had not prevented the populating of the earth.

The fatal weakness about all the germ science is that it cannot give a good reason why man is not extinct, if its theories of causation are true; and, on the other hand, if all it boasts of its great art and science be true, why disease is not stamped out.

Why do not all people who inhale bacilli develop the corresponding disease? Why are there people who cannot be made to take tuberculosis, and why are there a small percentage: who cannot be prevented from taking the disease? The answer to these questions will give a good working hypothesis on which to base a rational theory of causation.

The theories advanced in the various chapters in this book certainly are plausible, and the fact that, when applied, they work is all the proof that rationality needs. Bigotry and prejudice have never been, nor ever will be, convinced that the other fellow is not an ignoramus.

The theories of diathesis, enervation, and autotoxemia, when applied to tuberculosis, work out and rationally explain the cause, and certainly give the only depend prevention or immunization.

The various types of tubercular diseases--the classified tubercular diseases--are easily explained when it is known that this infection cannot be made to infect a gouty diathesis, but that it is easy to cultivate all types of tubercular affections--graft them, so to speak--on the tubercular diathesis.

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9. Pathology of the Fetus

As stated before, nature has put her eternal ban on the hereditary transmission of degeneracy.

Let us reiterate that there is no disease per se. What we call disease is an unideal state of health. What we recognize as health is a greater or less degree of approximation to an ideal state of comfort of mind and body. Few have perfect health; few realize their ideal standard; many are disappointed, and go through life singing, "Beyond this vale of tears." Those who think that man can escape all discomfort fail to understand the necessary educational influences of pain and discomfort.

Of course, the state known as health is a slight deviation from perfect health, functionally. But when functioning has been diverted from approximate health long enough to cause organized change of the character we call disease, this is degeneration, and is not transmissible.

Children are born with organs approximately perfect; or, as a result of accidents or injuries, they are monstrosities--deviations from normal physical development--and are frequently disposed of at the instant of birth because of their unfitness for independent existence; for example, headless children, or children born minus other vital organs.

The state of health which we call disease is not transmissible. Sterility stands between the unfit and propagation, No doubt children are born into environments unfit for proper development, but the vileness is all on this side of conception.

Diseases and deformities, up to monstrosities, are the results of traumatic influences. Disease-producing influences, such as toxin poisoning, may destroy life after it is started; but, at the time of conception, nature's health standard must have been satisfied, or it could never get by the censors who pass on proper conceptions. All sorts of detrimental influences may reach and influence fetal development; but life is started right--for certainly no organic disease in parents can be transmitted.

Drug-prescribing physicians have harmed unborn infants by medicating their mothers. Any influence that harms the mother must harm the fetus more or less. An overfed and incumbered mother will have an incumbered child.

It is said that mercury accumulates in the placenta. Why should it not find the fetus through the blood? The placenta is a filler which stands between the child and the ordinary blood derangements of the mother; but drugs, and especially mercury, arsenic, and iodid of potash, have a way of insinuating their toxic presence beyond the placental guard, there to deface the holiest of holies, and send it into the world a blot upon creation--a false witness against the purity of conception.

That the fetus and mother are united in bonds which allow a reciprocal exchange of physical and chemical influences, there is no question. For illustration: If a mother's uterus be opened, exposing a fetus, and a fatal dose of strychnin be injected into the fetus, fatal convulsions will be produced in the mother, while the child escapes; and, if sufficiently developed, the child may be extracted from the mother and saved--showing that it can stand a larger dose than the mother.

This statement is quoted from Sabory. It is not reasonable to suppose that a fetus can stand a larger dose of drugs than the mother; but the fact that the mother may be killed through the child, while the child is saved, is proof that every protection possible is thrown about the fetus. In this case the drug is taken up and sent to the placenta, and from the placenta to the mother's lungs and heart, before it can be returned through the general circulation to be distributed throughout the fetal body. The heart, and the circulation of blood through it, are far different in fetal life from what they are after the child takes an independent life. The blood, with its toxins,

is slow to reach the vital organs of the fetus. Indeed, the unborn child is safeguarded on every hand.

For the privilege of taking oxygen directly into our lungs we pay with a greater susceptibility to the poison influences of toxins.

When a fetus dies from poisoning through the mother by strychnine, it may be killed by the severe muscular contractions peculiar to convulsions caused by the drug; yet this is not very probable, so long as it is protected from contractions by a fluid cushion--the aniniotic fluid.

It is said that numerous observations establish that the bacillus of Eberth may pass through the placenta, but does not produce any lesion in the fetus, any alteration of Peyer's patches, nor any splenic hypertrophy, but causes a true septicemia. This is splendid proof of my contention that typhoid fever is the product of malpractice, and that all specific poisons--diseases with a specific poisoning--rest on one and the same basis--namely, septicemia--the septic base being chemically changed to suit the environment. A puerperal, typhoid, or traumatic septicemia, as well as a luetic infection, are all forms of sepsis, but featured by the environments under which they develop. Chaos reigns when specific individuality is given to all the different manifestations of putrefaction--septic poisoning. Our present system of treatment is made inefficient by a fallacious conception of causation.

Infection and contagion received a hard blow when it was discovered that, in the case of twins, one may be born with smallpox and the other not; and that the child is often behind the mother in point of time in the development of diseases.

Vaccinated mothers, living in an epidemic, may fail to develop the disease smallpox, and yet will give birth to children covered with pustules. This indicates that the mother's body is contaminated with the epidemic influence, or the infection could not be transmitted to the child. This also goes to show that, in all epidemic influences, those who do, not develop the tangible symptoms may be affected subjectively, having the disease in a subjective form, and how childish are all efforts at quarantine and immunization other than increasing resistance by raising the health standard.

So-called hereditary syphilis and tuberculosis are large subjects, the literature of which runs into tomes; but until the writers on these diseases shall know as much as high school boys, will know in a few years from now of the evils of bad habits in eating, clothing, and care of the mind and body generally, I shall not apologize to them for denouncing as rubbish their whole compilation on disease in general ,and syphilis in particular.

So long as wrong eating, wrong thinking, wrong care of the body--the use of tea, coffee, tobacco, and alcoholics-so long as the mind and body of our patients can be steeped in lasciviousness and sensuality, and all these disease-producing habits count for nothing with expert clinicians when they are weighing cause and effect to determine a correct diagnosis, why should I, or any other rational-minded physician, give any serious consideration to their conclusions as set forth in textbooks? Why are not their conclusions based on premises which have been robbed of their vital potency?

I charge the leading teachers of the profession of today with gross carelessness in making a diagnosis. They all know and acknowledge the evils of bad habits; but, in making a diagnosis, the effects of a vicious life are ignored entirely, and blood secretions, excretions, and pathological specimens are sent to bacteriologists, on whose findings a diagnosis is made and a cut-and-dried--specific--treatment is prescribed. The X-ray is used, and on its shadows is based a diagnosis, without a thought, or any consideration whatever, being given to the influence of the daily habits of the patient on causing the effects which the X-ray traces.

I have said that the pursuit of present-day diagnoses and treatment is a "fool's paradise." If it is not, why isn't it?

A life of lasciviousness and sensuality leads directly to degenerating diseases, such as tabes dorsalis; yet the leaders of the profession see nothing, think nothing, believe nothing, write nothing, and teach nothing, except that the disease is caused by syphilis and must be treated for syphilis, notwithstanding this treatment is a failure and they know it will fail. In the face of this, they *would* have laws passed to force their specific or anti-syphilitic treatment, and no other, at the pain of imprisonment for the culprit who would dare repudiate their dainnable pessimism.

The treatment standardized by the inhabitants of this fool's paradise (medical) will necessarily make their cures (?) correspond with their pessimistic prognosis. Perhaps it would be better to say that the treatment is logical--in keeping with the erroneous etiology,

From a modem medical view-point, there is but one toxin that counts in analyzing syphilis, and that is the toxin of syphilis. The modem medical gentleman may dive down into the worst human muck, but if he cannot find syphilitic infection, or the least excuse for suspecting it, he will issue a clean bill-of-health, to be put in escrow for ninety-nine years. If at the end of that time a Wassermann test, used every year, has shown negative, a certificate declaring the victim pure will be delivered to him "to have and to hold" for the remainder of his natural lifetime.

A syphilitic suspect is held under surveillance, and tested often enough and long enough to develop in him a syphilophobia, after which he will stand without being tied to any syphilomaniac.

To the uninitiated what I say may appear to be exaggeration, or perhaps entirely false; but the truth is that I cannot exaggerate on the fallacious teachings of modern medical science on syphilis--they are so false that they are beyond belief. The reason why medical fallacy has evolved to such dimensions on the subject of syphilis is because it is backed by law and the small voice of truth is frowned down.

'The majority of doctors who subscribe to the fallacy have no opinions, but they stand up and are counted for any ridiculous theories advanced by the "scientific" heads. In this way the stupid, unthinking majority governs; and when ignorance rules, insane delusion often sets the pace. 'The most dangerous delusions are those that are accepted by the lay minds as scientific.

When parents live in such a manner as to keep themselves enervated to the point of having imperfect metabolism--the point of having secretions and excretions more or less inhibited; when their personal habits are sensual, and the state of the alimentary canal is that of acetous fermentation in the stomach, and putrefactive fermentation in the bowels, their physical state is that of chronic toxin poisoning.

Acetous fermentation in the stomach and upper part of the small intestine has an inhibiting effect on the dehydrating process that takes place in the walls of the stomach, duodenum or small intestine, and liver. In the lower small intestine and the large intestine putrefaction takes place, and the toxins absorbed from this depraved condition is a constant source of poisoning. The lymphatic system arrests the absorbed toxins, and neutralizes them to a certain extent; but the body's immunization eventually becomes so overworked that glandular inflammations become the rule rather than the exception. This is the state that in time evolves the tubercular diathesis, which is described elsewhere under the head of "Diatheses." And, in thinking of diathesis, it should not be forgotten that more is meant than an average susceptibility; indeed, it means a fated certainty that tuberculosis will develop if the same habits of body and mind are practiced by the offspring that were practiced by the parents in developing acid fermentation in the stomach and putrefactive fermentation in the bowels. Without this inherited tendency to develop tuberculosis, no amount of association with people sick of pulmonary tuberculosis will cause its development.

When a subject showing so much degeneration of the vital processes is unfortunate in becoming acutely infected by any type of septic poisoning, ranging from venereal infection, through the infectious fevers, to infected injuries and surgical operations, his system will prove a

favorable culture-medium for the spread of the poisoning. The infectious fevers will develop the worst types. Venereal infections will act very severely, glandular inflammations will spread rapidly, and the system will show little resistance. Treatment will be slow in bringing about a change for the better. Anti-syphilitic medication, without correcting errors in eating, must fail.

Infectious fevers show a great mortality among such subjects. These are the subjects with whom modern syphilitic treatment plays such havoc. The most degenerated of this type are sterile; those who can pass nature's censorship and propagate are curable, and there is no transmission except an acute susceptibility to take on tuberculosis or syphilis, when the habits which lead to degeneracy are formed. A proper environment would lead away from such tendencies; but this influence seldom exists so long as children remain with parents, and parents remain ignorant of the health laws, and continue to practice vitiating habits. Children born. of such parents not only have a tendency to take on parental habits, but they are educated into them.

Postnatal influences cause degeneracies that are often ascribed to prenatal influences and inheritance.

The degenerating habits of the average parents during the gestation period, or during that period when a family is being raised, are quite enough to build a tuberculous or syphilitic diathesis. Excess in eating and excess in venery develop such a state of toxin poisoning that children are born more or less incumbered with flesh, and with such a sensitive state that they have little resistance. They soon develop toxemia; their lymphatic system takes on adenitis and lymphatic inflammations very easily. These are the children who develop borderland symptoms of scrofula, tuberculosis, and syphilis--they can satisfy the physician who is a syphilomaniac with all the thrills of a great discoverer.

Toxin poisoning from excessive eating, enervation from excessive venery and a lascivious mind, and poisoning from stimulants and improper clothing, housing, etc., build a state of body where no, symptoms are lacking for those who are ready to suspect tuberculosis, syphilis, or any degenerate state.

Errors in locating cause are the most tragic features of modern diagnosis. One of the most stupendous blunders of the day in medical science is in giving specificity to disease and ignoring the basic causes which make specific causes operative.

It is easy to graft specificity on a constitutional derangement, such as described above; but without some such cause the body proves a withering desert to the seeds of disease that fall upon it. To be specific and explicit: A child may be born with the tuberculous diathesis, yet it need not, because of that diathesis, develop and die of tuberculosis. Diathesis means susceptibility and inclination to take a given disease. Sterility prevents disease per se from being born.

Parents with vicious habits may deliver an incumbered child across the quarantine line drawn by nature, but nature's health officers are too loyal to evolution to allow the smuggling of infections into life. Degenerative processes must be manufactured on this side of conception.

Children born of parents who are too young are often degenerates. The cause, however, is psychological rather than physical. The first child is often a degenerate, as are only boys in large families of girls, and only girls in large families of boys. But the degeneracy is postnatal and psychical.

Physical degeneracy starts oftener from a psychological influence than from physical influences. However, both often start together, and walk hand in hand to the destruction of health and even life.

A babe is born. It is fed every two or three hours, night and day. It is disturbed in its sleep--in

its brainand body-building--by being put on exhibition to every friend who knows so little as to call in person on the puerperal mother, instead of sending a small note of one line conveying good wishes, and one flower (not a bouquet). Good wishes by telephone, or a personal card or note, with one flower, is all the personal attention any mother should receive from a friend, except her own family, for three months after the birth of the child.

Disturbing babies to look at them, kiss them, and shake them up to see how lovely their eyes are, and what exquisite little feet and hands they have, is nothing more than a delicious bit of hysteria and humbuggery practiced much too often for the good of the puerperal mothers and the babies; for right here is where the building of pathology of infants and heredity is begun.

The foundation of nervous irritability and indigestion starts at once, marked by constipation, white curds in stools, colic, and night and day crying.

Benevolent Assimilation--a Conservative Force

There is a tendency for pronounced types of any diathesis to grow weaker and weaker until unfit to reproduce; then they die out.

As stated often before, disease is not transmissible, but enervation is, Enervation means lost power of resistance, and when resistance is low, the influences which lower it find the high-bred diathetic easy prey, so to speak.

In breeding lap-dogs, the lower their nerve energy and the less, their resistance, the more popular they are among dog fanciers. The nearer death from fatty degeneration the stock at the stock shows is, the more it is admired and the greater is the premium.

One day years ago I was crossing Boston Commons. Moving along in front of me, at a snail's pace, was a woman far gone with fatty degeneration. When I was within ten steps of heir, she turned and said in a lackadaisical voice: "Darling, do you want mamma to wait for you?" I looked in the direction of her eyes, and saw an exophthalmic dog, whose weight certainly contrasted with that of its "mother," for she probably weighed two hundred, and her offspring could not have exceeded six to nine ounces.

The dog's breeding had left it with scarcely enough nerve energy to stand on its legs. It had eyes, but it saw not, and it had life, but it lived not. It was a case of nervous diathesis. It was bred almost out of existence.

Children may be born of parents who come from parents with strong, well-marked diatheses--with low resistance to influences which pervert nutrition--and if the diathesis favors tuberculosis, that disease will develop; if the diathesis is that of gout, the children will develop rheumatism and other gouty affections.

Children of tubercular diathesis, when bred down until they are very enervated, have but little resistance, and when they are abused in a way to pervert nutrition, they develop some form of tuberculosis. All they need to start the morbid process is to be vaccinated with cowpox, which is a bovine type of syphilis. Just what the difference is, the highest medical authorities do not know; the only apparent difference being that one develops in the human being and the other develops in the cow.

In a pronounced type of scrofulous diathesis, vaccination is all that is needed to set up a tuberculous or syphilitic morbid process that will be pushed on by wrong life to destruction of health and life while the victim is quite young.

Vaccination may start a morbid glandular derangement that will favor the development of all the catarrhal diseases peculiar to child-life.

Of course, infections from toxin absorption in the intestine are common to children of diathetic

type.

Children from a long line of ancestry favoring the development of the scrofulous, tuberculous, or syphilitic diathesis are weaklings, with flabby muscles, who develop adenoids and enlarged tonsils early. They develop skin diseases of an impetigo variety, and their lymphatic glands are very prone to take on inflammatory enlargements.

There are many fatal diseases developing in these children before and at puberty because their resistance is low and they are subjected to the same disease-producing habits as those from whom they inherit their type of health.

According to Darwin, this is the way the unfit are made to disappear.

A dyscrasia or diathesis is the sum of erroneous living practiced through generations. Diseases peculiar to a diathesis are not long in developing when the strain is pure and inbred; but where a beautiful tuberculous girl, with long, silky eyelashes and well-rounded body and limbs, compels an Apollo of the sanguine, vital temperament to fall in love with her, the tuberculous strain is diluted and the half-tuberculous children are given power to live; whereas, if the girl had attracted a young man, like herself, of tuberculous diathesis, the children of such a union would be born to die early.

Influence of Chronic Intoxications

Chronic food poisoning from the habit of overeating causes enervation. This state favors the development of any disease to which the one suffering from enervation is prenatally inclined. Anything that enervates those with a diathetic inclination will drive them into developing whatever disease their diathesis inclines them to develop.

Children born of parents enervated from chronic intoxications often start life with a great show of brilliancy; they are bright--indeed, precocious. But they soon come to an end, settling into disease or intellectual mediocrity. The cause for this may be one of many influences. The children are born and start life under domestic influences--a style of living--that have ended in alimentary, alcoholic, or other forms of inebriety in their parents; and the most natural thing for the children to do is to follow the parents in dietetic errors, and then, as they grow older, they adopt the coffee and tea habits, and perhaps later the tobacco and alcohol habits.

Excess in any one line paves the way for excess in other lines. Intoxication-be it from the absorption of toxins in the bowels from overeating, nicotine in the mouth, or alcohol in the stomach--develops enervation; and the more enervated a subject becomes, the more craving he has for more and greater varieties of stimulants, until the nervous system and nutrition are impotent. During the early stages, when the nervous system has strong reactive power, the mind is unusually bright--children show precocity; but the evil day of enervation, followed with prostration, must and does come. Then dullness follows brightness; will is lost; eccentricities come to the surface. The real artist may continue to produce in a way to please those who are not critical, but certainly not to please the artist himself, if he were normal.

Debauchery is not confined to physical stimulants. Ecstasy is mental debauchery. All cases of extraordinary precocity are types of mental diathesis brought on from idea--drunkenness. The emotions are fed with a consuming eagerness to drink at the fountain of all knowledge; the idea and desire become consuming; an ecstatic state is developed; and as a result we see the boy Christ "sitting in the midst of the doctors, both hearing them and asking them questions." On being asked by his simple-minded parents to explain why he was away from home, his answer was:

"Why look ye for me? Wist ye not that I must be about my father's business?" He was not understood, because the moral mind cannot look through the veil of ecstasy.

Only a short time ago the world of education was astonished by a boy of eleven years of age

lecturing to the Harvard professors on the fourth dimension. This is a type of ecstasy--mental inebriety. The enervation that must follow may show the will and all the positive elements of his character impotent; or the reaction may be so great as to sweep this precocious youth out of life.

These cases of premature--or, rather, extraordinary--mental developments were prepared for precociousness before birth. The parents developed a mental diathesis, and as soon as these youths were subjected to mental stimulation they developed mental inebriety.

Children, when once launched on the road of intoxication traveled by parents, will speed up and go much more rapidly and come to an end much sooner.

All habits--mental or physical, moral, immoral, or unmoral--are just so many varieties of intoxications; and, when indulged in without restraint, enervation, and the consequent perverted nutrition, follow. The children resulting are stamped with a diathesis which makes it easy for them to develop in the habits of parents.

As disease has no individuality per se, but is, first, last, and all the time, simply a state of health, all efforts in the line of healing worth anything are those that remove habits which lower the standard of health.

Moderation in all things builds a self-controlling diathesis that enables children to control themselves. Poise is as transmissible as any other habit.

Convulsions follow in the wake of parental drunkenness. Infantile paralysis is the effect of wrong nursing, and endemic or epidemic influences, on a child that is stamped with neurosis as a diathesis.

Unless we can fully comprehend the truth that normal children cannot be made sick; that such diseases as infantile paralysis take hold only of children who have been prepared by parental excess--perhaps excessive venery before and during the pregnant period, plus table excesses, and maybe alcoholics--we need not hope to build an immunization that will do away with epidemics. The part played by vaccination in breaking down resistance should never be forgotten.

Epilepsy is a neurosis built by parents and transmitted to children. Alcoholism is supposed to be the chief among all intoxications that build the neurosis in children which leads to epilepsy. In all probability, excessive venery stands at the top of all causes.

Saturnism (Lead Poisoning).--When the mother is poisoned, she usually aborts. When the father is poisoned, C. Paul found that out of one hundred and forty pregnancies more than eighty were abortions. Among the children born alive, one-third died the first year and one-third more before the third year. Those children who live to maturity are liable to have all kinds of nervous diseases.

One thing is always observed, namely: when degeneration is established from the use of any stimulants, sterility prevents propagation.

Hereditary Syphilis.--That symptoms produced by toxic poisoning caused by ordinary sensuality in those of scrofulous diathesis are often ascribed to hereditary syphilis cannot be successfully disputed. This I have demonstrated so often in my practice that the truth is common-place. For example: The abortion habit is curable by correcting vicious dietetic habits and venereal excesses. Pemphigus, when located on the soles of the feet, is declared to be absolutely characteristic; but the truth is that such skin diseases are developed prenatally and after conception, and are due to perverted nutrition brought on the mother from the sensual indulgences too common in, if not characteristic of, pregnant women.

The average woman's nutrition is perverted before conception, because of the universal habit of overeating and overindulgence in licensed sensuality. Add to this state the sensual

indulgences above referred to, and countenanced by good society and everybody's religion, and we have the ground-work for all the diseases to which the human offspring is heir. Modify this picture of perverted nutrition by poverty, squalor, and the corresponding psychology; then add the complicating influences exercised on these types by fear, hopelessness, dispair, and a disorganizing medication, as practiced by the representatives of modem medical science, and no imagination, it matters not how vivid, can picture a pathological inferno with more types of loathsomeness than evolves from the states here described--all, too, without anything more "specific" being added.

Where the above pathology is pushed to organic degeneration, sterility prevents its propagation; but there are enough functional diseases manifesting in the fetus, built by licentiousness in parents since conception, to satisfy the imaginings and perverted reasoning of our most pronounced types of syphilomaniacs.

Perhaps those who read my argument will say: "Why shall we accept one man's opinion against the opinion of the whole profession?" What can the whole profession know about a subject that it has not investigated? If the whole profession has, refused to watch the progress of perverted nutrition, as it develops under the sway of sensuality, and has not refrained from the use of medication, how is it to know what uncomplicated pathology is?

If the profession has refused to watch the progress of disease under fasting, or light dieting, and no medication, how is it to know what I know after years of such "watchful waiting?"

No man's opinion is worth anything on a subject about which he knows nothing, and to multiply such an opinion by a hundred, a thousand, or a million like opinions does not change the worthlessness of the first opinion. A fallacy multiplied by a hundred million minds does not make a truth. To force Galileo to abjure the Copernican theory ninety years after it had been published by Copernicus did not make the world flat.

Hereditary syphilis is a bugbear, the offspring of original sin, the fall of man, and like relics of the child-mind.

Hereditary syphilis is a disease made this side of conception, and is not transmissible. The child that is born with symptoms of disease is infected after conception.

It is a fact that we have the scrofulous diathesis, which means that the people coming under this head are more inclined to develop tubercular diseases, syphilis, and the thousand-and-one small diseases and symptoms that come under the head of scrofula, tuberculosis, and syphilis, than they are to develop symptoms of gouty diathesis.

It is worth while to try to comprehend that evolution had the preponderance of power, that the cosmic urge is on the side of development, and that there is a point beyond which degeneracy cannot go-and that point is conception. This is so true that no analytical mind can be in doubt when the great and profound truths of history are known and well digested.

Syphilis is a filth disease--a disease of clothes and sensuality. Man is slow in learning how to wear clothes--his morality transcends his estheticism. From a health point of view, a filthy man is much safer nude than clothed.

Syphilis is a disease reaching back far beyond the birth of the idea of specific treatment. Long before modem medical science, with its dogmatic, fatalistic teachings regarding "universal taint" and hereditary syphilis, King David confessed to his God: "There is no soundness in my flesh . . . no rest in my bones, because of my sin ... My wounds stink and are corrupt because of my foolishness . . . My loins are filled with a loathsome disease, and there is no soundness in my flesh . . . the light of mine eyes . . . is gone from me. My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off."

This confession was by David for his people. The symptoms were those of syphilis. If the

Jewish people were so diseased as to be shunned in that early day, before mercury, potash, "606," Wassermann tests, plays on the order of "Damaged Goods," and all the other insanities and inanities were discovered, what prevented the race from being wiped out? If circumcision was all the treatment, except fasting, it would be well for the wiseacres of the medical profession of today to tell us why the disease needs more attention today. Every other disease known to antiquity has grown lighter, if it has not become extinct, in the march of civilization.

The literature that has grown up on the subject of syphilis and its mystical habits is weird, and so eminently scientific that nothing can possibly evolve out of science to equal it, unless it would be a cure for the dreadful disease. But this is obviously impossible; hence the glorious achievement of the scientifico-syphilo-maniacs is likely to stand unparalleled in all medical history.

If I should undertake to refute all the freakish pathological phenomena attributed to syphilis, I should be occupied for the remainder of my days, and then leave the subject unfinished.

The following I give as a sample of myriads of analogies: "The microbe may remain inactive in some corner of the organism, and become active several years later, on the occasion of a traumatism or any other cause." This can be duplicated in those who are autotoxemic, and who are jotted out of "status quo" by an unusual shock.

We might tolerate the profession's syphilomania if it were not so pessimistic and fatalistic. But from years of experience we know that nature can throw off every disease that has not become organic; all that is necessary in the line of treatment is to remove every influence that is obstructive to the body's functioning. We know that the body is busy throwing out toxins, and if there is an accumulation--if elimination is not equal to accumulation--all that is necessary is rest (physiological rest), and nature quickly returns to the normal. There is no stimulation to elimination that equals physiological, physical, and mental rest.

That drugs will bring about elimination is true; but they bring a disappointing relief, for they excite to action and leave the organs more enervated. As a consequence, a relapse follows--or an apparent relapse; for, as a matter of fact, such relief is disease-building.

Hereditary tuberculosis and hereditary syphilis are analogous when found in a syphilitic or scrofulous diathesis--in a scrofulous subject coming from a father and mother of tubercular diathesis; but when one parent is scrofulous and the other gouty, the heredity is a modified scrofula or syphilis.

There is no hereditary tuberculosis. As stated before, diathesis means a tendency to develop given symptoms of diseases. Disease per se cannot cross the line drawn by sterility. To make an exact statement, diathesis means that health will deviate in a definite manner.

A child with the tuberculous diathesis well established may develop utero-tuberculous derangements.

Pronounced unmixed types of diathesis are hard to find. The tuberculous and gouty stand out more plainly and are recognized by the unskilled. A pronounced diathesis predetermines the type of diseases to which the subject is heir. The advantage of knowing to what class a child belongs, is that mistakes in climate, food, clothing, and occupation may not be made.

The tubercular diathesis should live out-of-doors, and be fed fruits and vegetables--very little animal food. The gouty diathesis develops gout, eczema, neuralgias, neurasthenia, etc. Animal food, with fruit and raw vegetables, should be the diet.

Both diatheses need grain during the developing period.

Arthritism, or gouty diathesis, presents the following characteristics: gout, eczema, nervous derangements, such as neuralgia, hemicrania, hypochondria, neurasthenia, gas, diabetes, gravel,

stone in the liver, kidneys, and bladder. When the father has gout, the son has asthma, and the daughter develops arthritis deformans. A child of this diathesis has headache at puberty, and may develop asthma or rheumatism; at about middle life, gout develops, and he dies of apoplexy.

It is said that gifted people--geniuses--are of a gouty diathesis, and are very inclined to develop single faculties to their own destruction.

The scrofulous diathesis starts with catarrh; nose, throat, and ear diseases; tubercular joint and bone diseases; catarrhal inflammations of all mucous membranes; glandular diseases.

Congenital malformations are said to start from infections. No doubt the nervous systems of the mothers have much to do with fetal development.

Fetal development is a large and interesting subject, but not necessary to this book. The readers who are interested should go to their public libraries, where they will find textbooks on the subject.

Physiological heredity is the innate power of the cell to reproduce a successor.

Ribot declares it to be a biological law that enables living beings to repeat themselves in their offspring.

There are two laws, however: first, the law of conservation--retaining ancestral type; and, second, that of evolution.

Conservation is the greater. Indeed, when we see with what tenacity humanity clings to all beliefs and customs, we sometimes wish that nature would relax her vigilance. But when we see how necessary it is for great resistance to be present all the time to prevent disease--degeneration--from crossing the lines drawn by heredity or transmission, we are made to rejoice that degeneration cannot be transmitted.

There is a temptation to write on the subject of reproduction and other features of heredity, but space will not permit. Darwin, Ribot, Haeckel, Weissmann, and many others will furnish the reader material out of which he may formulate his own belief.

10. Inflammation

Definition.--A burning. Any local influence that disturbs cell nutrition may be said to lower its standard of life or health, and this state we call disease. The phenomena are hyperemia, pain, heat, swelling, redness, and disordered function--impaired nutrition.

When the influence is traumatic (a wound or injury), there are two reactions which follow--namely, local and general. The local reaction causes a change in the nutrition of the cells injured and in their neighbor-cells. The general or systemic reaction causes a general nutritive change in keeping with the severity of the local injury. An injury may be so small that the general reaction is nil; yet, if the reparative process is interfered with because of inhibition of elimination and drainage, the systemic reaction may be so great as to cause death.

The simplest wound is a cut. When left to nature, the wound gapes. The wise mind will interpret nature's speechless signs about as follows: Nature is always conservative, and if there were danger in a wound standing open, it would be natural for the mechanism to close it, the same as the blood vessels close to stop bleeding. The blood vessels contract and retract, causing the flow of blood to be very light; then, on account of the slight flow of blood, a clot forms in the mouth of the cut vessel, which seals it most effectually. Where the blood vessels are torn or twisted apart they do not bleed. In certain diseased states the blood will not clot, and bleeding continues. It may be objected that wounds to blood vessels do sometimes bleed the injured to death. Yes, that is true. Every conservative provision of nature can be, and sometimes is,

overcome, but that does not alter the fact that nature places a special guard over each one of the body's vital functions, the normal action of each and every one being necessary to total full health of the body, and that each guard must be vanquished before the function over which it presides can be deranged or checked.

If microbes were dangerous to open wounds, they would not be in the atmosphere, in us and about us. If it were not for the reciprocal relationship existing between the microbes (organized ferment) and the enzymes (unorganized ferment), cell development could not take place, and tissue growth and reparation of injuries could not be brought about.

If the microbes could not get into a wound, either at the front or at the rear--either from the outside of the body through the medium of the atmosphere into the wound, or through the lungs into the blood, and, by virtue of the circulation of the blood, into the wound--healing could not take place. Organized ferments are as necessary to life as unorganized ferments. We know that cooked food, boiled water, and canned fruits are not so wholesome as foods not cooked. The false notion is sometimes advanced that uncooked vegetables are disease-producing. This is true only when the uncooked vegetables are diseased.

To kill the vitamin or enzymes in fruit, vegetables, or meat, by cooking, destroys the reciprocal balance between enzymes and microbes, resulting in decomposition. If, however, the cooked products are placed in vacuum, they will remain without change.

The Lister dressing places wounds in a state free from the access of germs; hence there is no danger from interfering with nature's plan of open drainage. But if the dressing is imperfect, allowing the germs to enter, and does not allow free drainage, the balance between germs and enzymes--between organized ferments and unorganized ferments--is lost, and the result is decomposition with infection, which ends repair, and sloughing of the parts takes place. If the sloughing establishes drainage, a reciprocity--a balancing of activities--between microbes and enzymes is once more established, and healing proceeds; but if sloughing does not take place and drainage fails to be established, organized ferments (microbes) gain the mastery over the unorganized ferments (enzymes), decomposition and disorganization of the blood take place, with the generation of sepsis which paralyzes the nerve centers, causing death in a very short time. If feeding is pushed "to keep up the strength and supply waste," the enzymes are used up, reparation of the wound--healing--does not take place, and the reparative material breaks down into pus.

The activity of the circulation in and about an injury takes place as one of the reactive phenomena following the shock of an injury, and causes swelling, pain, redness, and heat. This is a normal inflammation, necessary to reparation. To secure healing material, a surplus of blood must be taken to an injured part; and so much is taken that the environment of an injury is filled to overflowing-for nature is prodigal. This is the cause of the swelling, pain, redness, and heat; and the pressure on the nerves causes pain--the pain of inflammation. A surplus of blood means a surplus of heat; but so long as the chemistry of the elements is physiologically maintained, the temperature--inflammation--will not be above the normal visceral temperature, and the healing will then proceed normally. On the other hand, if the nutrition of the wound is perverted by having the waste retained, microbic fermentation takes place, which changes the chemistry, and decomposition supplants composition or healing. Normal inflammation, due to the fermentation caused by enzymes, is supplanted by abnormal inflammation, due to the fermentation caused by microbes. The first phenomenon is health as it appears when the reparative processes are working without a handicap; while the second is health as it appears when the reparative processes are working under a handicap.

Physiology and pathology are not opposing forces. They are two phases of life, and health is the thermometer. Health may register high, and it may register low; but the degrees between the extremes of full physiological health and full pathological death mark the standard of health.

Instead of the microbe per se being pathologic, it is physiologic and necessary to the life and

health of the cell, or the great aggregation of cells known as man.

The great importance of drainage is obvious when the above facts are considered, and such facts should enable the analytical mind to know that organized ferments (microbes) have no more to do with inflammation than unorganized ferments (enzymes). The real cause is obstruction to the normal operations of repair. If microbes must be pent up in a wound before they can set up their peculiar fermentation, then the cause of the pent-up condition is the cause of the morbid process.

Irritation and overfeeding cause too much secretion, and too much secretion is disease-producing.

Enzymes are secreted by all the organs and tissues of the body. When they are secreted in less quantities than normal, disease results. It would not be the truth to say that enzymes are disease-producing; yet too little or too much will result in imperfect metabolism.

Food is stimulating and body-building, but when eaten in too great quantities it is disease-building. It would not be the truth, however, to declare that food is disease-producing. Unless microbes can produce a specific disease without unnatural environments to aid, it cannot be truthfully said that they are disease-producing; if they are, then every benign influence may be said to be disease-provoking, because disease follows its perversion. The air is irritating to a fresh wound, but the irritation must be for a good purpose. It is; it checks the discharge of serum, and dries the surface of the wound so that reparation can take place behind the protection. The dry covering acts as a stay or fixation expediency, to secure the quiet necessary for healing. If the sealing-in of the wound is too close, and danger of infection threatens, an itching takes place, which forces rubbing or scratching, and this breaks enough of the covering to allow the escape of pent-up pus and waste matter.

Thus we see that nature is not afraid of air, nor of the dust and microbes which it carries. We see that nature does a splendid job, and her theory and practice are sound as science. The only objection is that her work in healing wounds is severely crude at times, and that it may be improved upon--only, however, in manual dexterity. The surgeon may lend nature his hands, but nature certainly does not need his brains. A good combination is for nature to lend the doctor the wisdom to carry out what she would do if she had hands.

Not long ago I read the extraordinary advice of stitching a wound together without the preliminary of cleansing, and without any attention to drainage except massaging the edges of the wound. All I have to say about such a procedure is that the Lord is on the side of that surgeon, and permits him to exploit the laws of nature in a most grotesque fashion.

A safe plan for surgeons who are not "anointed of the Lord" is carefully to drain all wounds that are sewed up, and, if quick healing is desired, to keep the parts as quiet as possible; indeed, keep fingers away from the wound, and especially those of the patient. If these precautions are not observed, the surgeon may find, after it is too late, that he may say with Pope:

> Pretty in amber to observe the forms
> Of hairs, or straws, or dirt, or grubs, or worms.
> The things, we know, are neither rich nor rare;
> But wonder how the devil they all got there!

It is just possible that the great physician who penned the surgical heresy referred to was posing and, for the sake of being thought original, suffered his logic to run counter to natural law and order. And again we are made to agree with David: "Verily, every man at his best state is altogether vanity." Selah!

Hands, with nature's wisdom, will clear the wound. Place a drain in the bottom of it, in such a manner as to secure perfect drainage; then bring the wound together, closing the gap and

coaptating the cut surfaces as nearly as possible; then apply a general dressing that will not interfere with drainage, but will lend support and steadiness, so that healing will not be interrupted by unnecessary motion. This is nature's wisdom turned to account.

Healing is interfered with by inflammation, or the causes that lead to inflammation.

We have seen that the first reactions stop bleeding, and cover the wound with serum and fibrin, which protect the surface by giving it rest from continuous irritation from air, dust, and insects.

If the cut surfaces are brought together, the healing must end much sooner than if a bridge of tissue must be built to span the gap.

The Wound and Natures Mechanism

Nutritive material is brought in abundance to a wound, caused by the irritation of the injury. Irritation, pain, redness, and swelling follow injury. At first, irritation causes contraction of blood vessels. This stops hemorrhage. As a result of the contraction--overstimulation--reaction sets in; the overstimulated blood vessels are enervated, and because of the enervation they relax and fill with blood; then exudation takes place. The cell-building elements cover the cut or mutilated surface, and crowd the border so much that there is a heavy discharge through the drain, if the wound has been properly dressed or has been left open. Where drainage is unobstructed, the healing behind the barrage of nutritive material thrown out moves along without a halt. The proportion of enzymes and nutritive material furnished by a healthy, not overfed, wounded individual insures rapid renewal of tissue. If obstruction takes place, microbic fermentation is set up in the pent-up surplus. This is a conservative process; for it thins the discharge, irritates the wound, and causes an extra amount of serum to be exuded. The purpose is to melt down any incrustations and new-made tissue that is obstructing drainage. When this fails, and the microbic fermentation gains the mastery over the enzymic fermentation that is protecting the healing surface, then the enemy--toxin or septic poison--pushes its way into the circulation, and septicemic fever and death follow very quickly.

Inflammation is almost nil when a wound is in a state of health; for it must not be forgotten that wounds, as well as all the phenomena we call disease, are different states of health. The strategic move for preserving the health of the wound, when it becomes obstructed, is little short of a miracle in appearance; yet it is the most natural workingout of cause and effect. We have seen that, unless the obstruction is overcome, the state of health will be lowered until it ends in death. In obstruction to wounds, nature destroys to make alive.

All nutritive changes which we call disease are due to influences which increase, decrease, or pervert cell-life; every symptom called disease is a conservative move; and, when not understood, or suppressed as doctors (not physicians) do, harm follows.

Inflammation is due to the local speeding-up of the nutritive processes caused by injury. The injury may be physical or chemical--a cut, tear, bruise, bum, blister, or a local irritant of any kind. When a wound is healing normally, the heat is about that of the normal viscera--namely, 99° to 100' F. When the temperature exceeds 100°, there is something going wrong--either the drainage is not perfect or the patient is eating too much.

The phenomena of inflammation are pain, heat, redness, and swelling.

Where the increase of heat is not more than one or two degrees above normal--above the temperature under the tongue--all is well with the wound.

The whole question of wound infection hinges on drainage. Any wound that drains well may be smeared with the most virulent septic poison without infection. The infecting agent must be rubbed into the wound so that it will be pushed into, or below, the granular surface. The infecting material must find a lodgment so secure that the flushing--enzymic--serums cannot

dissolve and wash it away.

Injuries in canals, tubes, ducts, and air passages will heal normally if drainage is not obstructed; but, when obstructed, the usual conservative methods of nature may further obstruct, and death may result from a rational therapeutic measure mechanically obstructed in its execution.

It is painful to watch members of the medical profession floundering about in a vain endeavor to save a patient from death from septicemia by injecting into the veins or subcutaneously a solution of salt, or a hastily prepared serum, regardless of the fact that the source of the infection has not been discovered; or, if it has, no adequate effort is being put forth to overcome it. What must be the conclusion when such floundering is observed? Obviously, that either the medical gentlemen are acting, or they have not a very accurate knowledge of the principles involved.

If the case is one of septicemia, following abortion, an intra-uterine douche of an hour's duration (hot salt water) is the first thing to do; and it should be repeated every three hours, if the patient continues to live. The douche removes the infecting material, establishes drainage, relieves the nervous system, brings on relaxation, lowers the tension that is interfering with all the life-processes, and, neither last nor least, places the organism in the most favorable state for resumption of secretion and excretion. A hot bath of from thirty to forty minutes' duration will prove a great auxiliary to the douches. Certainly no food should be given; for the work of elimination and neutralizing the poison--antidoting the organized ferments by the unorganized ferments, the germs by the enzymes--must not be hindered by interrupting the enzymic activities of repair with an intake of food, which, under the circumstances, is wholly superfluous and disease-producing.

Why does an injury or a local irritant or irritation cause inflammation at one time and not at another?

It is all a question of natural immunization; and natural immunization has for its elements an alkaline state of the blood, a normal nerve energy, and an optimistic psychology.

The blood, if normal, is alkaline and well charged with enzymes.

When an injury is received, there is first a shock, which causes a constriction of blood vessels. In time there must come a reaction, and the reaction equals the shock--the dilation of the tissues (blood vessels) will be equal to the contraction from shock. This means congestion or crowding of the parts, and, as in the case of a congested thoroughfare, traffic or the function of trade is impaired--too much blood is in the parts, causing an exudation, There can be no rest or standing-still; the exudates must be excreted, thrown out, or reabsorbed. To fit these exudates for absorption, they must be treated with enzymes, in order to fit them to reenter the circulation. If there is enervation and a lack of enzymes, then it will be "up to" bacterial fermentation to prepare the exudate for expulsion from the body. If there is no break in continuity--if there is no open wound--then the bacterially treated exudate must be absorbed into the general circulation, causing infection; or the infection will be corralled by walling in the devitalized territory and lining the inclosure with an impervious pyrogenc membrane. The pus that forms is retained--not allowed to escape into the general circulation; for, if it should, it would cause pyemia. If the body's natural resistance is too low to fortify it in this way--if it cannot localize and immunize the infecting material--then general infection takes place and the victim dies of septicemia.

Anything-any influence that causes irritation--attracts an extra flow of blood to the point of irritation. The engorged blood vessels exude a fluid. This fluid must get out of the body. If it cannot, it must be digested and reenter the circulation; or it must be bacterially liquefied and carried out of the body through the open wound. If there is no point of escape, an abscess must form, as described above, or general systemic infection must take place.

If the point of irritation is the pleura, the exudate may accumulate, and, from lack of bacterial

influence, the fluid is neither digested and absorbed, nor decomposed and converted into an abscess of the pleura, nor absorbed, creating septic fever and death; but remains a bland, innoxious fluid in the pleura.

The life of man, from his entrance to his exit in this world, is a process of metabolism. If this process is done well, he has health and well-being; if the process is carried out badly, he has impaired health.

Metabolism is carried on well or badly. When well done, we say that the individual is well--healthy; when badly done, then man is sick. Health and disease are states, not entities.

Inflammations of Mucous Membranes.--The simple forms of inflammation are those caused by the toxins generated by the influence of organized ferments on carbohydrate foods. When no more food is taken than can be utilized by the body--than can be fitted for assimilation by the unorganized ferments (enzymes)--the body in all its parts remains in a state of health called normal. Secretions and excretions are nearly enough balanced to insure health.

If, by mental or physical habits, nerve energy is lowered--if enervation is pronounced--secretion and excretion sink below the normal; this lowers enzymic production and increases the amount of waste products circulating in the fluids of the body. If the usual amount of food is eaten. digestion will not be perfectly carried out. A certain amount will be left over and above this amount that can be digested. This left-over material must undergo microbic fermentation.

If the organism is abused by overeating, overclothing, or living in too hot houses, or when the body is especially enervated, and is then exposed to low temperatures, or passing from hot houses, hot beds, to cold air--winter --temperature--irritation of the mucous membranes of all exposed canals results, until catarrhal inflammations become a constant state of the most exposed of these membranes.

Catarrhal inflammation of mucous membranes may be considered an index of the state of digestion and assimilation. The catarrhal sign means an oversupply of food--in some cases an oversupply of food and improper food. as well as improper combinations.

This catarrhal state is general and is the culture-medium for the development of all sorts of affections which we call disease.

For children to develop the affection known as diphtheria, all they need, in addition to their general catarrhal state, is a sudden change in clothes, weather, environment, and other influences, which brings on enervation; then add to these influences an unusual meal, or an unusual amount of meat, sugar, and rich cooking, such as served on holidays.

A child may be very enervated from whatever the cause, but it will not develop diphtheria unless it is poisoned by an oversupply of animal proteid.

11. Septicemia and Pyemia

Septicemia is poisoning from putrefaction. The poisoning may be slight and local, or it may be general and so intense that it overwhelms the patient, causing death in a few hours, and certainly in a few days.

A type of local as well as general septicemia may be furnished by puerperal subjects.

An injury at childbirth--a simple tear in the neck of the womb--may be bathed in a putrefactive lochia. The puerperal woman may not be kept clean--douches are neglected until the discharge is allowed to become septic. The torn part is submerged in this putrefaction, and enough is absorbed to set up a local inflammation and derange the blood so as to ruin the mother's milk for the infant, perhaps causing convulsions; or, if not so bad, then the milk may cause such a derangement of the stomach and bowels as to force weaning. In the mother's case, she may get

off with a local ulceration, an endocervicitis, or an endometritis; or she may develop a phebitis (milk-leg), and systemic infection may follow, leaving the way clear for a general or organic diathesis to establish a predisposed disease--namely, tuberculosis in one or more of its many phases, kidney, heart, or nervous diseases, or gout in the various forms.

When the septic infection is great (as it is when the womb is misplaced and drainage imperfect), absorption to a fatal amount is no infrequent happening.

There is a cut-and-dried classification of toxernias which corresponds to a bacterial classification that is legionary. To minds which respond only to the mystical, intricate, complex, and infinitely imaginative, bacteriology, with its infinite variety of germs of diseases--its theory of bacteriemia and bacterio-toxemia--certainly must be satisfying to a superlative degree.

Bacteriemia.--Bacteriemia is where the bacteria invade the entire organism and develop septicemia, without causing the special lesions; or they locate in viscera or tissue, and cause purulent foci (pyemia).

Bacteriemia, then, is general infection. In bacterio-toxemia the bacteria remain localized and secrete toxins, causing intoxication. This is an ingenious explanation which, defined, is a distinction without a difference. Indeed, according to the same authorities, the blood will not tolerate bacteria; it kills them, or forces them to ensconce in the tissues of the body,

Pyemia is distinguished from septicemia by the germs locating in the tissues and becoming purulent foci. True pyemia is exclusively ensconced in the tissues, while in septicemia the microbe is present in all parts of the organism. 'These are bacteriological teachings.

The only theory that appears logical--consistent with the unity of scientific knowledge and philosophy--and works out satisfactorily in a clinical way, is that bacteria, or organized ferments, begin their work where enzymes, or unorganized ferments, leave off. When physiological fermentation leaves off, pathological fermentation begins. In nature's economy, one is as necessary as the other; for one process is organizing and the other is disorganizing: one is evolution, the other is dissolution.

The old demonistic idea of warring forces--of good and bad being locked in mortal combat--is worthy of the childmind, but certainly ill becomes enlightened interpretation.

Science is nature defined. It is possessed of rigid necessity and absolute universality. Philosophy is the unifying of all knowledge--all science--into a logical unit. Unless fragmentary knowledge can be unified into a consistent whole with all other knowledge, such knowledge is not truth. Philosophizing is trying out knowledge--it is testing and proving the truth of experience.

According to the logic of absolute science and philosophy, a unitary cause of disease must act under all circumstances, and it must continue to act so long as cause and the object on which it acts are occupying the same environment. If this cause acts only under special and favorable circumstances, then it is not a cause, but one of a series of causes, any one of which is as important as any other. To build a system of cause and cure on one causative factor, taken from a multiple of factors, is building a fool's paradise. And that is exactly what our so-called specific cause is in our bacteriological system.

Germs of fermentation take on specificity from the toxins--chemical medium--which they themselves cause to generate in a given compound of elements. Single elements are proof against fermentation; only compounds are susceptible to organized or unorganized ferments. Organized ferments dissolve organized compounds, and fit them for elimination; the toxin is a resultant of the action of the ferment on the compound. The toxin is potential in the compound, but not in the germ.

It is true that the withholding of food from a septic patient ends the septic fever. Fasting stops

disease, because fuel for fermentation is withheld. Bacteria appear to be unable to cause fermentation when the organization is normal in energy and possessed of sufficient unorganized ferments to digest all the food taken into it.

In the light of these facts, the proper treatment for toxin poisoning--septic or pyemic poisoning, syphilitic or gonorrheal poisoning (the toxins representing the decomposition of several tissues in the body)--is to withhold food until nature has eliminated all toxins. Then feeding for the first week should be fresh, uncooked fruits and vegetables.

Septicemia--Infection always means that there is retention of a superfluous amount of reparative material. and confinement of this material in the womb, or in wounds, or in excretory canals or ducts, until putrefaction takes place. If the amount of infection is not overwhelming, and fatal, it may end in suppurative inflammation and formation of septic abscesses.

Milk fever, traumatic fever, putrefactive fermentation, syphilitic and gonorrheal infections, are different forms of septicemic inflammations. The distinguishing characteristics are furnished by the tissue involved, To make my meaning clear, think of the action of organized ferments (bacteria) on carbohydrates and fats. The result is to develop an acid which is more or less an intoxicant, but very unimportant compared with the toxins generated by the ferment on protein--meat--substances containing sulphur and nitrogen. It is probable, however, that excessive fermentation in the digestive tract of carbohydrates does impart a putrefactive change in the proteid tissues of the body and is the cause of offensive odors, hardening of tissues, inducing sclerosis and cancer.

Sclerosis.--Sclerosis means hardened tissue. Tissue in that state is very feebly vascular. It is white, firm. and resistant, grating under the knife. Keloid, which is an exaggerated development of scar tissue, is a form of sclerosis. Cirrhosis of the liver is a type of sclerosis, and atrophy of the liver is another form.

Organs that have been hardened from inflammation sometimes take on compensatory hypertrophy (enlargements). Then is presented normal tissue endeavoring to replace hard tissue, and this modifies the form of the organ.

Fistulas are the result of a hardening of the walls of an opening through which pus has been discharging. Instead of the walls on an abscess closing and healing, a hardening of the walls takes place, and the result is fistula.

When urethritis has continued for months, the walls of the canal harden at those points where the inflammation has continued. The result is hardening or stricture. Stricture of the urethra may form with no more to irritate the mucous membrane than unusually strong urine from meat eating.

When an irritation has continued for months or years, as in continuous acidity of the stomach, a chronic inflammation is produced, enlarging, and then hardening. If the offense to the tissue is continued, the end of the degenerative process will be cancer. Cancer is a form of spontaneous gangrene. When tissues have hardened to such an extent as to cut off the oxygen supply, there is nothing left but dry atrophy. If, however, there are islands of tissue throughout the mass of **atrophying hypertrophy** which still receive nourishment, life will continue until the hardening encroaches on the inlets of food to such an extent that nourishment is shut off. Then decomposition takes place, with the development of toxins; following which comes, slowly but surely, systemic infection.

An acidosis of a subtle form may develop a general hardening of tissues. If the circulatory system is most involved, death will come from atheromatous diseases--arteritis, endocarditis, apoplexy, paralysis, or arteriosclerosis. If the glandular system is most involved, then tuberculosis may follow. If serous tissue is most involved, perhaps cancer will be the ending of life.

The probabilities are that when syphilis, tuberculosis, gangrene, sclerosis, hypertrophy, atrophy, and all the various forms of infections and so-called contagions, are understood, they will prove to be different forms of one and the same thing; namely, sclerosis--or infection, inflammation, gangrene, death; and the various causes are all different forms of one and the same thing. Multi-specific causations, followed by multi-specific effects, as a basis on which to build a rational theory and practice of healing, are so out of keeping with the teachings of science and philosophy that it is a continuous surprise that such a system can receive the endorsement and support of as large a body of intelligent professional men as are found banded together under the banner of modem medical science.

'The whole phenomenon or complex of life, health, and disease may be summed up in three words; namely; digestion, nutrition, infection.

Reparation of Lesions.--When an injury has broken down and destroyed cell-life--when inflammation from any cause has broken down and destroyed cell-life--reparation cannot be perfect. The destroyed cells will be supplanted by sclerose tissue. This scar, or cicatrix, is more or less of a menace to the health and life of the tissue in which it is located, depending, of course, on the vital importance of the organ or tissue. If of the valves of the heart, the ending will be fatal without a rational treatment begun in time; if of the neck of the womb, a cancer may be the ending, if proper treatment is not instituted in time; if a gland of the breast be the injured part, then, without proper treatment, cancer will end all; if a stricture of the urethra, and neglected, bladder, and possibly kidney, disease may be the consequence; if a catarrhal thickening of the mucous membrance of the bile duct, and its obstruction is not relieved, stone in the gall bladder will result; if the hardening is of the spinal cord, ataxia and other forms of paralysis may result. The affections that result from hardening can only end with those limitations of tissues and organs of the body; and offenses to the tissues and organs of the body which may cause cicatrical tissue end only with the sum of everything in the environment of man capable of injuring his body and mind.

The lower the order of tissue life, the more power it has for regenerating. In a few animals it is possible to remove a portion of the liver, spleen, or kidney, and it will be rebuilt. It is said that the mutilated organs are reproduced according to their normal type. In spite of this fact, their lives are short compared with that of man, who has a very limited power of reproduction.

Intoxications of All Kinds.--Psychological intoxications--drunk on ideas, emotionalisms--and physical intoxications, such as alcoholic, tobacco, coffee, tea, acidosis from fermentation of carbohydrates, sugar, and fats, and toxin infections from the putrefaction of nitrogenous compounds--proteins; auto- intoxications caused by checked elimination from enervation brought on from overwork and worry; perverted nutrition, causing activities to start up in diatheses--all have an aging effect on the tissues of the body. Alcohol, when used in small quantities, has the effect of hardening the arteries, and when used in large quantities it produces fatty degeneration. When used in small quantities continually, the effect is to produce cirrhosis. Tobacco, coffee, and tea harden tissue. These drugs also produce arterial pressure.

A regular diet of bread, meat, preserves, cake, pie, puddings, coffee, and tea will bring on sclerosis by first creating toxemia.

Where Sclerosis Gets Its Origin.--Primarily a cell is produced under almost ideal conditions. It has been seen that health is a state that only approximates the ideal. Under the most favorable circumstances, a cell is approximately ideally developed. The state of nutrition that favors cell development means the normal balancing of energy, unorganized (enzymes) and organized (germs) ferments, and food (building material). If nerve energy runs low, enzymic power is weakened, cell-building drags, building material accumulates, obstruction takes place, and it is necessary for organized ferments to start an abnormal elimination. This means fermentation, irritation, inflammation, ulceration, sclerosis, cancer, and death.

The microbe acts as traffic police in keeping the avenues of the body cleared. This clearing-out

process causes the death and disorganization of a few cells in the midst of the fray, This results in the formation of cicatrices; **and here is where sclerosis originates.**

This scarring process, this hardening of tissue, goes on rapidly in those who live in a way to keep cell development more or less retarded by overstimulation from toxins autogenerated or brought in from without. When a cell is destroyed, a cicatrix is formed. When cicatrices multiply because of a continuance of cause, the accumulation may be so great as to destroy the nutrition of important parts by cutting off the circulation.

Impaired nutrition of important organs is brought about in this way; nephritis, hepatitis, and inflammation of other organs is brought about in this way. It should be understood that an inflammatory process started in this way grinds out to its end very slowly. It may end in hypertrophy, atrophy, cancer. etc.

Arteriosclerosis.--This affection may be general, with special emphasis placed on one or more of the viscera.

Just which special organs will be most affected will depend upon which have borne the stress of wrong life. If the brain and spinal cord have been kept hyperemic from venereal excess, or overstimulation--overstimulated from toxins taken in or toxins autogenerated--then apoplexy or ataxia will follow.

The affection is the last state of the effects of morbid stimulation, either mental or physical, or both. This derangement of the arteries is quite natural, for toxins are circulated throughout the body. The walls, or coats, of the arteries are infected and forced into degeneration sooner than other parts of the body. The highly complex tissues of the body, such as the brain and spinal cord, take on sclerotic change sooner than others.

This affection may begin early in life, but it is seldom absent in the aged, and it is common in adults.

Arteriosclerosis is seldom equally distributed. The parts most affected are those most used. Those whose occupation requires head work will develop hard arteries of the brain. The degeneration in the brain will be that of softening; when of the extremities, it will be dry or senile gangrene.

Symptoms are first dizziness, dyspnea of an asthmatic order, somnolence after eating, and hemicrania. Asthma and headache are the first symptoms in many; and these symptoms point to kidney affection. In women there are sudden congestions and sensations of heat, which pass as symptoms of change of life.

On examination, the heart gives out a tympanic click along with the second sound, with intermittent systolic and diastolic murmur. (See Heart Symptoms.) The arteries are hard; the sphygmomanometer indicates an elevated pressure of about twenty centimeters.

In the second stage there are many local manifestations. Whichever viscus (organ) in any of the four great cavities of the body (for instance, the brain in the cranial; lungs or heart in the thoracic; liver, intestine, or kidneys in the abdominal; and uterus in the pelvic) is the victim of special stress, in arteriosclerosis it will appear to be the cause of discomfort and sickness. If the stomach is the most vulnerable organ, then the subject will be treated for indigestion, dyspepsia, ulceration, or possibly other so-called diseases; if the intestine or reproductive organs are the hyperemic centers, these will be vandalized surgically; if the lungs are the most vulnerable organ, that organ will be the cynosure of the professional eyes of those who are consulted; the same will be true of the breast and other organs.

These various diseases (?)--symptoms or affections, more correctly speaking--are transitory and intermittent, and are in evidence only when the sclerotic subject has been imprudent, and when, through overwork, worry, excessive eating, or sensual indulgence, excessive, functional activity

has been brought on. The correct prescription is simply abstinence, followed by greater moderation. Sclerosis means aging, and all nature cries out for rest or moderation. Indeed, rest is the price of continuing in life, and death is the penalty for not resting.

Arteriosclerosis is not a disease that can be cured, but it can be held in check, and the subject made comfortable and quite efficient. It should not be forgotten, however, that the leading prescriptions are proscriptions. The object in treating such subjects is to encourage "status quo".

The organs of the body are sufficiently nourished when not pushed beyond the daily habits; but when speeded up, they do not receive enough blood to be supplied with the oxygen immediately necessary for a quick extra demand or nourishment required for the increased demand. Exercise makes a demand for more nourishment, and hardened tissues work slowly at best; hence great care must be taken not to overwork a sclerosed subject with hardened arteries.

Sudden speeding-up of the digestive organs, and of the heart and arteries, causes spasmodic breathing, clouding of the brain, and inhibits the kidneys, causing transitory uremia, evidenced by heavy drowsiness at inopportune moments when it is embarrasing to appear sleepy. After dinner the sclerosed subject will get heavy and sleepy, in spite of his endeavors to stay awake.

Arteriosclerosis manifests itself early in those of gouty diathesis. It must be understood, however, that toxin poisoning is necessary. Children and young people, as well as adults, must have the overeating habit; they must be in the habit of eating beyond their enzymic capacity. This, of course, necessitates bacterial fermentation of all superfluous nutritive material, and the generation of toxins. When this becomes an established habit, the blood becomes charged with toxins, and necessarily the intima (the internal coat of the arteries) and the endocardium (lining membrane of the heart) must become diseased.

Arteriosclerosis in the first stage presents, as one of the first symptoms, dizziness; dyspnea of an asthmatic character, somnolence after meals, and hemicrania (migraine--pain in one side of the head) are others. The observing physician, in examining all asthmas and hemicranias, will be on the lookout with a view of ascertaining if there is arteriosclerosis as the probable cause. If of a sclerotic origin, there may be a kidney change. In women there may be hot flashes--sudden congestions and heat-flashes--attributed to change of life, when sclerosis is the real cause.

To prove that the above symptoms are due to sclerosis, the heart must give out a tympanitic click at its second sound, and not always murmurs both systolic and diastolic.

The second stage presents organic disturbances, which come and go in keeping with excessive functioning.

The limping and stiffness accompanying this stage of sclerosis are called rheumatism--rheumatic stiffness. Inactivity is followed by claudication, (limping), stiffness, and more or less tenderness, which pass off shortly. Asystole (feebleness of the heart with dilation) presents itself intermittently; so do cerebral clouding and uremia.

The third stage is characterized by the localizing or organizing change. The heart may be the vulnerable organ, and the diagnosis may be sclerotic myocarditis. The heart becomes weaker and weaker, marked by asystole (shortened and weaker systolic contractions), which means that there are dilation and feebleness.

The arterial type is characterized by vascular dilation, with formation of aneurisms, and embolism is imminent.

The cerebral type is marked by unilateral headache, dizziness, etc. This type is liable to terminate in softening, or hemorrhage in the cerebrum, or the meninges. This ending is called cerebral apoplexy.

The renal type of arteriosclerosis is marked by nephritis, with polyuria, slight albuminuria,

palpitation of the heart, tension of arteries, and galloping murmurs, Death occurs from uremia, uremic convulsions, gradual weakening of the heart, and sometimes from apoplexy of the lungs.

Treatment.--Why should drugs be given? Can drugs add to life, or stop a habit that lowers the health standard? The habits of life that are using up nerve energy must be reformed. Those who are predisposed by diathetic heredity to develop the disease early should get away from family habits, both mental and physical, as soon as possible. Why should not a son or daughter develop affections like those of father and mother, when living in the same environment and practicing the same daily habits?

12. Tumors--Definition of*

(*To my lay readers: Do not fail to read this subject, even if it contains a few technical terms.)

Tumors are divided into benign (innocent) and malignant (dangerous to life).

Benign tumors may be considered as hyperplasias of any of the organs of the body. Hyperplasia means the overmolding of organs--hypertrophy--overnourishment; or, to speak in every-day parlance, an enlarged organ. A type of benign tumor, or hyperplastic development, is seen in what is called a keloid tumor. This tumor develops in scar tissue.

Histology.--Tissue science--the study of the structure of tissue.

Tissue.--The elements of a part of organ; for example, skin tissue, muscle tissue, glandular tissue, etc.

The keloid is described as an exuberant fibrous production, caused by the hyperplasia brought about by inflammation. Such growths are more inclined to develop in those who eat heartily and of gross or greasy foods, and who do not exercise enough to stimulate the required elimination.

Histology tells us that simple or benign tumors are made up of tissues having normal arrangement as to structure, or which are sufficiently normal to resemble somewhat the tissues from which they are developed.

Adenoma (a tumor of a gland) is found to have glandular structure. The cells proliferate (bear offspring--generate) and fill the alveoli (the cells of a gland; these cells may be likened to a bunch of grapes). They remain inclosed by the limiting membrane of the gland in which they develop, and show no tendency to invade surrounding tissue. This means that, no matter how large the tumor gets, it is always encompassed within the gland-covering.

Malignant Tumors have a different arrangement of structure; indeed, they are chaos itself--King Disorder reigns supreme. The cells, which vary in form and size, are inclosed in membranes--alveoli (the skin of the grapes--the covering of each gland-cell) of independent growth. These growths break through the retaining membranes (skin of the grapes) and invade any and all environmental (surrounding) tissue. As "war is hell" turned loose in social fife, or in civilized life, so is the histological insanity known as cancer. Indeed, cancer has not even the order or system of so-called civilized warfare. It is more on the order of guerrilla warfare, or a war of extermination.

Embryological Tumors.--A class of tumors due to defective development. They may be divided into those that start before birth and those that develop after birth.

Teratology is a branch of biology that treats of malformations. In the study of embryological tumors there is described the phenomenon of two spermatozoa penetrating into one ovule, which gives birth to two beings when development is normal; but when, from some cause, one remains rudimentary (fails to develop), it may become inclosed in its well-developed fellow and in future evolve into a tumor. This anatomical and physiological perversion has been offered as an explanation of all neoplasms--new-growths or tumors.

Is it strange that, in an organism so infinitely complex, and subjected to such an infinite number of unfavorable influences, as the human body, there should be many blasted cells, or defects in glandular development, in the course of physical development? Certainly not. Then, when health is impaired-nutrition perverted-it is not !strange that these defects should take on independent growth and become tumors, or abnormal growths.

It is also reasonable to believe that, so long as the organism remains in a state approaching the normal, it can dominate any tendency which these blasted cells (be they congenital or caused by postnatal injury) have for taking on their pathological trend. But when enervation is lowered and elimination imperfect, causing chronic intoxication, these defective developments, or crippled tissues, find in this perversion the encouragement to grow--to take on pathological activity--for, being defective, if they develop at all, it must be in keeping with their histological bias.

This blasting of cell- or gland-life, when it occurs in the skin or ordinary tissues of the body, usually ends in the development of benign tumors; but when it takes place in the higher type of glandular structure, and then meets with the necessary pathological nourishment--namely, chronic autotoxemic poisoning--it may start a state of anarchy--malignant disease.

This is perhaps more true of the lymphatic system. The reason for this is that the best and worst nourishment is found in the lymphatic glands of the body.

The lymphatic glands may be likened to quarantine stations--places where all suspicious characters--infections--are held up until they can be dismissed with a clean bill-of-health. The lymphatic glands in the groin arrest the infection of venereal disease that threatens to invade the organism, and hold it long enough to immunize it. When the amount of infection is great, and the immunizing power of the glands is inadequate, suppuration takes place, the infection being thrown out of the body by way of a heavy pus discharge. In this phenomenon, life-preservation is a grand struggle against mortality. Years after glands have been altered in their structure from suppurative inflammation, degenerative activity may spring up, and malignant disease (cancer) may develop and run rapidly to a fatal termination.

The lymphatic glands in the lungs arrest toxin infection that has been absorbed in the bowels. When their power to antidote the infection is not equal to the task put upon them, inflammation and suppuration take place, with systemic poisoning. This disease is called tuberculosis. The bacillus tuberculosis is a scavenger germ, and not the infecting agent. The infecting agent is a toxin developed in the bowels.

If the bacilli tuberculosis are like all other scavenger germs, they depend upon toxins for their specificity, and the infecting agent comes in by way of bowel absorption.

When resistance is low--when enervation is pronounced--the resulting autotoxemia so weakens the immunizing power of the glandular system that blasted or defective cells, from any cause, may be encouraged to take on pathological development; which means benign tumor, or malignant tumor--cancer.

Where there are no blasted or defective anatomico-physiological structures, the organs with the most defective functioning will bear the brunt of the incoming infections, and the following diseases may develop; tuberculosis of any part of the body, glandars, syphilis, scrofula, scurvy, etc.

Cancer must jump the bounds of glandular limitation before life is overwhelmed by its cachexia (blood-poisoning).

Cancer.--So long as the cancerous process is going on within the limiting membrane of the gland, its growth is restricted; but after it breaks this membrane, its growth is unrestrained, and the pathological metabolism taking place in the growth quickly sets up the cancerous cachexia.

The reason why the removing of a cancerous growth or disease fails to cure, is because the cancer has potentized the surrounding tissue with its toxin.

The conservative power of the body limits the infection as long as possible to the lymphatic glands. Why? Because the glands have more immunizing power than ordinary tissue. The spread of all infecting diseases is along lymphatic chains; but after lymphatic restraint is lost--broken--all the fluids of the body become infected, and life is destroyed very quickly.

That is the manner of poisoning by cancer, which is a form of sepsis. The difference between traumatic septicemia, puerperal septicemia, and the septicemia of cancer, is the slowness of the infection from cancer. However, if the cancerous tissue is torn or cut, freeing its infection from the limiting membrane, cachexia, or septicemia, will develop rapidly. If the wound into the cancerous tissue is open and drains well, absorption will be very limited; but if located away from the eye, where drainage and cleanliness must be an unknown quantity and quality, cachexia (septic poisoning) will spread rapidly. Indeed, patients will die from septicemia as quickly when developed from cancerous tissue as when developed from injured normal tissue.

Cancerous tissue will not unite--once severed, always severed. Torn, bruised, or severed cancerous tissue does not drain well, but tends to break down very rapidly. Bruised and torn cancerous tissue differs from healthy tissue in that the malignant tissue does not contract and retract, forcing waste fluids out of the bruised and torn channels to drain, but the fluids remain, flooding the parts, forcing rapid decomposition and absorption, and causing acute cachexia (septicemia) and death.

The reason why cancer cannot be cured is obvious. If all infected glands could be extirpated before the limiting membrane of any of them has been broken, and the growth has passed out and become mingled with the surrounding tissue, largely devoid of immunizing power, the disease could be cured; but this possibility is almost nil, for large lymphatic glands are surrounded by many small ones, and, while removing the large ones is an easy matter, small ones are overlooked and left to continue the work of the larger ones that have been removed.

The worst feature of the operation is that some of the infected glands are injured. This allows the cancer to spread in non-glandular tissue without resistance, which quickly involves the fluids of the entire body.

This is why people often do not live so long when operated upon for cancer as when left without an operation.

Where do cancerous diseases get the infection that initiates their evolution? From putrefaction taking place in the large intestine. The infecting material is absorbed; and if the cause (decomposition in the bowels) is only temporary, and not of frequent occurrence, no permanent harm will result. But if imprudent eating is continued until the latency of a pathological process in gland structure is rendered dynamic, then a morbific process is set up that is called malignant or cancerous.

If the disease could be detected early enough, and removed, a cure would follow. But often the disease is not suspected until fatally developed.

Before malignancy can develop in any part of the body, it is necessary for it to be potentized by exogenous or autogenerated infection. And since infection must be septic in character, but absorbed so slowly as to bring on cachexia, the cancer must begin to break down before the fluids of the body become infected by the poison.

Before a morbid process can evolve, resistance must be broken down. What is the nature of the resistance that is lost before cachexia is developed? The immunizing power--the power on the part of the body to generate its own immunizing agents.

Immunizing power has but little to do with physical force or strength. A very weak man

physically may have the power to protect himself from the disintegrating influences of his environment, while a very strong man may not.

Histogenetic Tumors ("histo," web or tissue; "genetic" (from "genesis"), generation).--In biology, the process or function of cells and cell-products.

This class of tumors are not supposed to be of embryonic origin, but develop from connective, muscular, nervous, or epithelial tissue.

The sarcoma, which grows very rapidly and becomes very large, is considered as standing between a malignant and a benign tumor.

Myxoma belongs to the mucous tissue. Fibroma belongs to the fibrous tissue. Lipoma belongs to adipose tissue. Condroma develops from cartilage. Osteoma grows from bone.

Vascular, lymphatic, angiomatous, endotheliomatous, and lymphaornatous tumors are produced from serous membranes derived from the lymphatic system.

Muscular tissue gives origin to two species of tumors--namely, leiomyomata a n d rhabdomyomata--which correspond to the non-striped and the striped muscle fiber.

Adenoma.--A benign tumor that has its origin in canals, ducts, and follicles of glands which have become stopped up, causing a cyst (sac) to form that is filled with a perverted secretion. Sometimes the lining membranes of these little cavities take on an excessive growth and end in what are called simple tumors. Such tumors do no harm, except for their unsightliness, when developed on exposed parts of the body, or from size. The tissues of these tumors always resemble those of the structure from which they are built. They have no tendency to break through their retaining membrane, which, of course, was originally the lining membrane of the passage that became plugged up.

This is not true of epithelioma (a true cancer). This disease respects no restrictions; it breaks through and invades any tissue, spreads in all directions, and leaves destruction behind it.

When Does a Cancer Become a Cancer?--That simple adenomatous tumors, and epitheliomatous degeneration, are related much as cause and effect, there appears to be convincing proof. In other words, cancer at the start is not always cancer. The question, then, is: When does it become cancer?

In the stomach there is first irritation from acid, due to overeating. If the overeating is persisted in, the acidity continues to irritate, until subacute inflammation is established. If the causes are not removed, the next stage is ulceration; then, further, degeneration into malignancy.

What can be the difference between last year's ulceration and this year's cancer?

That "cancer" is not always cancer, every experienced physician must have acknowledged to himself, if not to others. The question to be settled, then, is: What is the cause of the transformation?

I have thought that in ulceration the blood-vessels and lymphatics are sealed by adhesive inflammation before the sloughing or necrosis of their involved portions takes place, leaving them intact to perform their function of supplying reparative material; whereas in cancer the ulceration involves the bloood-vessels and glands so far distant from the surface of the ulceration that oxygen and nourishment are cut off and putrefaction is established, following which systemic infection (cancer cachexia) is established, which in time inhibits all physiological processes.

The cause of rapid fatality in some cases is the slight resistance given by some tissue to the spread of the disease, while in others it is the extension of the disease into parts where drainage

is cut off, forcing absorption and the rapid development of cachexia--blood-poisoning.

Another thought may be considered; namely, the state of the patient may be that of premature aging, and the blood vessels and tissues are sclerotic-hardened to such an extent that they offer no resistance to an ulcerative process. Under such conditions, the system can hardly be expected to generate anti-bodies for self-protection.

No doubt there are many factors in the process of evolving cancer. Those who would sidestep the trouble of thinking may say that germs cause the disease; but to the discerning, germs are a poor excuse for accounting for any disease.

In the building of all morbid processes, the chemic changes that take place in tumor-building must be known before the cause can be understood.

Cancer, tuberculosis, and other diseases appear to run in families. So do certain habits. Domestic peculiarities are confined to family strains. The relationship of given types of disease to strains or family peculiarities should be given attention until understood.

A peculiar style of eating, cooking, mixing, clothing, bathing, and thinking will be followed by a peculiar style of disease.

Like causes produce like effects--only, however, when everything is equal. When every phase of cause is known, the effect may be modified by changing the object on which the cause operates. For example: The sun, moon, and stars, or the astronomical bodies in general, we assume, are always the same; which, so far as the comfort and life of man are concerned, is not true. The subject on which these influences are spent--man, for instance--can be changed so that the fixed influences do not act the same; hence the effect cannot be the same. The sun does not act on the drunkard the same as on a sober man. The gluttonous and the temperate are acted upon differently by extraneous influences. Those of limited reasoning power consult the stars regarding their coffee-drinking, what clothing they should wear, and how to invest; when to bull and bear the market, and about their health; also when and whom to marry; in fact, regarding daily, monthly, and yearly affairs. There is no material difference, as far as ultimate results are concerned, whether sun, gods, planets, or devil be consulted--whether the Bible, the Koran, astrology, or other deific sciences be studied for the purpose of determining what is foreordained for man, domestically and socially.

All of which is as unscientific as to start children in the kindergarten in the study of mathematics.

If man ever finds God, he will begin the study with man; and if he ever finds man, he will begin the study with cell-life. If man ever finds the cause of his health and disease, he will find it by understanding the laws of his being; and if he is ever saved, he will save himself by obeying those laws. Yes, obeying every one--the most insignificant,

Man did not find the stars until he found the telescope; and he did not understand the, composition of stars until he discovered the spectrum.

There is but one door open to knowledge, and that is the ABC; and not the ABC of one department, but the ABC's of all departments. 'The ABC of God-knowledge is the laws of life. Unfortunately the study of God was begun with God; and, from the very nature of the subject, had to start with a hypothesis--a hypothetical God. As a consequence, no two people have the same God. A hypothesis must always be in keeping with the mental development of the individual.

Starting with a hypothetical Deity, it is not strange that many attributes, and even essential principles, have been left out. Those that concern us more than any other are natural laws--laws that minister to man's physical well-being. That these are left out of all theologies goes without saying, when we see theologians everywhere breaking the laws of health and life as ruthlessly

as though they belonged to the devil. Ministers--moral teachers--know no more of nature than their parishioners; and they are not ashamed of their ignorance. Yet nature is God's expression; and if we know nothing of God's expression, how can we say that we love something we know nothing about?

All this infidelity and atheism of our deistical students would not be, if the study of God would begin at the ABC of the subject, instead of starting with the graduation exercises.

In regard to diseases, modem medical science, often starts at the finish--to diagnose them. In order to find out all about the disease that killed the patient, a post-mortem is held, and the morbid findings are given out as diagnosis. A cancer is found; a fibroid tumor is found; an abscess is found; but the causes that produced these diseases have passed. The laws which were broken still exist, however; and, when broken again in the same way, like diseases will result, no matter whether or not the interpretation of the stars or the deities agrees.

It is of far greater importance to know the chemical needs of the brain than to know the ethical laws of society.

It is more needful to know the mechanical and chemical laws governing the growth of a fibroid tumor than to know the most scientific surgical technique necessary for their successful removal; because removing the tumor is nothing more than removing a symptom, which is very often quite remote from the cause.

Fibroid Tumor-Cause of

The erstwhile opinion of medical men was that back of the exciting cause of a tumor was that of inclusion during embryonic life: non-employed cells are enveloped in active cell-development; then in after-life they take on activity. That this was professional guesswork is evident, now that the latest guess is that tumors are caused by germs.

There are authors of standing who do not agree with the germ theory of tumor-development.

Every little while a laboratory scientist jumps into print with the announcement that the cancer germ has been developed in fish or mice by inoculation; and he enjoys an hour's fame, after which his little bubble of discovery reverts to oblivion.

No tumor can develop without obstruction to the circulation--without a local influence that disturbs nutrition and elimination.

It is safe to start with the hypothesis that, if full health is enjoyed, there can be no tumor-development.

The first thing necessary for the development of any form of disease is enervation, which always inhibits elimination; following which autotoxemia develops.

Fibroid Tumors of the Womb are developed about as follows: A young woman develops intestinal indigestion from imprudent eating. The catching-cold habit, with catarrh of the mucous membranes, follows. Soon there is developed intestinal putrefaction, which, being absorbed, causes infection. The pelvic lymphatics become involved. As there is more or less congestion of the mucous membrane lining the uterus and its neck, this condition is made more pronounced each month because of menstruation and the toxins being absorbed in the bowels, The uterine engorgement causes, longer and more profuse menstruation; painful menstruation begins, growing more pronounced month by month. Pain forces the calling of a physician, who on examination finds a flexed womb. The flexion is caused by a thickening of one side of the womb, which forces a flexion to the opposite side. The more thickening, the more obstruction to the circulation and the more bent is the neck of the womb; and the more bent is the neck, the more the canal is obstructed to the menstrual flow.

As the womb is flexed more and more, the circulation is more and more interfered with. The flexed side fails to receive the proper amount of nourishment, and the thickened side receives all that the uterine artery and other vessels can bring; but the return vessels fail to carry back the full amount, and, as a result, hypertrophy takes place--the parts are overnourished. Nature undertakes to organize the surplus; and she does--and we call it fibroid tumor. These growths grow rapidly or slowly, according to the amount of obstruction.

A growth may fill the pelvis and abdomen in five years; and again in some other women it may require twenty years to develop a tumor the size of an orange.

Injuries at childbirth often become the first cause of tumor, next to putrefactive infection from intestinal indigestion.

Another cause: A catarrhal inflammation locates at an old placental site, as a result of toxemia. Thickening and induration follow, impeding the efferent circulation. The more growth, the more pressure and obstruction, until the new-growth--fibroid tumor--is large enough to become a cause of its own growth, by impeding the circulation through its weight and pressure.

This work of overgrowth is pushed along rapidly by overeating, which means overnourishing; the surplus being organized into tumor.

Overeating and improper eating often cause gas distention of the bowels. The pressure from gas crowds and misplaces the womb. From such misplacements enough obstruction to uterine circulation may take place to cause hypertrophic enlargement, which is fibroid enlargement.

Constipation may cause enough pressure on the womb to start imperfect circulation, and later fibroid growth.

Wherever there is impeded circulation, new-growth must take place; and that means tumor. The kind of tumor will depend on the character of the tissues involved.

Add to these causes sclerosis, and malignant diseases may follow. That is, the benign tumors may become malignant.

Can they be cured?

Treatment.--Remove the cause, which can be done when understood. The circulation must be restored by removing the cause of the obstruction. Very few tumors require removal by the knife; for, if the cause is removed, the tumor will gradually disappear.

13. Synergies

Synergy means the unity of the organism under favorable or unfavorable influences.

In social life, an injury to one man is an injury to all; and so it is with the organs of the body--if one is injured, all are injured. Any influence that modifies function or structure of one part of the body influences the entire structure.

Family habits may be of such a character as to throw More stress on one organ than on another. The sequel is the development of an organic diathesis. (See subject of "Diatheses.") When this is true, the hundred-per-cent organs in the organism lend their influence in various ways to do vicarious work for the weak organ.

When the organism is enervated from the thousand-and-one influences incident to life, and intoxication has brought on such a state of the metabolism that the organism is overwhelmed by waste--excretory--products, it is then that inherited diathesis takes on activity. If the diathesis is tubercular, gouty, neurotic, or of any of the special organs of the body, it is in keeping with the laws of health and life for the affection peculiar to the diathesis to spring up. If the causes are not

removed, the affection will remain functional for a time; then organic change will take place. It is then that affections become diseases; it is then that an irritation and an inflammation from indigestion become ulceration of the bowels or stomach, and the ulcer perforates, and death ensues from peritonitis caused by the perforation. The peritonitis was caused by perforation; perforation was caused by ulceration; ulceration was caused by inflammation; inflammation (catarrh) was caused by irritation; irritation was caused by indigestion; indigestion was caused by fermentation; fermentation was caused by enervation; and enervation was caused by the thousand-and-one influences which build or destroy the body and mind of men, depending upon whether they are wisely or unwisely applied.

When one organ gives down--when the blood is deprived of the proper amount of building salts--the whole organism is deprived of the necessary building salts. When imprudent eating--sugar-eating, cake-eating, rich-meat and gravy-eating--has been practiced so long that enzymic fermentation is not equal to the task of physiologically digesting the intake, then it is that organic ferments--bacteria, microbes--set up pathologic fermentation, which is slightly toxic when developed in the carbohydrates and fats, but putrefactive and decidely toxic in the animal products. The organized ferments cause a souring of fruits, vegetables, and starches; the acid builds irritations and catarrhal inflammations of mucous membranes; and in this way the stomach may become the exciting cause of organic depression and catarrhal affections of all the organs of the body.

It is very hard for average physicians to get away from the idea that each organ acts in an isonomic manner--that organs break away from the union of organs and develop a disease without the consent of the general government. This is not only false, but it is absurd. When from inherited weakness, or from injury, a part--an organ or a tissue--is below the general standard, it becomes the seat or center of affection when the general standard of health is lowered. When enervation is brought about, and, because of the enervation, metabolism is impaired, elimination becomes imperfect, and, to autotoxemia, toxins from imperfect digestion are added. The system, under these circumstances, becomes so toxemic that the inherited weaknesses, either organic or systemic, take on disease. The disease, however, is an affection; for the cause lies back in bloodmaking and nutrition.

In the tuberculous diathesis the lungs or other vulnerable organs of the body give down with tuberculosis when the general health is impaired and resistance broken. The gouty diathesis favors the development of any type of gouty disease that is in keeping with the vulnerability of organs and tissue of the body. The disease may be articular. If so, joint rheumatism will be the type of the disease. It may be the arteries, in which case arteritis with hardening will occur. The kidneys or liver may be the weakest points; then urinary calculus or gallstones will form.

There is a unity of sympathies and a unity of action. The nerves, the muscles, the motor cells, the blood vessels, and the organs generally are in reality a unit. The muscles and the cells cannot function without the nerves, and if the nerves be enervated from overwork or poison, they fail to function properly. Then the muscles become weak, waste is retained, the cells fail to renew, and degeneration takes place.

To overcome any disease, restoration of nerve energy is of first consideration.

A giving-down of some of the bony structure from injury or from disease, may cause more or less distortion of the entire anatomy. The distortion requires an anatomical readjustment-an endeavor to change the mechanism to meet the new requirements. In the changes that take place, important organs--such as the heart, lungs, etc.--may be forced to take on disease because of the interference with their normal functioning.

The body is at work readjusting every minute. The forces of health and life are at work in the line of readjusting and idealizing all the time. Nature--physiological energies--is all expended in healing--repairing and building. Man needs no doctor, so far as healing is concerned; he needs instruction in knowing how to avoid abusing his body, and how to live to conserve his energies.

If a bone is misplaced, it must be righted. If an artery is cut, it must be tied. Nature heals the bone when broken, if it is kept quiet long enough. If a large artery is tied, nature dilates and enlarges collateral arteries, so that the parts temporarily ill nourished will soon receive a full supply of nourishment.

All malformations are met with readjustments to give collateral aid.

Extirpation of the ovaries produces atrophy of the uterus and often of the mammae.

When the eating habits are such as to crowd and disturb the liver function--impair its function of preparing urea and sugar for further use in the economy--we see kidney affections springing up as a consequence. The cure must get back to the cause--namely, remove nerve leaks and correct imprudent eating. If the remedy is neglected until the liver, kidneys, or pancreas take on organic change, then a cure is often impossible.

The muscular system and the liver are allies. Exercise uses up energy (sugar), which the liver furnishes. If the muscular system is not worked, the liver becomes engorged with glucose, or the glucose is sent to the circulation to be excreted by the kidneys.

Exercise is necessary where there is too great a supply of carbohydrate foods. Either the intake of starch and sugar must be limited, or work must equal the eating.

An organ, when enlarged, may, by pressure, affect other organs. An enlarged liver may impair the stomach and other organs. A dilated stomach, or gas-distended bowels, may create affections of the heart, lungs, or pelvic organs from pressure. Indeed, intra-abdominal pressure may be the cause of heart palpitation, asthma, hay fever, bladder and urethral irritation, falling of the womb, and displacements of other organs.

Because of compression from fat or gas distention, the excretory ducts, such as the bile-duct, are partially obstructed, In gouty subjects the formation of biliary calculi is liable to, follow; in tubercular subjects, tubercular inflammations, etc.

Where compression of a nerve is continuous, neuralgia, spasms, paralysis, and nutritive changes take place.

The part of the body most affected by nerve compression is the head and spine--the face rather than the head. The cerebro-spinal nerves pass out through various passages and foramina (small openings in bone). These openings are liable to have their caliber narrowed from a thickening of the walls from injury and consequent deposit of reparative material. So many are the ailments due to this cause that whole systems of healing have grown up, exploiting this etiological factor into a marvelous universal cause of all diseases.

The tendency for man to allow large sections of his body to lie fallow is the cause of much nerve compression, and consequent pain and sympathetic disturbances. When men stop their boyish exercises and settle into a routine business, only those parts of their bodies are exercised that are used in their business; the rest become fallow. A neglected part in time takes on deposits, and naturally grooves, foramina, and narrow openings between bones will become the repositories of deposits. This brings on compressions, with consequent impingement on the blood vessels and nerves. To secure relief, the patient must exercise the parts, or employ someone to massage; or, what is better, call a physician of one of the bone manipulating schools, who will relieve the nerve pressure. The members of these schools are wonderfully adept in bringing quick relief. But unless the patient--the one relieved--is taught the necessity of right living--taught the necessity of exercise, and how to eat to secure proper elimination--someone will have to be employed all the time to manipulate the unused parts of the body so as to keep down deposits and keep the body comfortable. It is not necessary for people to become athletes in order to avoid taking on these deposits. Athletes have their troubles-namely, over-development, which is not conducive to the best health and long life.

Compression of the pneurnogastric nerve may start up a pneumonia. Certainly there is much stomach derangement due to this cause. From such compression, stomach irritation, inflammation, ulceration, and cancer may follow. Cancer may result from compression on a small artery, causing the territory supplied by it to become ischemic (local anemia). From the same cause, neurosis or gangrene may result. It should not be lost sight of that wrong eating-haphazard eating-bringing on toxemia, has much to do with the manner of degeneration.

Compression on an excretory duct causes a backing-up of excretions; and, if it is of long duration, the blood win not be drained of that particular excretion. Other organs may do vicarious work. When compression is removed, the injured organ may have developed a sick habit and may never get back to the normal. This is daily observed by busy physicians in affections of the liver, kidneys, and pancreas.

When tissues such as the neck or body of the womb, or the pylorus of the stomach, etc., suffer from irritation and hyperplasia, cutting off a normal supply of blood, the effect is to cause an ischemia (anemia) of a small territory of tissues supplied by the arteries compressed. If the ischemia is pronounced, the result may be necrosis or gangrene. If the compression is of such a character as to affect only the venous circulation--the return blood to the lungs--the parts become hypertrophied, the tissues harden, the carbon and oxygen gases fail to exchange. Irritation, inflammation, ulceration, and cancer are different phases of the degeneration that will follow. The chronic state of the tissues from venous stasis is sclerosis. Fibroid tumor of the uterus is a type. It is obvious to the reflective mind that if this change of tissue can take place in the musculature of the womb, stomach, and other organs, when the circulation is interfered with, the same change can and does take place in the muscular tissue of other parts of the body, including the coats of the arteries. The change is brought about by cell compression caused by the irritation brought on from toxins generated in the intestine or f r o m chronic autotoxemia.

Compression of nerves causes neuralgia, spasms, paralysis, disturbances of nutrition, and at times fatal infections.

Compression or section of the pneumogastric nerve is followed by pneumonia.

Cancer of any part of the body in time infects the whole body through the autogenerated toxins--the toxins resulting from the degeneration of the neoplastic growth. The fact that neoplasms of all kinds owe their existence to local obstruction of nutrition should not be forgotten, nor the fact that perverted nutrition is characteristic of the life of these tumors, or growths. The chemistry of these growths is not in keeping with their environments, and it is liable to sudden and destructive changes. When the change of nutrition is great enough to cause a breaking-up or disorganization, the fluids pass into the environmental tissues; and, as the blood and lymphatics have power to oppose and neutralize the infectious infiltration, the spread of the toxin is held in check. But a time soon comes when the body's defenses are overcome; then cachexia rules and the body dies.

Malignant growths are built by obstructing the normal nutrition of otherwise healthy tissues of the body, but which, when abused, soon take on a chemistry in keeping with the sum of their elements plus fermentation. As these perverted tissues are on the descending plane--on the involuting route--it is only a question of time when degeneration will take place and such powerful toxins will be formed that the life of the body, which unfortunately becomes host for the erstwhile innocent neoplasm, will be destroyed.

Cancers are not malignant at their beginning. A fever is not septic at the start. Vaccination excites tuberculosis only in the tuberculous disthesis--it simply arouses the diathesis into activity. Perverted nutrition of the liver is not stone building at first. Hyperemia of the brain is not apoplectic at its beginning. Worry, over-worked emotions, and chronic toxemia ultimately become arteriosclerosis. Yeast and dough may become bread by baking. Organized germs and a beefsteak may end in putrescence, and the generation of toxins that may destroy life. Bacteria cannot poison without the meat, and the meat's toxic potentiality cannot evolve without the

germ. Two atoms of hydrogen are not water; one atom of oxygen is not water; but when the two are combined, water is made. Disease, health, life, and everything pertaining to animal existence, depend upon physiological chemistry for their existence. The immunization practiced on our hundreds of thousands of soldiers will prove to be the exciting cause for lighting up many latent pathologic diatheses; or planting purulent or septic foci which will develop into many unaccountable diseases by and by--diseases which the pension boards will not reckon as so many obligations of our government. Well may the helpless discerning say: "What will the harvest be?"

Neoplastic cells and pathogenic microbes, which are credited by the profession generally as being the cause of cancer, are not creative. All they can possibly do is to become elements in a chemical compound whose individuality is a so-called disease of some kind--cancer or syphilis, if you please.

Heart weakness may be brought on from many causes: fear, overworked emotions, anything that uses up nerve energy and produces its consequent autotoxemia; habitual overeating, and its consequent toxemia; intoxications from tobacco, coffee, tea, alcoholics; enervation from excessive venery. 'The result of heart weakness may be stasis in the brain, liver, kidneys, or pancreas.

Drugs or palliatives of any kind that stimulate the heart muscles relieve the headache, torpid liver, albumin or sugar in the urine; and the edemas (dropsical symptoms) disappear. The arterial tension is temporarily restored, and the patient is well, so far as his feelings are concerned. But the cure is palliative, and will soon prove but a short respite. There is but one cure, and that is to remove the cause. If this is done before organized changes have taken place, the cure will be permanent; if too late for a cure, then comfort and increased length of life may be expected. Those who have headaches often relieve themselves with coffee, or take a drug prescribed by a physician, and they call their reliefs cures; but, alas! the "cure" builds more heart disease, and hurries the end.

Embolism is a sudden occlusion of a blood vessel by a small body traveling in the circulatory system.

A strong organism is not given to gathering moss, so to speak, as we see in the case of the old oaken bucket. However, there is a very strong tendency for the development of emboli from deposits taking place in the heart, on the valves of the heart, and in the blood vessels, when there has been toxin infection running on for years. This occurs when the blood fails to carry a normal amount of enzymes.

A normal blood digests all clots which form from whatever cause. When foreign bodies succeed in gaining entrance into the circulation, they must be very resistant if they are not digested and made a part of the blood. The same is true of the lymphatic circulation. The lymphatic glands have the power of benevolently assimilating toxins that are absorbed.

Emboli are divided into exogenous and endogeenous--those entering the body and those developed in the body.

Endocarditis ends in atheromatous productions which open into the general circulation. The same occurs in arteritis. This accounts for many sudden and unexpected deaths.

Blood clots form on the interior of the blood vessels. They are caused by injury and various diseased conditions. Inflammation of the aorta may at almost any time furnish an embolus. that will swing into the circulation and cause a fatal obstruction.

Inflammation of veins is very liable to cause emboli. Phlebitis is caused by infection, This disease is very prone to cause embolism. It should never be forgotten that, if it were not for man's great immunizing power, he would be unable to protect himself against the many

invasions of his organism.

Course of Emboli: Emboli follow a regular route. Those of the arteries start from a lesion of the pulmonary veins, of the left heart, or of the aorta. They pass into the left carotid. They stop at the sylvian, and produce hemiplegia with aphasia. The embolus may follow the aorta, and may stop in the splenic, the renal, or the iliac arteries.

Effects of Embolism: Arrest may be in the heart. In this case sudden death may occur. A reflex syncope is produced, due to the excitation of the endocardium.

Pulmonary apoplexy may be caused by an embolus.

Softening is a common effect of embolism. Apoplexy is another effect.

When emboli are very small, only headache, dizziness, or some mental disturbance may result.

Partial or complete blindness may result from embolism of the central artery of the retina.

There are fatty and gaseous emboli.

Nerve Connections.--Compression of nerves may cause pain in distant parts.

Irritation of the biliary or urinary passages may cause nausea and vomiting.

Inflammation of the neck of the uterus or misplaced uterus may cause pain in the back of the head.

Excitement may produce paralysis, fainting, and other nervous derangements.

Red cheeks and lung irritation go together. Red cheeks may accompany congestion of lungs and hepatic colic.

Salivation goes with irritation of the stomach. Excessive flow of urine accompanies sciatic neuralgia. Stricture of the urethra, cystic irritation, and prostatic irritation may cause pain in the sciatic nerve.

Hepatic colic causes change in the circulation of the blood in lungs. The heart is also influenced. It may become insufficient, systole occurs, and edema may follow.

The kidneys affect the heart; the heart affects the lungs; the liver and the kidneys affect themselves.

The physician should trace the successive changes that take place. It is necessary to know the morbid sympathies. It should not, however, be understood that organs take on disease per se.

The cause of an organ becoming diseased is usually abuse of some kind. The stress of life rests more heavily on one organ than on another. Whenever an organ goes wrong, others are affected through sympathy. Then, after functional derangement has gone on for a certain length of time, organic changes take place; after which organic disease becomes a cause of other affections.

Inflammation.--Diphtheroid gangrene is declared by bacteriology to depend upon microbic infection; yet at the same time it is declared that a specific diphtherogenetic microbe does not exist. This certainly is true of every so-called specific disease.

Gangrene is the resultant of a morbid process of sufficient virulence to cause the death of the tissues involved in the inflammation. Necessary to this process must be lowered vitality, lost immunization, and a chemical change on the order of disintegration.

"Pseudomembranous sore throat may be produced by numerous microbes." Just the reverse is

true. The chemical changes taking place in the throat, from the initial inflammation to ulceration, on to gangrene and sloughing, due to the influence of the fermentation initiated by organized ferments in the nitrogenous tissues involved. Then these organized ferments take on an individuality and personality in keeping with the chemical medium resulting from the diseased process. In a breaking-down process there are all stages represented. Then why should not these organized ferments--microbes of fermentation--be found in all stages of transformation, from the simple germs of fermentation on to the virulent types found in putrefaction and gangrene?

It is well to keep in mind that putrescence, or the toxin resulting, is not potential in the microbe, but is potential in the protein, requiring the fermenting influence of the organized ferment to evolve the toxin. On the other hand, protein food has peptone as a potentiality; but without the fermenting influence of the unorganized ferment (enzyme), peptone would not evolve.

The material out of which pseudomembranes, are formed is a fibrogenic exudate--the very same material that is thrown out on abraded surfaces, or into solutions of continuity in any and all wounds. The quantity thrown out is always abundant, but the amounts are greater where the local irritation is great.

In pseudomembranous inflammation of the throat everything should be done to avoid breaking or loosening the membrane; for the more it is interrupted, the greater the local poisoning, and the more toxins there will be swallowed to be neutralized by the stomachic secretions.

Positively nothing is to be put into the child's mouth; not a drop of water, for swallowing must be avoided. The act of swallowing breaks the membranous protection. The old treatment of gargling and swabbing was barbarous and, for intelligent people, criminal.

Thirst must be controlled by frequent small enemas of water. Nourishment is not life-saving, as many think, but positively disease- and death-provoking.

Every patient, when prostrated with a disease, has locally or generally passed from enzymic control to bacterial control. All efforts of cure must be in the line of crossing back to enzymic control. This may be done if the intoxication from bacterial fermentation can be controlled before enervation is so profound that the nerve centers are paralyzed.

If the patient is plethoric, and the gastro-intestinal canal is full, and kept full, of food, the bacterial fermentation must thrive so long as such a state is continued. The enzymic production is at a halt, and every particle of food taken into the body becomes an ally to organized fermentation.

Stop food, and wash out the bowels daily; otherwise let the patient alone, except for gentle rubbing and bathing for comfort. High fever means much bacterial fermentation, and should be controlled by baths and the withholding of food.

The fact that the temperature declines with the consumption, or rather with the exhaustion, of the food supply should be proof sufficient to convince the skeptical that feeding the sick is encouraging disease.

A membrane is a protectorate--not simply a protector. For under this membrane is the process of repair, which requires rest, and the control of bacterial fermentation, and an enzymic influence sufficient to encourage all development. There must be enough retrograde fermentation to destroy obstructive accumulation, and enough constructive fermentation to fit the necessary amount of exudate for reparative work. This process requires a covering--a membrane-to protect from traumatic injury and an oversupply of bacteria or organized ferment.

From the foregoing explanation it is obvious how dangerous is the old-time practice of swabbing and gargling the throat. No wonder the mortality was great, and no wonder the

antitoxin treatment has proved such a success. Its success, however, has been of a negative character--on the order of the lesser evil. If the antitoxin has any influence--if it is not inert--it certainly must make a change in the nervous system; and this change must be reconciled, and an equilibrium or readjustment take place, before a normal healing process can be resumed.

The unreasoning cannot see that food is disease-producing from every point of view--from every conceivable influence which it may have on the subject. If this is true of food, why may it not be true of every influence, even though theoretically it is beneficial? It is the same rule that applies in all warfare; namely, the efforts put forth in times of peace for the upbuilding of the morale of a people become treason when attempted while the country is at war. Feeding in disease is treason to the body's government.

Suppuration.--Suppuration is of three kinds: phlegmonous, caseous, and thin pus.

Phlegmonous pus--or what is known as laudable pus--is a yellowish-wbite, creamy, thick, odorless liquid. It is met with in phlegmons and suppurating pleurisies.

Caseous pus resembles soft cheese.

Thin pus is a serous liquid which exhales a fetid odor.

The color of pus varies from a light yellow to an orange, brownish red, or greenish. The coloring may be from bile or blood.

Pus in sputum sinks in water, Pus in urine precipitates with the addition of ammonia. The microscope will reveal pus cells.

Bacteriology gives many pyrogenic agents, but there is much distinction without differences. A ferment and a protein end in fermentation, inflammation, and suppuration. The chemistry of the compound does the rest. Chemistry is the determining factor.

Purulent Foci.--Suppuration may exist in a tooth, in the antrum, in the ear, or elsewhere. When once formed, it may become incysted and take on a fatty degeneration. It may extend toward a hollow organ, as a suppurating appendix, if left alone, will surely insinuate an opening into the gut--a natural cure.

Pus has a tendency to follow tendons and aponeuroses. or muscular interstices, vascular or nerve sheaths. Nature controls pus by the action of enzymes, which keep it laudable. It is only when the organism becomes acid--when acidosis develops--that pus foci begin to break down, the pus becomes thin, and begins to poison the organism. it is then that organized ferments preponderate over the enzymes in the purulent foci. It is then that latent inflammations of a specific character take on activity and are said to be developing the various stages. Why this latent stage? Because the life of the patient is not sufficiently correct to allow a complete cure; hence in from ten to twenty or thirty years, when protection is prostrate, the focal points take on activity and the organism give down to an old enemy.

Chyliform collections are found principally in serous membranes. They occur from rupture of a vessel or even of the thoracic duct. In most cases, however, they are due to a primary purulent collection whose microbes have succumbed to the supply of unorganized ferments furnished by a healthy organism (enzymes) sufficiently to cause a granulo-fatty degeneration. The fat is freed and emulsified, giving the liquid a milky appearance.

If the liquid is absorbed, a cheesy mass remains, which may take on calcareus transformation. Tubercles sometimes take on this change or cure.

Symptoms of a purulent focus are pain, heat, redness, swelling. Pain is the first symptom. It is caused by an increased flow of blood to the part, which causes swelling and heat, as well as the redness.

The pain is of a pulsating character. In time the pulsating pain gives way to a feeling of constriction, due to stretching of the nerves. After pus forms, the pain may subside, to appear only upon pressure. Cold abscesses are considered tubercular. They form without causing much reaction. I have seen reputable physicians confuse sarcoma and cold abscesses.

Gangrene.--Defined, gangrene is mortification or putrefaction of tissue. The process is named necrobiosis. It is declared to be of microbic origin. It is well, however, to be reminded that microbes are always secondary causes, and to declare that a given disease is of microbic origin is to leave the question of real cause in the air, from which it will never come down for a thinking mind until it is furnished an adequate cause. The fact that there is no specific gangrenous microbe is proof that, following the cause of the devitalizing of a given tissue, any organized ferment is sufficient to cause putrefaction of the dead tissue. The colon bacillus is sufficient to set up putrefaction or gangrene of the undigested food in the intestine.

When a part is dead, it must either desiccate or putrefy. Where there is heat and moisture it rots; and that is what gangrene is. The causes leading to death of tissue may be mechanical, physical, chemical, or animate: mechanical when a part is killed by machinery; physical when a part is killed by strong acid, excessive cold, or excessive heat; and animate when a part is killed by bacteria. It should not be forgotten, however, that germs must be aided by a forerunner which first devitalizes. The animate agents follow all agents that devitalize.

Anything that cuts off blood or nerve supply may devitalize to such an extent that germs may finish the destruction.

Fermentation of food may cause sufficient intoxication to destroy tissue. Then gangrene follows.

If it is understood that any putrefactive process, it matters not what the cause, is gangrenous, it will not be necessary to go into detail and name all the diseases which end in the death, or gangrene, of isolated spots of tissue or integument. Suffice it to say that the infections from typhoid fever, syphilitic chancre, gonorrheal bubo, septicemic fever, etc., are all putrefactive--gangrenous--infections.

Every diathesis takes advantage of systemic enervation to use these foci as centers from which to spread its peculiar type of disease.

If those who have suffered infection--an invasion--from a septic disease of any type (so-called contagious or infectious) will live in such a manner as to encourage elimination and an increase of nerve energy, these internal foci will be destroyed--will be used as fuel; and then it may be said that a blood poisoning--a specific disease--is cured.

A cure cannot be made by drugs, because a drug adds nothing to nutrition. A drug may irritate an organ and force artificial functioning, as in purging the bowels. But what does really take place? The bowels are forced to empty, but their functioning is inhibited, and, if the abuse is continued, they will cease functioning entirely. This is true of all medication and all organs affected by drugs. The so-called eliminating drugs irritate, but do not eliminate. They depress, enervate, and join with the enemies of the body in breaking down resistance and establishing infection rule over the entire body, or what "Damaged Goods" so graphically describes as the inevitable taint.

I here and now call upon all truth that is potential in medical science to bear witness to the statement I am about to make; namely: The human body is fully able to eliminate all infections, if it is given reasonable care in the lines of feeding, bathing, clothing, and mental poise. If, from an inherited diathesis, the constitution cannot resist the breaking-down influence of an infection, even when aided by the best of dietetic and hygienic care, the only possible results from medication and baths must be further enervation and less resistance to septic (specific) infection. Nature can eliminate and readjust, if permitted to rest physically and physiologically.

If proper care--a care that favors a better elimination and tissue renewal--fails to rid the body of septic foci, it is a beggarly reasoning power that ran believe that a medication which impairs nutrition and hardens tissue--causes a gingivitis (shedding of teeth) and ulceration of glands and bones, and even blindness--can act favorably and persuade or force a health standard that does not exist and is not potential in an organism.

The consensus of medical opinion holds to the superstition that by some magical power the drugs mercury, arsenic, iodin, potash, or a mysterious compounding--a synthetical blend--of drugs, can be made to go on a still hunt through the organism and drag out of their hidings all septic foci and expel them from the body, "Some dream," I admit; but no unprejudiced mind can find any proof for it in any of the fundamentals of medical science yet recorded.

Tubercles.--Those desiring an extensive bacteriological history of tubercles should procure a monograph on the subject.

All germs of a bacterial or microbic character are capable of generating fermentation in an environment favorable to their functioning; namely, a crowded nutrition, or overworked enzymic fermentation; threatening fatal obstruction to physiologic processes or devitalized tissue from injury.

When enervation is great, those who have purulent foci deposited from septic fevers, syphilitic ulcer or chancre, gonorrheal bubo or stricture, or chronic colitis with putrefactive fermentation, will develop affections in keeping with their diatheses. If they have the tuberculous diathesis, or if they are predisposed to take on glandular inflammation of a scrofulous nature, the type of their disease will be tubercular, which may be developed in any tissue of the body. If the diathesis should be of a nature to develop sclerosis, heart and arterial diseases will develop.

So long as any and all affections (so-called diseases) are permitted to develop only after the body's natural immunization is exhausted, it is very far-fetched to declare that a process which is wholly house-cleaning--wholly an emergency auxiliary to a physiological process--is disease-producing, or the cause of disease. Indeed, disease is a state, and those influences that increase or decrease the comfort of that state are causes of health and disease. Organized ferments are a part of a necessary and a properly organized environment for man. This is equally true of enzymes, food, sunshine, and other elements. Indeed, like every entity in the environment, each can be made man's friend or enemy, food or bane. Food is necessary to health and life, yet it is made man's greatest enemy.

For those with a diathesis there is but one immunization--namely, good health. Instead of seeking cures, prevention is the rational work--not extermination of germs, which is obviously impracticable, even if it were possible. And prevention is encompassed in one word-namely, moderation.

The control of tuberculosis must begin in childhood, if not before. Proper feeding, bathing, and clothing, along with enough intelligence to put such knowledge into practice, will stamp out the disease.

Localization and Evolution of Tuberculosis.--Theories of localized tuberculosis other than of the lungs are quite plausibly worked out. Of course, the pulmonary variety of tuberculosis is pretty generally conceded to come from inspiring infected air, or from taking the germ into the stomach with food. The bacilli introduced by the inspired air ingraft themselves in the apices of the lungs. The reason for this particular localization is attributed to the limited expansion of this part of the chest, and especially the weakness of the expirating movement. The natural sciences--especially mechanics--are frequently used by medical science in reinforcing a theory; but the student should not allow plausible argument to paralyze his real effort at getting at the truth.

If the theories of scientific medicine regarding tuberculosis were true, there could be no plausible reason given why tuberculosis, syphilis, or a fatal contagion had not depopulated the

earth; and certainly, if the theories of bacteriology were true, there could be no good reason given why germs had not prevented the populating of the earth.

The fatal weakness about all the germ science is that it cannot give a good reason why man is not extinct, if its theories of causation are true; and, on the other hand, if all it boasts of its great art and science be true, why disease is not stamped out.

Why do not all people who inhale bacilli develop the corresponding disease? Why are there people who cannot be made to take tuberculosis, and why are there a small percentage: who cannot be prevented from taking the disease? The answer to these questions will give a good working hypothesis on which to base a rational theory of causation.

The theories advanced in the various chapters in this book certainly are plausible, and the fact that, when applied, they work is all the proof that rationality needs. Bigotry and prejudice have never been, nor ever will be, convinced that the other fellow is not an ignoramus.

The theories of diathesis, enervation, and autotoxemia, when applied to tuberculosis, work out and rationally explain the cause, and certainly give the only depend prevention or immunization.

The various types of tubercular diseases--the classified tubercular diseases--are easily explained when it is known that this infection cannot be made to infect a gouty diathesis, but that it is easy to cultivate all types of tubercular affections--graft them, so to speak--on the tubercular diathesis.

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9. Pathology of the Fetus

As stated before, nature has put her eternal ban on the hereditary transmission of degeneracy.

Let us reiterate that there is no disease per se. What we call disease is an unideal state of health. What we recognize as health is a greater or less degree of approximation to an ideal state of comfort of mind and body. Few have perfect health; few realize their ideal standard; many are disappointed, and go through life singing, "Beyond this vale of tears." Those who think that man can escape all discomfort fail to understand the necessary educational influences of pain and discomfort.

Of course, the state known as health is a slight deviation from perfect health, functionally. But when functioning has been diverted from approximate health long enough to cause organized change of the character we call disease, this is degeneration, and is not transmissible.

Children are born with organs approximately perfect; or, as a result of accidents or injuries, they are monstrosities--deviations from normal physical development--and are frequently disposed of at the instant of birth because of their unfitness for independent existence; for example, headless children, or children born minus other vital organs.

The state of health which we call disease is not transmissible. Sterility stands between the unfit and propagation, No doubt children are born into environments unfit for proper development, but the vileness is all on this side of conception.

Diseases and deformities, up to monstrosities, are the results of traumatic influences. Disease-producing influences, such as toxin poisoning, may destroy life after it is started; but, at the time of conception, nature's health standard must have been satisfied, or it could never get by the censors who pass on proper conceptions. All sorts of detrimental influences may reach and influence fetal development; but life is started right--for certainly no organic disease in parents can be transmitted.

Drug-prescribing physicians have harmed unborn infants by medicating their mothers. Any influence that harms the mother must harm the fetus more or less. An overfed and incumbered mother will have an incumbered child.

It is said that mercury accumulates in the placenta. Why should it not find the fetus through the blood? The placenta is a filler which stands between the child and the ordinary blood derangements of the mother; but drugs, and especially mercury, arsenic, and iodid of potash, have a way of insinuating their toxic presence beyond the placental guard, there to deface the holiest of holies, and send it into the world a blot upon creation--a false witness against the purity of conception.

That the fetus and mother are united in bonds which allow a reciprocal exchange of physical and chemical influences, there is no question. For illustration: If a mother's uterus be opened, exposing a fetus, and a fatal dose of strychnin be injected into the fetus, fatal convulsions will be produced in the mother, while the child escapes; and, if sufficiently developed, the child may be extracted from the mother and saved--showing that it can stand a larger dose than the mother.

This statement is quoted from Sabory. It is not reasonable to suppose that a fetus can stand a larger dose of drugs than the mother; but the fact that the mother may be killed through the child, while the child is saved, is proof that every protection possible is thrown about the fetus. In this case the drug is taken up and sent to the placenta, and from the placenta to the mother's lungs and heart, before it can be returned through the general circulation to be distributed throughout the fetal body. The heart, and the circulation of blood through it, are far different in fetal life from what they are after the child takes an independent life. The blood, with its toxins,

is slow to reach the vital organs of the fetus. Indeed, the unborn child is safeguarded on every hand.

For the privilege of taking oxygen directly into our lungs we pay with a greater susceptibility to the poison influences of toxins.

When a fetus dies from poisoning through the mother by strychnine, it may be killed by the severe muscular contractions peculiar to convulsions caused by the drug; yet this is not very probable, so long as it is protected from contractions by a fluid cushion--the aniniotic fluid.

It is said that numerous observations establish that the bacillus of Eberth may pass through the placenta, but does not produce any lesion in the fetus, any alteration of Peyer's patches, nor any splenic hypertrophy, but causes a true septicemia. This is splendid proof of my contention that typhoid fever is the product of malpractice, and that all specific poisons--diseases with a specific poisoning--rest on one and the same basis--namely, septicemia--the septic base being chemically changed to suit the environment. A puerperal, typhoid, or traumatic septicemia, as well as a luetic infection, are all forms of sepsis, but featured by the environments under which they develop. Chaos reigns when specific individuality is given to all the different manifestations of putrefaction--septic poisoning. Our present system of treatment is made inefficient by a fallacious conception of causation.

Infection and contagion received a hard blow when it was discovered that, in the case of twins, one may be born with smallpox and the other not; and that the child is often behind the mother in point of time in the development of diseases.

Vaccinated mothers, living in an epidemic, may fail to develop the disease smallpox, and yet will give birth to children covered with pustules. This indicates that the mother's body is contaminated with the epidemic influence, or the infection could not be transmitted to the child. This also goes to show that, in all epidemic influences, those who do, not develop the tangible symptoms may be affected subjectively, having the disease in a subjective form, and how childish are all efforts at quarantine and immunization other than increasing resistance by raising the health standard.

So-called hereditary syphilis and tuberculosis are large subjects, the literature of which runs into tomes; but until the writers on these diseases shall know as much as high school boys, will know in a few years from now of the evils of bad habits in eating, clothing, and care of the mind and body generally, I shall not apologize to them for denouncing as rubbish their whole compilation on disease in general ,and syphilis in particular.

So long as wrong eating, wrong thinking, wrong care of the body--the use of tea, coffee, tobacco, and alcoholics-so long as the mind and body of our patients can be steeped in lasciviousness and sensuality, and all these disease-producing habits count for nothing with expert clinicians when they are weighing cause and effect to determine a correct diagnosis, why should I, or any other rational-minded physician, give any serious consideration to their conclusions as set forth in textbooks? Why are not their conclusions based on premises which have been robbed of their vital potency?

I charge the leading teachers of the profession of today with gross carelessness in making a diagnosis. They all know and acknowledge the evils of bad habits; but, in making a diagnosis, the effects of a vicious life are ignored entirely, and blood secretions, excretions, and pathological specimens are sent to bacteriologists, on whose findings a diagnosis is made and a cut-and-dried--specific--treatment is prescribed. The X-ray is used, and on its shadows is based a diagnosis, without a thought, or any consideration whatever, being given to the influence of the daily habits of the patient on causing the effects which the X-ray traces.

I have said that the pursuit of present-day diagnoses and treatment is a "fool's paradise." If it is not, why isn't it?

A life of lasciviousness and sensuality leads directly to degenerating diseases, such as tabes dorsalis; yet the leaders of the profession see nothing, think nothing, believe nothing, write nothing, and teach nothing, except that the disease is caused by syphilis and must be treated for syphilis, notwithstanding this treatment is a failure and they know it will fail. In the face of this, they *would* have laws passed to force their specific or anti-syphilitic treatment, and no other, at the pain of imprisonment for the culprit who would dare repudiate their dainnable pessimism.

The treatment standardized by the inhabitants of this fool's paradise (medical) will necessarily make their cures (?) correspond with their pessimistic prognosis. Perhaps it would be better to say that the treatment is logical--in keeping with the erroneous etiology,

From a modem medical view-point, there is but one toxin that counts in analyzing syphilis, and that is the toxin of syphilis. The modem medical gentleman may dive down into the worst human muck, but if he cannot find syphilitic infection, or the least excuse for suspecting it, he will issue a clean bill-of-health, to be put in escrow for ninety-nine years. If at the end of that time a Wassermann test, used every year, has shown negative, a certificate declaring the victim pure will be delivered to him "to have and to hold" for the remainder of his natural lifetime.

A syphilitic suspect is held under surveillance, and tested often enough and long enough to develop in him a syphilophobia, after which he will stand without being tied to any syphilomaniac.

To the uninitiated what I say may appear to be exaggeration, or perhaps entirely false; but the truth is that I cannot exaggerate on the fallacious teachings of modern medical science on syphilis--they are so false that they are beyond belief. The reason why medical fallacy has evolved to such dimensions on the subject of syphilis is because it is backed by law and the small voice of truth is frowned down.

'The majority of doctors who subscribe to the fallacy have no opinions, but they stand up and are counted for any ridiculous theories advanced by the "scientific" heads. In this way the stupid, unthinking majority governs; and when ignorance rules, insane delusion often sets the pace. 'The most dangerous delusions are those that are accepted by the lay minds as scientific.

When parents live in such a manner as to keep themselves enervated to the point of having imperfect metabolism--the point of having secretions and excretions more or less inhibited; when their personal habits are sensual, and the state of the alimentary canal is that of acetous fermentation in the stomach, and putrefactive fermentation in the bowels, their physical state is that of chronic toxin poisoning.

Acetous fermentation in the stomach and upper part of the small intestine has an inhibiting effect on the dehydrating process that takes place in the walls of the stomach, duodenum or small intestine, and liver. In the lower small intestine and the large intestine putrefaction takes place, and the toxins absorbed from this depraved condition is a constant source of poisoning. The lymphatic system arrests the absorbed toxins, and neutralizes them to a certain extent; but the body's immunization eventually becomes so overworked that glandular inflammations become the rule rather than the exception. This is the state that in time evolves the tubercular diathesis, which is described elsewhere under the head of "Diatheses." And, in thinking of diathesis, it should not be forgotten that more is meant than an average susceptibility; indeed, it means a fated certainty that tuberculosis will develop if the same habits of body and mind are practiced by the offspring that were practiced by the parents in developing acid fermentation in the stomach and putrefactive fermentation in the bowels. Without this inherited tendency to develop tuberculosis, no amount of association with people sick of pulmonary tuberculosis will cause its development.

When a subject showing so much degeneration of the vital processes is unfortunate in becoming acutely infected by any type of septic poisoning, ranging from venereal infection, through the infectious fevers, to infected injuries and surgical operations, his system will prove a

favorable culture-medium for the spread of the poisoning. The infectious fevers will develop the worst types. Venereal infections will act very severely, glandular inflammations will spread rapidly, and the system will show little resistance. Treatment will be slow in bringing about a change for the better. Anti-syphilitic medication, without correcting errors in eating, must fail.

Infectious fevers show a great mortality among such subjects. These are the subjects with whom modern syphilitic treatment plays such havoc. The most degenerated of this type are sterile; those who can pass nature's censorship and propagate are curable, and there is no transmission except an acute susceptibility to take on tuberculosis or syphilis, when the habits which lead to degeneracy are formed. A proper environment would lead away from such tendencies; but this influence seldom exists so long as children remain with parents, and parents remain ignorant of the health laws, and continue to practice vitiating habits. Children born. of such parents not only have a tendency to take on parental habits, but they are educated into them.

Postnatal influences cause degeneracies that are often ascribed to prenatal influences and inheritance.

The degenerating habits of the average parents during the gestation period, or during that period when a family is being raised, are quite enough to build a tuberculous or syphilitic diathesis. Excess in eating and excess in venery develop such a state of toxin poisoning that children are born more or less incumbered with flesh, and with such a sensitive state that they have little resistance. They soon develop toxemia; their lymphatic system takes on adenitis and lymphatic inflammations very easily. These are the children who develop borderland symptoms of scrofula, tuberculosis, and syphilis--they can satisfy the physician who is a syphilomaniac with all the thrills of a great discoverer.

Toxin poisoning from excessive eating, enervation from excessive venery and a lascivious mind, and poisoning from stimulants and improper clothing, housing, etc., build a state of body where no, symptoms are lacking for those who are ready to suspect tuberculosis, syphilis, or any degenerate state.

Errors in locating cause are the most tragic features of modern diagnosis. One of the most stupendous blunders of the day in medical science is in giving specificity to disease and ignoring the basic causes which make specific causes operative.

It is easy to graft specificity on a constitutional derangement, such as described above; but without some such cause the body proves a withering desert to the seeds of disease that fall upon it. To be specific and explicit: A child may be born with the tuberculous diathesis, yet it need not, because of that diathesis, develop and die of tuberculosis. Diathesis means susceptibility and inclination to take a given disease. Sterility prevents disease per se from being born.

Parents with vicious habits may deliver an incumbered child across the quarantine line drawn by nature, but nature's health officers are too loyal to evolution to allow the smuggling of infections into life. Degenerative processes must be manufactured on this side of conception.

Children born of parents who are too young are often degenerates. The cause, however, is psychological rather than physical. The first child is often a degenerate, as are only boys in large families of girls, and only girls in large families of boys. But the degeneracy is postnatal and psychical.

Physical degeneracy starts oftener from a psychological influence than from physical influences. However, both often start together, and walk hand in hand to the destruction of health and even life.

A babe is born. It is fed every two or three hours, night and day. It is disturbed in its sleep--in

its brainand body-building--by being put on exhibition to every friend who knows so little as to call in person on the puerperal mother, instead of sending a small note of one line conveying good wishes, and one flower (not a bouquet). Good wishes by telephone, or a personal card or note, with one flower, is all the personal attention any mother should receive from a friend, except her own family, for three months after the birth of the child.

Disturbing babies to look at them, kiss them, and shake them up to see how lovely their eyes are, and what exquisite little feet and hands they have, is nothing more than a delicious bit of hysteria and humbuggery practiced much too often for the good of the puerperal mothers and the babies; for right here is where the building of pathology of infants and heredity is begun.

The foundation of nervous irritability and indigestion starts at once, marked by constipation, white curds in stools, colic, and night and day crying.

Benevolent Assimilation--a Conservative Force

There is a tendency for pronounced types of any diathesis to grow weaker and weaker until unfit to reproduce; then they die out.

As stated often before, disease is not transmissible, but enervation is, Enervation means lost power of resistance, and when resistance is low, the influences which lower it find the high-bred diathetic easy prey, so to speak.

In breeding lap-dogs, the lower their nerve energy and the less, their resistance, the more popular they are among dog fanciers. The nearer death from fatty degeneration the stock at the stock shows is, the more it is admired and the greater is the premium.

One day years ago I was crossing Boston Commons. Moving along in front of me, at a snail's pace, was a woman far gone with fatty degeneration. When I was within ten steps of heir, she turned and said in a lackadaisical voice: "Darling, do you want mamma to wait for you?" I looked in the direction of her eyes, and saw an exophthalmic dog, whose weight certainly contrasted with that of its "mother," for she probably weighed two hundred, and her offspring could not have exceeded six to nine ounces.

The dog's breeding had left it with scarcely enough nerve energy to stand on its legs. It had eyes, but it saw not, and it had life, but it lived not. It was a case of nervous diathesis. It was bred almost out of existence.

Children may be born of parents who come from parents with strong, well-marked diatheses--with low resistance to influences which pervert nutrition--and if the diathesis favors tuberculosis, that disease will develop; if the diathesis is that of gout, the children will develop rheumatism and other gouty affections.

Children of tubercular diathesis, when bred down until they are very enervated, have but little resistance, and when they are abused in a way to pervert nutrition, they develop some form of tuberculosis. All they need to start the morbid process is to be vaccinated with cowpox, which is a bovine type of syphilis. Just what the difference is, the highest medical authorities do not know; the only apparent difference being that one develops in the human being and the other develops in the cow.

In a pronounced type of scrofulous diathesis, vaccination is all that is needed to set up a tuberculous or syphilitic morbid process that will be pushed on by wrong life to destruction of health and life while the victim is quite young.

Vaccination may start a morbid glandular derangement that will favor the development of all the catarrhal diseases peculiar to child-life.

Of course, infections from toxin absorption in the intestine are common to children of diathetic

type.

Children from a long line of ancestry favoring the development of the scrofulous, tuberculous, or syphilitic diathesis are weaklings, with flabby muscles, who develop adenoids and enlarged tonsils early. They develop skin diseases of an impetigo variety, and their lymphatic glands are very prone to take on inflammatory enlargements.

There are many fatal diseases developing in these children before and at puberty because their resistance is low and they are subjected to the same disease-producing habits as those from whom they inherit their type of health.

According to Darwin, this is the way the unfit are made to disappear.

A dyscrasia or diathesis is the sum of erroneous living practiced through generations. Diseases peculiar to a diathesis are not long in developing when the strain is pure and inbred; but where a beautiful tuberculous girl, with long, silky eyelashes and well-rounded body and limbs, compels an Apollo of the sanguine, vital temperament to fall in love with her, the tuberculous strain is diluted and the half-tuberculous children are given power to live; whereas, if the girl had attracted a young man, like herself, of tuberculous diathesis, the children of such a union would be born to die early.

Influence of Chronic Intoxications

Chronic food poisoning from the habit of overeating causes enervation. This state favors the development of any disease to which the one suffering from enervation is prenatally inclined. Anything that enervates those with a diathetic inclination will drive them into developing whatever disease their diathesis inclines them to develop.

Children born of parents enervated from chronic intoxications often start life with a great show of brilliancy; they are bright--indeed, precocious. But they soon come to an end, settling into disease or intellectual mediocrity. The cause for this may be one of many influences. The children are born and start life under domestic influences--a style of living--that have ended in alimentary, alcoholic, or other forms of inebriety in their parents; and the most natural thing for the children to do is to follow the parents in dietetic errors, and then, as they grow older, they adopt the coffee and tea habits, and perhaps later the tobacco and alcohol habits.

Excess in any one line paves the way for excess in other lines. Intoxication-be it from the absorption of toxins in the bowels from overeating, nicotine in the mouth, or alcohol in the stomach--develops enervation; and the more enervated a subject becomes, the more craving he has for more and greater varieties of stimulants, until the nervous system and nutrition are impotent. During the early stages, when the nervous system has strong reactive power, the mind is unusually bright--children show precocity; but the evil day of enervation, followed with prostration, must and does come. Then dullness follows brightness; will is lost; eccentricities come to the surface. The real artist may continue to produce in a way to please those who are not critical, but certainly not to please the artist himself, if he were normal.

Debauchery is not confined to physical stimulants. Ecstasy is mental debauchery. All cases of extraordinary precocity are types of mental diathesis brought on from idea--drunkenness. The emotions are fed with a consuming eagerness to drink at the fountain of all knowledge; the idea and desire become consuming; an ecstatic state is developed; and as a result we see the boy Christ "sitting in the midst of the doctors, both hearing them and asking them questions." On being asked by his simple-minded parents to explain why he was away from home, his answer was:

"Why look ye for me? Wist ye not that I must be about my father's business?" He was not understood, because the moral mind cannot look through the veil of ecstasy.

Only a short time ago the world of education was astonished by a boy of eleven years of age

lecturing to the Harvard professors on the fourth dimension. This is a type of ecstasy--mental inebriety. The enervation that must follow may show the will and all the positive elements of his character impotent; or the reaction may be so great as to sweep this precocious youth out of life.

These cases of premature--or, rather, extraordinary--mental developments were prepared for precociousness before birth. The parents developed a mental diathesis, and as soon as these youths were subjected to mental stimulation they developed mental inebriety.

Children, when once launched on the road of intoxication traveled by parents, will speed up and go much more rapidly and come to an end much sooner.

All habits--mental or physical, moral, immoral, or unmoral--are just so many varieties of intoxications; and, when indulged in without restraint, enervation, and the consequent perverted nutrition, follow. The children resulting are stamped with a diathesis which makes it easy for them to develop in the habits of parents.

As disease has no individuality per se, but is, first, last, and all the time, simply a state of health, all efforts in the line of healing worth anything are those that remove habits which lower the standard of health.

Moderation in all things builds a self-controlling diathesis that enables children to control themselves. Poise is as transmissible as any other habit.

Convulsions follow in the wake of parental drunkenness. Infantile paralysis is the effect of wrong nursing, and endemic or epidemic influences, on a child that is stamped with neurosis as a diathesis.

Unless we can fully comprehend the truth that normal children cannot be made sick; that such diseases as infantile paralysis take hold only of children who have been prepared by parental excess--perhaps excessive venery before and during the pregnant period, plus table excesses, and maybe alcoholics--we need not hope to build an immunization that will do away with epidemics. The part played by vaccination in breaking down resistance should never be forgotten.

Epilepsy is a neurosis built by parents and transmitted to children. Alcoholism is supposed to be the chief among all intoxications that build the neurosis in children which leads to epilepsy. In all probability, excessive venery stands at the top of all causes.

Saturnism (Lead Poisoning).--When the mother is poisoned, she usually aborts. When the father is poisoned, C. Paul found that out of one hundred and forty pregnancies more than eighty were abortions. Among the children born alive, one-third died the first year and one-third more before the third year. Those children who live to maturity are liable to have all kinds of nervous diseases.

One thing is always observed, namely: when degeneration is established from the use of any stimulants, sterility prevents propagation.

Hereditary Syphilis.--That symptoms produced by toxic poisoning caused by ordinary sensuality in those of scrofulous diathesis are often ascribed to hereditary syphilis cannot be successfully disputed. This I have demonstrated so often in my practice that the truth is common-place. For example: The abortion habit is curable by correcting vicious dietetic habits and venereal excesses. Pemphigus, when located on the soles of the feet, is declared to be absolutely characteristic; but the truth is that such skin diseases are developed prenatally and after conception, and are due to perverted nutrition brought on the mother from the sensual indulgences too common in, if not characteristic of, pregnant women.

The average woman's nutrition is perverted before conception, because of the universal habit of overeating and overindulgence in licensed sensuality. Add to this state the sensual

indulgences above referred to, and countenanced by good society and everybody's religion, and we have the ground-work for all the diseases to which the human offspring is heir. Modify this picture of perverted nutrition by poverty, squalor, and the corresponding psychology; then add the complicating influences exercised on these types by fear, hopelessness, dispair, and a disorganizing medication, as practiced by the representatives of modem medical science, and no imagination, it matters not how vivid, can picture a pathological inferno with more types of loathsomeness than evolves from the states here described--all, too, without anything more "specific" being added.

Where the above pathology is pushed to organic degeneration, sterility prevents its propagation; but there are enough functional diseases manifesting in the fetus, built by licentiousness in parents since conception, to satisfy the imaginings and perverted reasoning of our most pronounced types of syphilomaniacs.

Perhaps those who read my argument will say: "Why shall we accept one man's opinion against the opinion of the whole profession?" What can the whole profession know about a subject that it has not investigated? If the whole profession has, refused to watch the progress of perverted nutrition, as it develops under the sway of sensuality, and has not refrained from the use of medication, how is it to know what uncomplicated pathology is?

If the profession has refused to watch the progress of disease under fasting, or light dieting, and no medication, how is it to know what I know after years of such "watchful waiting?"

No man's opinion is worth anything on a subject about which he knows nothing, and to multiply such an opinion by a hundred, a thousand, or a million like opinions does not change the worthlessness of the first opinion. A fallacy multiplied by a hundred million minds does not make a truth. To force Galileo to abjure the Copernican theory ninety years after it had been published by Copernicus did not make the world flat.

Hereditary syphilis is a bugbear, the offspring of original sin, the fall of man, and like relics of the child-mind.

Hereditary syphilis is a disease made this side of conception, and is not transmissible. The child that is born with symptoms of disease is infected after conception.

It is a fact that we have the scrofulous diathesis, which means that the people coming under this head are more inclined to develop tubercular diseases, syphilis, and the thousand-and-one small diseases and symptoms that come under the head of scrofula, tuberculosis, and syphilis, than they are to develop symptoms of gouty diathesis.

It is worth while to try to comprehend that evolution had the preponderance of power, that the cosmic urge is on the side of development, and that there is a point beyond which degeneracy cannot go-and that point is conception. This is so true that no analytical mind can be in doubt when the great and profound truths of history are known and well digested.

Syphilis is a filth disease--a disease of clothes and sensuality. Man is slow in learning how to wear clothes--his morality transcends his estheticism. From a health point of view, a filthy man is much safer nude than clothed.

Syphilis is a disease reaching back far beyond the birth of the idea of specific treatment. Long before modem medical science, with its dogmatic, fatalistic teachings regarding "universal taint" and hereditary syphilis, King David confessed to his God: "There is no soundness in my flesh . . . no rest in my bones, because of my sin ... My wounds stink and are corrupt because of my foolishness . . . My loins are filled with a loathsome disease, and there is no soundness in my flesh . . . the light of mine eyes . . . is gone from me. My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off."

This confession was by David for his people. The symptoms were those of syphilis. If the

Jewish people were so diseased as to be shunned in that early day, before mercury, potash, "606," Wassermann tests, plays on the order of "Damaged Goods," and all the other insanities and inanities were discovered, what prevented the race from being wiped out? If circumcision was all the treatment, except fasting, it would be well for the wiseacres of the medical profession of today to tell us why the disease needs more attention today. Every other disease known to antiquity has grown lighter, if it has not become extinct, in the march of civilization.

The literature that has grown up on the subject of syphilis and its mystical habits is weird, and so eminently scientific that nothing can possibly evolve out of science to equal it, unless it would be a cure for the dreadful disease. But this is obviously impossible; hence the glorious achievement of the scientifico-syphilo-maniacs is likely to stand unparalleled in all medical history.

If I should undertake to refute all the freakish pathological phenomena attributed to syphilis, I should be occupied for the remainder of my days, and then leave the subject unfinished.

The following I give as a sample of myriads of analogies: "The microbe may remain inactive in some corner of the organism, and become active several years later, on the occasion of a traumatism or any other cause." This can be duplicated in those who are autotoxemic, and who are jotted out of "status quo" by an unusual shock.

We might tolerate the profession's syphilomania if it were not so pessimistic and fatalistic. But from years of experience we know that nature can throw off every disease that has not become organic; all that is necessary in the line of treatment is to remove every influence that is obstructive to the body's functioning. We know that the body is busy throwing out toxins, and if there is an accumulation--if elimination is not equal to accumulation--all that is necessary is rest (physiological rest), and nature quickly returns to the normal. There is no stimulation to elimination that equals physiological, physical, and mental rest.

That drugs will bring about elimination is true; but they bring a disappointing relief, for they excite to action and leave the organs more enervated. As a consequence, a relapse follows--or an apparent relapse; for, as a matter of fact, such relief is disease-building.

Hereditary tuberculosis and hereditary syphilis are analogous when found in a syphilitic or scrofulous diathesis--in a scrofulous subject coming from a father and mother of tubercular diathesis; but when one parent is scrofulous and the other gouty, the heredity is a modified scrofula or syphilis.

There is no hereditary tuberculosis. As stated before, diathesis means a tendency to develop given symptoms of diseases. Disease per se cannot cross the line drawn by sterility. To make an exact statement, diathesis means that health will deviate in a definite manner.

A child with the tuberculous diathesis well established may develop utero-tuberculous derangements.

Pronounced unmixed types of diathesis are hard to find. The tuberculous and gouty stand out more plainly and are recognized by the unskilled. A pronounced diathesis predetermines the type of diseases to which the subject is heir. The advantage of knowing to what class a child belongs, is that mistakes in climate, food, clothing, and occupation may not be made.

The tubercular diathesis should live out-of-doors, and be fed fruits and vegetables--very little animal food. The gouty diathesis develops gout, eczema, neuralgias, neurasthenia, etc. Animal food, with fruit and raw vegetables, should be the diet.

Both diatheses need grain during the developing period.

Arthritism, or gouty diathesis, presents the following characteristics: gout, eczema, nervous derangements, such as neuralgia, hemicrania, hypochondria, neurasthenia, gas, diabetes, gravel,

stone in the liver, kidneys, and bladder. When the father has gout, the son has asthma, and the daughter develops arthritis deformans. A child of this diathesis has headache at puberty, and may develop asthma or rheumatism; at about middle life, gout develops, and he dies of apoplexy.

It is said that gifted people--geniuses--are of a gouty diathesis, and are very inclined to develop single faculties to their own destruction.

The scrofulous diathesis starts with catarrh; nose, throat, and ear diseases; tubercular joint and bone diseases; catarrhal inflammations of all mucous membranes; glandular diseases.

Congenital malformations are said to start from infections. No doubt the nervous systems of the mothers have much to do with fetal development.

Fetal development is a large and interesting subject, but not necessary to this book. The readers who are interested should go to their public libraries, where they will find textbooks on the subject.

Physiological heredity is the innate power of the cell to reproduce a successor.

Ribot declares it to be a biological law that enables living beings to repeat themselves in their offspring.

There are two laws, however: first, the law of conservation--retaining ancestral type; and, second, that of evolution.

Conservation is the greater. Indeed, when we see with what tenacity humanity clings to all beliefs and customs, we sometimes wish that nature would relax her vigilance. But when we see how necessary it is for great resistance to be present all the time to prevent disease--degeneration--from crossing the lines drawn by heredity or transmission, we are made to rejoice that degeneration cannot be transmitted.

There is a temptation to write on the subject of reproduction and other features of heredity, but space will not permit. Darwin, Ribot, Haeckel, Weissmann, and many others will furnish the reader material out of which he may formulate his own belief.

10. Inflammation

Definition.--A burning. Any local influence that disturbs cell nutrition may be said to lower its standard of life or health, and this state we call disease. The phenomena are hyperemia, pain, heat, swelling, redness, and disordered function--impaired nutrition.

When the influence is traumatic (a wound or injury), there are two reactions which follow--namely, local and general. The local reaction causes a change in the nutrition of the cells injured and in their neighbor-cells. The general or systemic reaction causes a general nutritive change in keeping with the severity of the local injury. An injury may be so small that the general reaction is nil; yet, if the reparative process is interfered with because of inhibition of elimination and drainage, the systemic reaction may be so great as to cause death.

The simplest wound is a cut. When left to nature, the wound gapes. The wise mind will interpret nature's speechless signs about as follows: Nature is always conservative, and if there were danger in a wound standing open, it would be natural for the mechanism to close it, the same as the blood vessels close to stop bleeding. The blood vessels contract and retract, causing the flow of blood to be very light; then, on account of the slight flow of blood, a clot forms in the mouth of the cut vessel, which seals it most effectually. Where the blood vessels are torn or twisted apart they do not bleed. In certain diseased states the blood will not clot, and bleeding continues. It may be objected that wounds to blood vessels do sometimes bleed the injured to death. Yes, that is true. Every conservative provision of nature can be, and sometimes is,

overcome, but that does not alter the fact that nature places a special guard over each one of the body's vital functions, the normal action of each and every one being necessary to total full health of the body, and that each guard must be vanquished before the function over which it presides can be deranged or checked.

If microbes were dangerous to open wounds, they would not be in the atmosphere, in us and about us. If it were not for the reciprocal relationship existing between the microbes (organized ferment) and the enzymes (unorganized ferment), cell development could not take place, and tissue growth and reparation of injuries could not be brought about.

If the microbes could not get into a wound, either at the front or at the rear--either from the outside of the body through the medium of the atmosphere into the wound, or through the lungs into the blood, and, by virtue of the circulation of the blood, into the wound--healing could not take place. Organized ferments are as necessary to life as unorganized ferments. We know that cooked food, boiled water, and canned fruits are not so wholesome as foods not cooked. The false notion is sometimes advanced that uncooked vegetables are disease-producing. This is true only when the uncooked vegetables are diseased.

To kill the vitamin or enzymes in fruit, vegetables, or meat, by cooking, destroys the reciprocal balance between enzymes and microbes, resulting in decomposition. If, however, the cooked products are placed in vacuum, they will remain without change.

The Lister dressing places wounds in a state free from the access of germs; hence there is no danger from interfering with nature's plan of open drainage. But if the dressing is imperfect, allowing the germs to enter, and does not allow free drainage, the balance between germs and enzymes--between organized ferments and unorganized ferments--is lost, and the result is decomposition with infection, which ends repair, and sloughing of the parts takes place. If the sloughing establishes drainage, a reciprocity--a balancing of activities--between microbes and enzymes is once more established, and healing proceeds; but if sloughing does not take place and drainage fails to be established, organized ferments (microbes) gain the mastery over the unorganized ferments (enzymes), decomposition and disorganization of the blood take place, with the generation of sepsis which paralyzes the nerve centers, causing death in a very short time. If feeding is pushed "to keep up the strength and supply waste," the enzymes are used up, reparation of the wound--healing--does not take place, and the reparative material breaks down into pus.

The activity of the circulation in and about an injury takes place as one of the reactive phenomena following the shock of an injury, and causes swelling, pain, redness, and heat. This is a normal inflammation, necessary to reparation. To secure healing material, a surplus of blood must be taken to an injured part; and so much is taken that the environment of an injury is filled to overflowing-for nature is prodigal. This is the cause of the swelling, pain, redness, and heat; and the pressure on the nerves causes pain--the pain of inflammation. A surplus of blood means a surplus of heat; but so long as the chemistry of the elements is physiologically maintained, the temperature--inflammation--will not be above the normal visceral temperature, and the healing will then proceed normally. On the other hand, if the nutrition of the wound is perverted by having the waste retained, microbic fermentation takes place, which changes the chemistry, and decomposition supplants composition or healing. Normal inflammation, due to the fermentation caused by enzymes, is supplanted by abnormal inflammation, due to the fermentation caused by microbes. The first phenomenon is health as it appears when the reparative processes are working without a handicap; while the second is health as it appears when the reparative processes are working under a handicap.

Physiology and pathology are not opposing forces. They are two phases of life, and health is the thermometer. Health may register high, and it may register low; but the degrees between the extremes of full physiological health and full pathological death mark the standard of health.

Instead of the microbe per se being pathologic, it is physiologic and necessary to the life and

health of the cell, or the great aggregation of cells known as man.

The great importance of drainage is obvious when the above facts are considered, and such facts should enable the analytical mind to know that organized ferments (microbes) have no more to do with inflammation than unorganized ferments (enzymes). The real cause is obstruction to the normal operations of repair. If microbes must be pent up in a wound before they can set up their peculiar fermentation, then the cause of the pent-up condition is the cause of the morbid process.

Irritation and overfeeding cause too much secretion, and too much secretion is disease-producing.

Enzymes are secreted by all the organs and tissues of the body. When they are secreted in less quantities than normal, disease results. It would not be the truth to say that enzymes are disease-producing; yet too little or too much will result in imperfect metabolism.

Food is stimulating and body-building, but when eaten in too great quantities it is disease-building. It would not be the truth, however, to declare that food is disease-producing. Unless microbes can produce a specific disease without unnatural environments to aid, it cannot be truthfully said that they are disease-producing; if they are, then every benign influence may be said to be disease-provoking, because disease follows its perversion. The air is irritating to a fresh wound, but the irritation must be for a good purpose. It is; it checks the discharge of serum, and dries the surface of the wound so that reparation can take place behind the protection. The dry covering acts as a stay or fixation expediency, to secure the quiet necessary for healing. If the sealing-in of the wound is too close, and danger of infection threatens, an itching takes place, which forces rubbing or scratching, and this breaks enough of the covering to allow the escape of pent-up pus and waste matter.

Thus we see that nature is not afraid of air, nor of the dust and microbes which it carries. We see that nature does a splendid job, and her theory and practice are sound as science. The only objection is that her work in healing wounds is severely crude at times, and that it may be improved upon--only, however, in manual dexterity. The surgeon may lend nature his hands, but nature certainly does not need his brains. A good combination is for nature to lend the doctor the wisdom to carry out what she would do if she had hands.

Not long ago I read the extraordinary advice of stitching a wound together without the preliminary of cleansing, and without any attention to drainage except massaging the edges of the wound. All I have to say about such a procedure is that the Lord is on the side of that surgeon, and permits him to exploit the laws of nature in a most grotesque fashion.

A safe plan for surgeons who are not "anointed of the Lord" is carefully to drain all wounds that are sewed up, and, if quick healing is desired, to keep the parts as quiet as possible; indeed, keep fingers away from the wound, and especially those of the patient. If these precautions are not observed, the surgeon may find, after it is too late, that he may say with Pope:

> Pretty in amber to observe the forms
> Of hairs, or straws, or dirt, or grubs, or worms.
> The things, we know, are neither rich nor rare;
> But wonder how the devil they all got there!

It is just possible that the great physician who penned the surgical heresy referred to was posing and, for the sake of being thought original, suffered his logic to run counter to natural law and order. And again we are made to agree with David: "Verily, every man at his best state is altogether vanity." Selah!

Hands, with nature's wisdom, will clear the wound. Place a drain in the bottom of it, in such a manner as to secure perfect drainage; then bring the wound together, closing the gap and

coaptating the cut surfaces as nearly as possible; then apply a general dressing that will not interfere with drainage, but will lend support and steadiness, so that healing will not be interrupted by unnecessary motion. This is nature's wisdom turned to account.

Healing is interfered with by inflammation, or the causes that lead to inflammation.

We have seen that the first reactions stop bleeding, and cover the wound with serum and fibrin, which protect the surface by giving it rest from continuous irritation from air, dust, and insects.

If the cut surfaces are brought together, the healing must end much sooner than if a bridge of tissue must be built to span the gap.

The Wound and Natures Mechanism

Nutritive material is brought in abundance to a wound, caused by the irritation of the injury. Irritation, pain, redness, and swelling follow injury. At first, irritation causes contraction of blood vessels. This stops hemorrhage. As a result of the contraction--overstimulation--reaction sets in; the overstimulated blood vessels are enervated, and because of the enervation they relax and fill with blood; then exudation takes place. The cell-building elements cover the cut or mutilated surface, and crowd the border so much that there is a heavy discharge through the drain, if the wound has been properly dressed or has been left open. Where drainage is unobstructed, the healing behind the barrage of nutritive material thrown out moves along without a halt. The proportion of enzymes and nutritive material furnished by a healthy, not overfed, wounded individual insures rapid renewal of tissue. If obstruction takes place, microbic fermentation is set up in the pent-up surplus. This is a conservative process; for it thins the discharge, irritates the wound, and causes an extra amount of serum to be exuded. The purpose is to melt down any incrustations and new-made tissue that is obstructing drainage. When this fails, and the microbic fermentation gains the mastery over the enzymic fermentation that is protecting the healing surface, then the enemy--toxin or septic poison--pushes its way into the circulation, and septicemic fever and death follow very quickly.

Inflammation is almost nil when a wound is in a state of health; for it must not be forgotten that wounds, as well as all the phenomena we call disease, are different states of health. The strategic move for preserving the health of the wound, when it becomes obstructed, is little short of a miracle in appearance; yet it is the most natural workingout of cause and effect. We have seen that, unless the obstruction is overcome, the state of health will be lowered until it ends in death. In obstruction to wounds, nature destroys to make alive.

All nutritive changes which we call disease are due to influences which increase, decrease, or pervert cell-life; every symptom called disease is a conservative move; and, when not understood, or suppressed as doctors (not physicians) do, harm follows.

Inflammation is due to the local speeding-up of the nutritive processes caused by injury. The injury may be physical or chemical--a cut, tear, bruise, bum, blister, or a local irritant of any kind. When a wound is healing normally, the heat is about that of the normal viscera--namely, 99° to 100' F. When the temperature exceeds 100°, there is something going wrong--either the drainage is not perfect or the patient is eating too much.

The phenomena of inflammation are pain, heat, redness, and swelling.

Where the increase of heat is not more than one or two degrees above normal--above the temperature under the tongue--all is well with the wound.

The whole question of wound infection hinges on drainage. Any wound that drains well may be smeared with the most virulent septic poison without infection. The infecting agent must be rubbed into the wound so that it will be pushed into, or below, the granular surface. The infecting material must find a lodgment so secure that the flushing--enzymic--serums cannot

dissolve and wash it away.

Injuries in canals, tubes, ducts, and air passages will heal normally if drainage is not obstructed; but, when obstructed, the usual conservative methods of nature may further obstruct, and death may result from a rational therapeutic measure mechanically obstructed in its execution.

It is painful to watch members of the medical profession floundering about in a vain endeavor to save a patient from death from septicemia by injecting into the veins or subcutaneously a solution of salt, or a hastily prepared serum, regardless of the fact that the source of the infection has not been discovered; or, if it has, no adequate effort is being put forth to overcome it. What must be the conclusion when such floundering is observed? Obviously, that either the medical gentlemen are acting, or they have not a very accurate knowledge of the principles involved.

If the case is one of septicemia, following abortion, an intra-uterine douche of an hour's duration (hot salt water) is the first thing to do; and it should be repeated every three hours, if the patient continues to live. The douche removes the infecting material, establishes drainage, relieves the nervous system, brings on relaxation, lowers the tension that is interfering with all the life-processes, and, neither last nor least, places the organism in the most favorable state for resumption of secretion and excretion. A hot bath of from thirty to forty minutes' duration will prove a great auxiliary to the douches. Certainly no food should be given; for the work of elimination and neutralizing the poison--antidoting the organized ferments by the unorganized ferments, the germs by the enzymes--must not be hindered by interrupting the enzymic activities of repair with an intake of food, which, under the circumstances, is wholly superfluous and disease-producing.

Why does an injury or a local irritant or irritation cause inflammation at one time and not at another?

It is all a question of natural immunization; and natural immunization has for its elements an alkaline state of the blood, a normal nerve energy, and an optimistic psychology.

The blood, if normal, is alkaline and well charged with enzymes.

When an injury is received, there is first a shock, which causes a constriction of blood vessels. In time there must come a reaction, and the reaction equals the shock--the dilation of the tissues (blood vessels) will be equal to the contraction from shock. This means congestion or crowding of the parts, and, as in the case of a congested thoroughfare, traffic or the function of trade is impaired--too much blood is in the parts, causing an exudation, There can be no rest or standing-still; the exudates must be excreted, thrown out, or reabsorbed. To fit these exudates for absorption, they must be treated with enzymes, in order to fit them to reenter the circulation. If there is enervation and a lack of enzymes, then it will be "up to" bacterial fermentation to prepare the exudate for expulsion from the body. If there is no break in continuity--if there is no open wound--then the bacterially treated exudate must be absorbed into the general circulation, causing infection; or the infection will be corralled by walling in the devitalized territory and lining the inclosure with an impervious pyrogenc membrane. The pus that forms is retained--not allowed to escape into the general circulation; for, if it should, it would cause pyemia. If the body's natural resistance is too low to fortify it in this way--if it cannot localize and immunize the infecting material--then general infection takes place and the victim dies of septicemia.

Anything-any influence that causes irritation--attracts an extra flow of blood to the point of irritation. The engorged blood vessels exude a fluid. This fluid must get out of the body. If it cannot, it must be digested and reenter the circulation; or it must be bacterially liquefied and carried out of the body through the open wound. If there is no point of escape, an abscess must form, as described above, or general systemic infection must take place.

If the point of irritation is the pleura, the exudate may accumulate, and, from lack of bacterial

influence, the fluid is neither digested and absorbed, nor decomposed and converted into an abscess of the pleura, nor absorbed, creating septic fever and death; but remains a bland, innoxious fluid in the pleura.

The life of man, from his entrance to his exit in this world, is a process of metabolism. If this process is done well, he has health and well-being; if the process is carried out badly, he has impaired health.

Metabolism is carried on well or badly. When well done, we say that the individual is well--healthy; when badly done, then man is sick. Health and disease are states, not entities.

Inflammations of Mucous Membranes.--The simple forms of inflammation are those caused by the toxins generated by the influence of organized ferments on carbohydrate foods. When no more food is taken than can be utilized by the body--than can be fitted for assimilation by the unorganized ferments (enzymes)--the body in all its parts remains in a state of health called normal. Secretions and excretions are nearly enough balanced to insure health.

If, by mental or physical habits, nerve energy is lowered--if enervation is pronounced--secretion and excretion sink below the normal; this lowers enzymic production and increases the amount of waste products circulating in the fluids of the body. If the usual amount of food is eaten. digestion will not be perfectly carried out. A certain amount will be left over and above this amount that can be digested. This left-over material must undergo microbic fermentation.

If the organism is abused by overeating, overclothing, or living in too hot houses, or when the body is especially enervated, and is then exposed to low temperatures, or passing from hot houses, hot beds, to cold air--winter --temperature--irritation of the mucous membranes of all exposed canals results, until catarrhal inflammations become a constant state of the most exposed of these membranes.

Catarrhal inflammation of mucous membranes may be considered an index of the state of digestion and assimilation. The catarrhal sign means an oversupply of food--in some cases an oversupply of food and improper food. as well as improper combinations.

This catarrhal state is general and is the culture-medium for the development of all sorts of affections which we call disease.

For children to develop the affection known as diphtheria, all they need, in addition to their general catarrhal state, is a sudden change in clothes, weather, environment, and other influences, which brings on enervation; then add to these influences an unusual meal, or an unusual amount of meat, sugar, and rich cooking, such as served on holidays.

A child may be very enervated from whatever the cause, but it will not develop diphtheria unless it is poisoned by an oversupply of animal proteid.

11. Septicemia and Pyemia

Septicemia is poisoning from putrefaction. The poisoning may be slight and local, or it may be general and so intense that it overwhelms the patient, causing death in a few hours, and certainly in a few days.

A type of local as well as general septicemia may be furnished by puerperal subjects.

An injury at childbirth--a simple tear in the neck of the womb--may be bathed in a putrefactive lochia. The puerperal woman may not be kept clean--douches are neglected until the discharge is allowed to become septic. The torn part is submerged in this putrefaction, and enough is absorbed to set up a local inflammation and derange the blood so as to ruin the mother's milk for the infant, perhaps causing convulsions; or, if not so bad, then the milk may cause such a derangement of the stomach and bowels as to force weaning. In the mother's case, she may get

off with a local ulceration, an endocervicitis, or an endometritis; or she may develop a phebitis (milk-leg), and systemic infection may follow, leaving the way clear for a general or organic diathesis to establish a predisposed disease--namely, tuberculosis in one or more of its many phases, kidney, heart, or nervous diseases, or gout in the various forms.

When the septic infection is great (as it is when the womb is misplaced and drainage imperfect), absorption to a fatal amount is no infrequent happening.

There is a cut-and-dried classification of toxernias which corresponds to a bacterial classification that is legionary. To minds which respond only to the mystical, intricate, complex, and infinitely imaginative, bacteriology, with its infinite variety of germs of diseases--its theory of bacteriemia and bacterio-toxemia--certainly must be satisfying to a superlative degree.

Bacteriemia.--Bacteriemia is where the bacteria invade the entire organism and develop septicemia, without causing the special lesions; or they locate in viscera or tissue, and cause purulent foci (pyemia).

Bacteriemia, then, is general infection. In bacterio-toxemia the bacteria remain localized and secrete toxins, causing intoxication. This is an ingenious explanation which, defined, is a distinction without a difference. Indeed, according to the same authorities, the blood will not tolerate bacteria; it kills them, or forces them to ensconce in the tissues of the body,

Pyemia is distinguished from septicemia by the germs locating in the tissues and becoming purulent foci. True pyemia is exclusively ensconced in the tissues, while in septicemia the microbe is present in all parts of the organism. 'These are bacteriological teachings.

The only theory that appears logical--consistent with the unity of scientific knowledge and philosophy--and works out satisfactorily in a clinical way, is that bacteria, or organized ferments, begin their work where enzymes, or unorganized ferments, leave off. When physiological fermentation leaves off, pathological fermentation begins. In nature's economy, one is as necessary as the other; for one process is organizing and the other is disorganizing: one is evolution, the other is dissolution.

The old demonistic idea of warring forces--of good and bad being locked in mortal combat--is worthy of the childmind, but certainly ill becomes enlightened interpretation.

Science is nature defined. It is possessed of rigid necessity and absolute universality. Philosophy is the unifying of all knowledge--all science--into a logical unit. Unless fragmentary knowledge can be unified into a consistent whole with all other knowledge, such knowledge is not truth. Philosophizing is trying out knowledge--it is testing and proving the truth of experience.

According to the logic of absolute science and philosophy, a unitary cause of disease must act under all circumstances, and it must continue to act so long as cause and the object on which it acts are occupying the same environment. If this cause acts only under special and favorable circumstances, then it is not a cause, but one of a series of causes, any one of which is as important as any other. To build a system of cause and cure on one causative factor, taken from a multiple of factors, is building a fool's paradise. And that is exactly what our so-called specific cause is in our bacteriological system.

Germs of fermentation take on specificity from the toxins--chemical medium--which they themselves cause to generate in a given compound of elements. Single elements are proof against fermentation; only compounds are susceptible to organized or unorganized ferments. Organized ferments dissolve organized compounds, and fit them for elimination; the toxin is a resultant of the action of the ferment on the compound. The toxin is potential in the compound, but not in the germ.

It is true that the withholding of food from a septic patient ends the septic fever. Fasting stops

disease, because fuel for fermentation is withheld. Bacteria appear to be unable to cause fermentation when the organization is normal in energy and possessed of sufficient unorganized ferments to digest all the food taken into it.

In the light of these facts, the proper treatment for toxin poisoning--septic or pyemic poisoning, syphilitic or gonorrheal poisoning (the toxins representing the decomposition of several tissues in the body)--is to withhold food until nature has eliminated all toxins. Then feeding for the first week should be fresh, uncooked fruits and vegetables.

Septicemia--Infection always means that there is retention of a superfluous amount of reparative material. and confinement of this material in the womb, or in wounds, or in excretory canals or ducts, until putrefaction takes place. If the amount of infection is not overwhelming, and fatal, it may end in suppurative inflammation and formation of septic abscesses.

Milk fever, traumatic fever, putrefactive fermentation, syphilitic and gonorrheal infections, are different forms of septicemic inflammations. The distinguishing characteristics are furnished by the tissue involved, To make my meaning clear, think of the action of organized ferments (bacteria) on carbohydrates and fats. The result is to develop an acid which is more or less an intoxicant, but very unimportant compared with the toxins generated by the ferment on protein--meat--substances containing sulphur and nitrogen. It is probable, however, that excessive fermentation in the digestive tract of carbohydrates does impart a putrefactive change in the proteid tissues of the body and is the cause of offensive odors, hardening of tissues, inducing sclerosis and cancer.

Sclerosis.--Sclerosis means hardened tissue. Tissue in that state is very feebly vascular. It is white, firm. and resistant, grating under the knife. Keloid, which is an exaggerated development of scar tissue, is a form of sclerosis. Cirrhosis of the liver is a type of sclerosis, and atrophy of the liver is another form.

Organs that have been hardened from inflammation sometimes take on compensatory hypertrophy (enlargements). Then is presented normal tissue endeavoring to replace hard tissue, and this modifies the form of the organ.

Fistulas are the result of a hardening of the walls of an opening through which pus has been discharging. Instead of the walls on an abscess closing and healing, a hardening of the walls takes place, and the result is fistula.

When urethritis has continued for months, the walls of the canal harden at those points where the inflammation has continued. The result is hardening or stricture. Stricture of the urethra may form with no more to irritate the mucous membrane than unusually strong urine from meat eating.

When an irritation has continued for months or years, as in continuous acidity of the stomach, a chronic inflammation is produced, enlarging, and then hardening. If the offense to the tissue is continued, the end of the degenerative process will be cancer. Cancer is a form of spontaneous gangrene. When tissues have hardened to such an extent as to cut off the oxygen supply, there is nothing left but dry atrophy. If, however, there are islands of tissue throughout the mass of **atrophying hypertrophy** which still receive nourishment, life will continue until the hardening encroaches on the inlets of food to such an extent that nourishment is shut off. Then decomposition takes place, with the development of toxins; following which comes, slowly but surely, systemic infection.

An acidosis of a subtle form may develop a general hardening of tissues. If the circulatory system is most involved, death will come from atheromatous diseases--arteritis, endocarditis, apoplexy, paralysis, or arteriosclerosis. If the glandular system is most involved, then tuberculosis may follow. If serous tissue is most involved, perhaps cancer will be the ending of life.

The probabilities are that when syphilis, tuberculosis, gangrene, sclerosis, hypertrophy, atrophy, and all the various forms of infections and so-called contagions, are understood, they will prove to be different forms of one and the same thing; namely, sclerosis--or infection, inflammation, gangrene, death; and the various causes are all different forms of one and the same thing. Multi-specific causations, followed by multi-specific effects, as a basis on which to build a rational theory and practice of healing, are so out of keeping with the teachings of science and philosophy that it is a continuous surprise that such a system can receive the endorsement and support of as large a body of intelligent professional men as are found banded together under the banner of modem medical science.

'The whole phenomenon or complex of life, health, and disease may be summed up in three words; namely; digestion, nutrition, infection.

Reparation of Lesions.--When an injury has broken down and destroyed cell-life--when inflammation from any cause has broken down and destroyed cell-life--reparation cannot be perfect. The destroyed cells will be supplanted by sclerose tissue. This scar, or cicatrix, is more or less of a menace to the health and life of the tissue in which it is located, depending, of course, on the vital importance of the organ or tissue. If of the valves of the heart, the ending will be fatal without a rational treatment begun in time; if of the neck of the womb, a cancer may be the ending, if proper treatment is not instituted in time; if a gland of the breast be the injured part, then, without proper treatment, cancer will end all; if a stricture of the urethra, and neglected, bladder, and possibly kidney, disease may be the consequence; if a catarrhal thickening of the mucous membrance of the bile duct, and its obstruction is not relieved, stone in the gall bladder will result; if the hardening is of the spinal cord, ataxia and other forms of paralysis may result. The affections that result from hardening can only end with those limitations of tissues and organs of the body; and offenses to the tissues and organs of the body which may cause cicatrical tissue end only with the sum of everything in the environment of man capable of injuring his body and mind.

The lower the order of tissue life, the more power it has for regenerating. In a few animals it is possible to remove a portion of the liver, spleen, or kidney, and it will be rebuilt. It is said that the mutilated organs are reproduced according to their normal type. In spite of this fact, their lives are short compared with that of man, who has a very limited power of reproduction.

Intoxications of All Kinds.--Psychological intoxications--drunk on ideas, emotionalisms--and physical intoxications, such as alcoholic, tobacco, coffee, tea, acidosis from fermentation of carbohydrates, sugar, and fats, and toxin infections from the putrefaction of nitrogenous compounds--proteins; auto- intoxications caused by checked elimination from enervation brought on from overwork and worry; perverted nutrition, causing activities to start up in diatheses--all have an aging effect on the tissues of the body. Alcohol, when used in small quantities, has the effect of hardening the arteries, and when used in large quantities it produces fatty degeneration. When used in small quantities continually, the effect is to produce cirrhosis. Tobacco, coffee, and tea harden tissue. These drugs also produce arterial pressure.

A regular diet of bread, meat, preserves, cake, pie, puddings, coffee, and tea will bring on sclerosis by first creating toxemia.

Where Sclerosis Gets Its Origin.--Primarily a cell is produced under almost ideal conditions. It has been seen that health is a state that only approximates the ideal. Under the most favorable circumstances, a cell is approximately ideally developed. The state of nutrition that favors cell development means the normal balancing of energy, unorganized (enzymes) and organized (germs) ferments, and food (building material). If nerve energy runs low, enzymic power is weakened, cell-building drags, building material accumulates, obstruction takes place, and it is necessary for organized ferments to start an abnormal elimination. This means fermentation, irritation, inflammation, ulceration, sclerosis, cancer, and death.

The microbe acts as traffic police in keeping the avenues of the body cleared. This clearing-out

process causes the death and disorganization of a few cells in the midst of the fray, This results in the formation of cicatrices; **and here is where sclerosis originates.**

This scarring process, this hardening of tissue, goes on rapidly in those who live in a way to keep cell development more or less retarded by overstimulation from toxins autogenerated or brought in from without. When a cell is destroyed, a cicatrix is formed. When cicatrices multiply because of a continuance of cause, the accumulation may be so great as to destroy the nutrition of important parts by cutting off the circulation.

Impaired nutrition of important organs is brought about in this way; nephritis, hepatitis, and inflammation of other organs is brought about in this way. It should be understood that an inflammatory process started in this way grinds out to its end very slowly. It may end in hypertrophy, atrophy, cancer. etc.

Arteriosclerosis.--This affection may be general, with special emphasis placed on one or more of the viscera.

Just which special organs will be most affected will depend upon which have borne the stress of wrong life. If the brain and spinal cord have been kept hyperemic from venereal excess, or overstimulation--overstimulated from toxins taken in or toxins autogenerated--then apoplexy or ataxia will follow.

The affection is the last state of the effects of morbid stimulation, either mental or physical, or both. This derangement of the arteries is quite natural, for toxins are circulated throughout the body. The walls, or coats, of the arteries are infected and forced into degeneration sooner than other parts of the body. The highly complex tissues of the body, such as the brain and spinal cord, take on sclerotic change sooner than others.

This affection may begin early in life, but it is seldom absent in the aged, and it is common in adults.

Arteriosclerosis is seldom equally distributed. The parts most affected are those most used. Those whose occupation requires head work will develop hard arteries of the brain. The degeneration in the brain will be that of softening; when of the extremities, it will be dry or senile gangrene.

Symptoms are first dizziness, dyspnea of an asthmatic order, somnolence after eating, and hemicrania. Asthma and headache are the first symptoms in many; and these symptoms point to kidney affection. In women there are sudden congestions and sensations of heat, which pass as symptoms of change of life.

On examination, the heart gives out a tympanic click along with the second sound, with intermittent systolic and diastolic murmur. (See Heart Symptoms.) The arteries are hard; the sphygmomanometer indicates an elevated pressure of about twenty centimeters.

In the second stage there are many local manifestations. Whichever viscus (organ) in any of the four great cavities of the body (for instance, the brain in the cranial; lungs or heart in the thoracic; liver, intestine, or kidneys in the abdominal; and uterus in the pelvic) is the victim of special stress, in arteriosclerosis it will appear to be the cause of discomfort and sickness. If the stomach is the most vulnerable organ, then the subject will be treated for indigestion, dyspepsia, ulceration, or possibly other so-called diseases; if the intestine or reproductive organs are the hyperemic centers, these will be vandalized surgically; if the lungs are the most vulnerable organ, that organ will be the cynosure of the professional eyes of those who are consulted; the same will be true of the breast and other organs.

These various diseases (?)--symptoms or affections, more correctly speaking--are transitory and intermittent, and are in evidence only when the sclerotic subject has been imprudent, and when, through overwork, worry, excessive eating, or sensual indulgence, excessive, functional activity

has been brought on. The correct prescription is simply abstinence, followed by greater moderation. Sclerosis means aging, and all nature cries out for rest or moderation. Indeed, rest is the price of continuing in life, and death is the penalty for not resting.

Arteriosclerosis is not a disease that can be cured, but it can be held in check, and the subject made comfortable and quite efficient. It should not be forgotten, however, that the leading prescriptions are proscriptions. The object in treating such subjects is to encourage "status quo".

The organs of the body are sufficiently nourished when not pushed beyond the daily habits; but when speeded up, they do not receive enough blood to be supplied with the oxygen immediately necessary for a quick extra demand or nourishment required for the increased demand. Exercise makes a demand for more nourishment, and hardened tissues work slowly at best; hence great care must be taken not to overwork a sclerosed subject with hardened arteries.

Sudden speeding-up of the digestive organs, and of the heart and arteries, causes spasmodic breathing, clouding of the brain, and inhibits the kidneys, causing transitory uremia, evidenced by heavy drowsiness at inopportune moments when it is embarrasing to appear sleepy. After dinner the sclerosed subject will get heavy and sleepy, in spite of his endeavors to stay awake.

Arteriosclerosis manifests itself early in those of gouty diathesis. It must be understood, however, that toxin poisoning is necessary. Children and young people, as well as adults, must have the overeating habit; they must be in the habit of eating beyond their enzymic capacity. This, of course, necessitates bacterial fermentation of all superfluous nutritive material, and the generation of toxins. When this becomes an established habit, the blood becomes charged with toxins, and necessarily the intima (the internal coat of the arteries) and the endocardium (lining membrane of the heart) must become diseased.

Arteriosclerosis in the first stage presents, as one of the first symptoms, dizziness; dyspnea of an asthmatic character, somnolence after meals, and hemicrania (migraine--pain in one side of the head) are others. The observing physician, in examining all asthmas and hemicranias, will be on the lookout with a view of ascertaining if there is arteriosclerosis as the probable cause. If of a sclerotic origin, there may be a kidney change. In women there may be hot flashes--sudden congestions and heat-flashes--attributed to change of life, when sclerosis is the real cause.

To prove that the above symptoms are due to sclerosis, the heart must give out a tympanitic click at its second sound, and not always murmurs both systolic and diastolic.

The second stage presents organic disturbances, which come and go in keeping with excessive functioning.

The limping and stiffness accompanying this stage of sclerosis are called rheumatism--rheumatic stiffness. Inactivity is followed by claudication, (limping), stiffness, and more or less tenderness, which pass off shortly. Asystole (feebleness of the heart with dilation) presents itself intermittently; so do cerebral clouding and uremia.

The third stage is characterized by the localizing or organizing change. The heart may be the vulnerable organ, and the diagnosis may be sclerotic myocarditis. The heart becomes weaker and weaker, marked by asystole (shortened and weaker systolic contractions), which means that there are dilation and feebleness.

The arterial type is characterized by vascular dilation, with formation of aneurisms, and embolism is imminent.

The cerebral type is marked by unilateral headache, dizziness, etc. This type is liable to terminate in softening, or hemorrhage in the cerebrum, or the meninges. This ending is called cerebral apoplexy.

The renal type of arteriosclerosis is marked by nephritis, with polyuria, slight albuminuria,

palpitation of the heart, tension of arteries, and galloping murmurs, Death occurs from uremia, uremic convulsions, gradual weakening of the heart, and sometimes from apoplexy of the lungs.

Treatment.--Why should drugs be given? Can drugs add to life, or stop a habit that lowers the health standard? The habits of life that are using up nerve energy must be reformed. Those who are predisposed by diathetic heredity to develop the disease early should get away from family habits, both mental and physical, as soon as possible. Why should not a son or daughter develop affections like those of father and mother, when living in the same environment and practicing the same daily habits?

12. Tumors--Definition of*

(*To my lay readers: Do not fail to read this subject, even if it contains a few technical terms.)

Tumors are divided into benign (innocent) and malignant (dangerous to life).

Benign tumors may be considered as hyperplasias of any of the organs of the body. Hyperplasia means the overmolding of organs--hypertrophy--overnourishment; or, to speak in every-day parlance, an enlarged organ. A type of benign tumor, or hyperplastic development, is seen in what is called a keloid tumor. This tumor develops in scar tissue.

Histology.--Tissue science--the study of the structure of tissue.

Tissue.--The elements of a part of organ; for example, skin tissue, muscle tissue, glandular tissue, etc.

The keloid is described as an exuberant fibrous production, caused by the hyperplasia brought about by inflammation. Such growths are more inclined to develop in those who eat heartily and of gross or greasy foods, and who do not exercise enough to stimulate the required elimination.

Histology tells us that simple or benign tumors are made up of tissues having normal arrangement as to structure, or which are sufficiently normal to resemble somewhat the tissues from which they are developed.

Adenoma (a tumor of a gland) is found to have glandular structure. The cells proliferate (bear offspring--generate) and fill the alveoli (the cells of a gland; these cells may be likened to a bunch of grapes). They remain inclosed by the limiting membrane of the gland in which they develop, and show no tendency to invade surrounding tissue. This means that, no matter how large the tumor gets, it is always encompassed within the gland-covering.

Malignant Tumors have a different arrangement of structure; indeed, they are chaos itself--King Disorder reigns supreme. The cells, which vary in form and size, are inclosed in membranes--alveoli (the skin of the grapes--the covering of each gland-cell) of independent growth. These growths break through the retaining membranes (skin of the grapes) and invade any and all environmental (surrounding) tissue. As "war is hell" turned loose in social fife, or in civilized life, so is the histological insanity known as cancer. Indeed, cancer has not even the order or system of so-called civilized warfare. It is more on the order of guerrilla warfare, or a war of extermination.

Embryological Tumors.--A class of tumors due to defective development. They may be divided into those that start before birth and those that develop after birth.

Teratology is a branch of biology that treats of malformations. In the study of embryological tumors there is described the phenomenon of two spermatozoa penetrating into one ovule, which gives birth to two beings when development is normal; but when, from some cause, one remains rudimentary (fails to develop), it may become inclosed in its well-developed fellow and in future evolve into a tumor. This anatomical and physiological perversion has been offered as an explanation of all neoplasms--new-growths or tumors.

Is it strange that, in an organism so infinitely complex, and subjected to such an infinite number of unfavorable influences, as the human body, there should be many blasted cells, or defects in glandular development, in the course of physical development? Certainly not. Then, when health is impaired-nutrition perverted-it is not !strange that these defects should take on independent growth and become tumors, or abnormal growths.

It is also reasonable to believe that, so long as the organism remains in a state approaching the normal, it can dominate any tendency which these blasted cells (be they congenital or caused by postnatal injury) have for taking on their pathological trend. But when enervation is lowered and elimination imperfect, causing chronic intoxication, these defective developments, or crippled tissues, find in this perversion the encouragement to grow--to take on pathological activity--for, being defective, if they develop at all, it must be in keeping with their histological bias.

This blasting of cell- or gland-life, when it occurs in the skin or ordinary tissues of the body, usually ends in the development of benign tumors; but when it takes place in the higher type of glandular structure, and then meets with the necessary pathological nourishment--namely, chronic autotoxemic poisoning--it may start a state of anarchy--malignant disease.

This is perhaps more true of the lymphatic system. The reason for this is that the best and worst nourishment is found in the lymphatic glands of the body.

The lymphatic glands may be likened to quarantine stations--places where all suspicious characters--infections--are held up until they can be dismissed with a clean bill-of-health. The lymphatic glands in the groin arrest the infection of venereal disease that threatens to invade the organism, and hold it long enough to immunize it. When the amount of infection is great, and the immunizing power of the glands is inadequate, suppuration takes place, the infection being thrown out of the body by way of a heavy pus discharge. In this phenomenon, life-preservation is a grand struggle against mortality. Years after glands have been altered in their structure from suppurative inflammation, degenerative activity may spring up, and malignant disease (cancer) may develop and run rapidly to a fatal termination.

The lymphatic glands in the lungs arrest toxin infection that has been absorbed in the bowels. When their power to antidote the infection is not equal to the task put upon them, inflammation and suppuration take place, with systemic poisoning. This disease is called tuberculosis. The bacillus tuberculosis is a scavenger germ, and not the infecting agent. The infecting agent is a toxin developed in the bowels.

If the bacilli tuberculosis are like all other scavenger germs, they depend upon toxins for their specificity, and the infecting agent comes in by way of bowel absorption.

When resistance is low--when enervation is pronounced--the resulting autotoxemia so weakens the immunizing power of the glandular system that blasted or defective cells, from any cause, may be encouraged to take on pathological development; which means benign tumor, or malignant tumor--cancer.

Where there are no blasted or defective anatomico-physiological structures, the organs with the most defective functioning will bear the brunt of the incoming infections, and the following diseases may develop; tuberculosis of any part of the body, glandars, syphilis, scrofula, scurvy, etc.

Cancer must jump the bounds of glandular limitation before life is overwhelmed by its cachexia (blood-poisoning).

Cancer.--So long as the cancerous process is going on within the limiting membrane of the gland, its growth is restricted; but after it breaks this membrane, its growth is unrestrained, and the pathological metabolism taking place in the growth quickly sets up the cancerous cachexia.

The reason why the removing of a cancerous growth or disease fails to cure, is because the cancer has potentized the surrounding tissue with its toxin.

The conservative power of the body limits the infection as long as possible to the lymphatic glands. Why? Because the glands have more immunizing power than ordinary tissue. The spread of all infecting diseases is along lymphatic chains; but after lymphatic restraint is lost--broken--all the fluids of the body become infected, and life is destroyed very quickly.

That is the manner of poisoning by cancer, which is a form of sepsis. The difference between traumatic septicemia, puerperal septicemia, and the septicemia of cancer, is the slowness of the infection from cancer. However, if the cancerous tissue is torn or cut, freeing its infection from the limiting membrane, cachexia, or septicemia, will develop rapidly. If the wound into the cancerous tissue is open and drains well, absorption will be very limited; but if located away from the eye, where drainage and cleanliness must be an unknown quantity and quality, cachexia (septic poisoning) will spread rapidly. Indeed, patients will die from septicemia as quickly when developed from cancerous tissue as when developed from injured normal tissue.

Cancerous tissue will not unite--once severed, always severed. Torn, bruised, or severed cancerous tissue does not drain well, but tends to break down very rapidly. Bruised and torn cancerous tissue differs from healthy tissue in that the malignant tissue does not contract and retract, forcing waste fluids out of the bruised and torn channels to drain, but the fluids remain, flooding the parts, forcing rapid decomposition and absorption, and causing acute cachexia (septicemia) and death.

The reason why cancer cannot be cured is obvious. If all infected glands could be extirpated before the limiting membrane of any of them has been broken, and the growth has passed out and become mingled with the surrounding tissue, largely devoid of immunizing power, the disease could be cured; but this possibility is almost nil, for large lymphatic glands are surrounded by many small ones, and, while removing the large ones is an easy matter, small ones are overlooked and left to continue the work of the larger ones that have been removed.

The worst feature of the operation is that some of the infected glands are injured. This allows the cancer to spread in non-glandular tissue without resistance, which quickly involves the fluids of the entire body.

This is why people often do not live so long when operated upon for cancer as when left without an operation.

Where do cancerous diseases get the infection that initiates their evolution? From putrefaction taking place in the large intestine. The infecting material is absorbed; and if the cause (decomposition in the bowels) is only temporary, and not of frequent occurrence, no permanent harm will result. But if imprudent eating is continued until the latency of a pathological process in gland structure is rendered dynamic, then a morbific process is set up that is called malignant or cancerous.

If the disease could be detected early enough, and removed, a cure would follow. But often the disease is not suspected until fatally developed.

Before malignancy can develop in any part of the body, it is necessary for it to be potentized by exogenous or autogenerated infection. And since infection must be septic in character, but absorbed so slowly as to bring on cachexia, the cancer must begin to break down before the fluids of the body become infected by the poison.

Before a morbid process can evolve, resistance must be broken down. What is the nature of the resistance that is lost before cachexia is developed? The immunizing power--the power on the part of the body to generate its own immunizing agents.

Immunizing power has but little to do with physical force or strength. A very weak man

physically may have the power to protect himself from the disintegrating influences of his environment, while a very strong man may not.

Histogenetic Tumors ("histo," web or tissue; "genetic" (from "genesis"), generation).--In biology, the process or function of cells and cell-products.

This class of tumors are not supposed to be of embryonic origin, but develop from connective, muscular, nervous, or epithelial tissue.

The sarcoma, which grows very rapidly and becomes very large, is considered as standing between a malignant and a benign tumor.

Myxoma belongs to the mucous tissue. Fibroma belongs to the fibrous tissue. Lipoma belongs to adipose tissue. Condroma develops from cartilage. Osteoma grows from bone.

Vascular, lymphatic, angiomatous, endotheliomatous, and lymphaornatous tumors are produced from serous membranes derived from the lymphatic system.

Muscular tissue gives origin to two species of tumors--namely, leiomyomata a n d rhabdomyomata--which correspond to the non-striped and the striped muscle fiber.

Adenoma.--A benign tumor that has its origin in canals, ducts, and follicles of glands which have become stopped up, causing a cyst (sac) to form that is filled with a perverted secretion. Sometimes the lining membranes of these little cavities take on an excessive growth and end in what are called simple tumors. Such tumors do no harm, except for their unsightliness, when developed on exposed parts of the body, or from size. The tissues of these tumors always resemble those of the structure from which they are built. They have no tendency to break through their retaining membrane, which, of course, was originally the lining membrane of the passage that became plugged up.

This is not true of epithelioma (a true cancer). This disease respects no restrictions; it breaks through and invades any tissue, spreads in all directions, and leaves destruction behind it.

When Does a Cancer Become a Cancer?--That simple adenomatous tumors, and epitheliomatous degeneration, are related much as cause and effect, there appears to be convincing proof. In other words, cancer at the start is not always cancer. The question, then, is: When does it become cancer?

In the stomach there is first irritation from acid, due to overeating. If the overeating is persisted in, the acidity continues to irritate, until subacute inflammation is established. If the causes are not removed, the next stage is ulceration; then, further, degeneration into malignancy.

What can be the difference between last year's ulceration and this year's cancer?

That "cancer" is not always cancer, every experienced physician must have acknowledged to himself, if not to others. The question to be settled, then, is: What is the cause of the transformation?

I have thought that in ulceration the blood-vessels and lymphatics are sealed by adhesive inflammation before the sloughing or necrosis of their involved portions takes place, leaving them intact to perform their function of supplying reparative material; whereas in cancer the ulceration involves the bloood-vessels and glands so far distant from the surface of the ulceration that oxygen and nourishment are cut off and putrefaction is established, following which systemic infection (cancer cachexia) is established, which in time inhibits all physiological processes.

The cause of rapid fatality in some cases is the slight resistance given by some tissue to the spread of the disease, while in others it is the extension of the disease into parts where drainage

is cut off, forcing absorption and the rapid development of cachexia--blood-poisoning.

Another thought may be considered; namely, the state of the patient may be that of premature aging, and the blood vessels and tissues are sclerotic-hardened to such an extent that they offer no resistance to an ulcerative process. Under such conditions, the system can hardly be expected to generate anti-bodies for self-protection.

No doubt there are many factors in the process of evolving cancer. Those who would sidestep the trouble of thinking may say that germs cause the disease; but to the discerning, germs are a poor excuse for accounting for any disease.

In the building of all morbid processes, the chemic changes that take place in tumor-building must be known before the cause can be understood.

Cancer, tuberculosis, and other diseases appear to run in families. So do certain habits. Domestic peculiarities are confined to family strains. The relationship of given types of disease to strains or family peculiarities should be given attention until understood.

A peculiar style of eating, cooking, mixing, clothing, bathing, and thinking will be followed by a peculiar style of disease.

Like causes produce like effects--only, however, when everything is equal. When every phase of cause is known, the effect may be modified by changing the object on which the cause operates. For example: The sun, moon, and stars, or the astronomical bodies in general, we assume, are always the same; which, so far as the comfort and life of man are concerned, is not true. The subject on which these influences are spent--man, for instance--can be changed so that the fixed influences do not act the same; hence the effect cannot be the same. The sun does not act on the drunkard the same as on a sober man. The gluttonous and the temperate are acted upon differently by extraneous influences. Those of limited reasoning power consult the stars regarding their coffee-drinking, what clothing they should wear, and how to invest; when to bull and bear the market, and about their health; also when and whom to marry; in fact, regarding daily, monthly, and yearly affairs. There is no material difference, as far as ultimate results are concerned, whether sun, gods, planets, or devil be consulted--whether the Bible, the Koran, astrology, or other deific sciences be studied for the purpose of determining what is foreordained for man, domestically and socially.

All of which is as unscientific as to start children in the kindergarten in the study of mathematics.

If man ever finds God, he will begin the study with man; and if he ever finds man, he will begin the study with cell-life. If man ever finds the cause of his health and disease, he will find it by understanding the laws of his being; and if he is ever saved, he will save himself by obeying those laws. Yes, obeying every one--the most insignificant,

Man did not find the stars until he found the telescope; and he did not understand the, composition of stars until he discovered the spectrum.

There is but one door open to knowledge, and that is the ABC; and not the ABC of one department, but the ABC's of all departments. 'The ABC of God-knowledge is the laws of life. Unfortunately the study of God was begun with God; and, from the very nature of the subject, had to start with a hypothesis--a hypothetical God. As a consequence, no two people have the same God. A hypothesis must always be in keeping with the mental development of the individual.

Starting with a hypothetical Deity, it is not strange that many attributes, and even essential principles, have been left out. Those that concern us more than any other are natural laws--laws that minister to man's physical well-being. That these are left out of all theologies goes without saying, when we see theologians everywhere breaking the laws of health and life as ruthlessly

as though they belonged to the devil. Ministers--moral teachers--know no more of nature than their parishioners; and they are not ashamed of their ignorance. Yet nature is God's expression; and if we know nothing of God's expression, how can we say that we love something we know nothing about?

All this infidelity and atheism of our deistical students would not be, if the study of God would begin at the ABC of the subject, instead of starting with the graduation exercises.

In regard to diseases, modem medical science, often starts at the finish--to diagnose them. In order to find out all about the disease that killed the patient, a post-mortem is held, and the morbid findings are given out as diagnosis. A cancer is found; a fibroid tumor is found; an abscess is found; but the causes that produced these diseases have passed. The laws which were broken still exist, however; and, when broken again in the same way, like diseases will result, no matter whether or not the interpretation of the stars or the deities agrees.

It is of far greater importance to know the chemical needs of the brain than to know the ethical laws of society.

It is more needful to know the mechanical and chemical laws governing the growth of a fibroid tumor than to know the most scientific surgical technique necessary for their successful removal; because removing the tumor is nothing more than removing a symptom, which is very often quite remote from the cause.

Fibroid Tumor-Cause of

The erstwhile opinion of medical men was that back of the exciting cause of a tumor was that of inclusion during embryonic life: non-employed cells are enveloped in active cell-development; then in after-life they take on activity. That this was professional guesswork is evident, now that the latest guess is that tumors are caused by germs.

There are authors of standing who do not agree with the germ theory of tumor-development.

Every little while a laboratory scientist jumps into print with the announcement that the cancer germ has been developed in fish or mice by inoculation; and he enjoys an hour's fame, after which his little bubble of discovery reverts to oblivion.

No tumor can develop without obstruction to the circulation--without a local influence that disturbs nutrition and elimination.

It is safe to start with the hypothesis that, if full health is enjoyed, there can be no tumor-development.

The first thing necessary for the development of any form of disease is enervation, which always inhibits elimination; following which autotoxemia develops.

Fibroid Tumors of the Womb are developed about as follows: A young woman develops intestinal indigestion from imprudent eating. The catching-cold habit, with catarrh of the mucous membranes, follows. Soon there is developed intestinal putrefaction, which, being absorbed, causes infection. The pelvic lymphatics become involved. As there is more or less congestion of the mucous membrane lining the uterus and its neck, this condition is made more pronounced each month because of menstruation and the toxins being absorbed in the bowels, The uterine engorgement causes, longer and more profuse menstruation; painful menstruation begins, growing more pronounced month by month. Pain forces the calling of a physician, who on examination finds a flexed womb. The flexion is caused by a thickening of one side of the womb, which forces a flexion to the opposite side. The more thickening, the more obstruction to the circulation and the more bent is the neck of the womb; and the more bent is the neck, the more the canal is obstructed to the menstrual flow.

As the womb is flexed more and more, the circulation is more and more interfered with. The flexed side fails to receive the proper amount of nourishment, and the thickened side receives all that the uterine artery and other vessels can bring; but the return vessels fail to carry back the full amount, and, as a result, hypertrophy takes place--the parts are overnourished. Nature undertakes to organize the surplus; and she does--and we call it fibroid tumor. These growths grow rapidly or slowly, according to the amount of obstruction.

A growth may fill the pelvis and abdomen in five years; and again in some other women it may require twenty years to develop a tumor the size of an orange.

Injuries at childbirth often become the first cause of tumor, next to putrefactive infection from intestinal indigestion.

Another cause: A catarrhal inflammation locates at an old placental site, as a result of toxemia. Thickening and induration follow, impeding the efferent circulation. The more growth, the more pressure and obstruction, until the new-growth--fibroid tumor--is large enough to become a cause of its own growth, by impeding the circulation through its weight and pressure.

This work of overgrowth is pushed along rapidly by overeating, which means overnourishing; the surplus being organized into tumor.

Overeating and improper eating often cause gas distention of the bowels. The pressure from gas crowds and misplaces the womb. From such misplacements enough obstruction to uterine circulation may take place to cause hypertrophic enlargement, which is fibroid enlargement.

Constipation may cause enough pressure on the womb to start imperfect circulation, and later fibroid growth.

Wherever there is impeded circulation, new-growth must take place; and that means tumor. The kind of tumor will depend on the character of the tissues involved.

Add to these causes sclerosis, and malignant diseases may follow. That is, the benign tumors may become malignant.

Can they be cured?

Treatment.--Remove the cause, which can be done when understood. The circulation must be restored by removing the cause of the obstruction. Very few tumors require removal by the knife; for, if the cause is removed, the tumor will gradually disappear.

13. Synergies

Synergy means the unity of the organism under favorable or unfavorable influences.

In social life, an injury to one man is an injury to all; and so it is with the organs of the body--if one is injured, all are injured. Any influence that modifies function or structure of one part of the body influences the entire structure.

Family habits may be of such a character as to throw More stress on one organ than on another. The sequel is the development of an organic diathesis. (See subject of "Diatheses.") When this is true, the hundred-per-cent organs in the organism lend their influence in various ways to do vicarious work for the weak organ.

When the organism is enervated from the thousand-and-one influences incident to life, and intoxication has brought on such a state of the metabolism that the organism is overwhelmed by waste--excretory--products, it is then that inherited diathesis takes on activity. If the diathesis is tubercular, gouty, neurotic, or of any of the special organs of the body, it is in keeping with the laws of health and life for the affection peculiar to the diathesis to spring up. If the causes are not

removed, the affection will remain functional for a time; then organic change will take place. It is then that affections become diseases; it is then that an irritation and an inflammation from indigestion become ulceration of the bowels or stomach, and the ulcer perforates, and death ensues from peritonitis caused by the perforation. The peritonitis was caused by perforation; perforation was caused by ulceration; ulceration was caused by inflammation; inflammation (catarrh) was caused by irritation; irritation was caused by indigestion; indigestion was caused by fermentation; fermentation was caused by enervation; and enervation was caused by the thousand-and-one influences which build or destroy the body and mind of men, depending upon whether they are wisely or unwisely applied.

When one organ gives down--when the blood is deprived of the proper amount of building salts--the whole organism is deprived of the necessary building salts. When imprudent eating--sugar-eating, cake-eating, rich-meat and gravy-eating--has been practiced so long that enzymic fermentation is not equal to the task of physiologically digesting the intake, then it is that organic ferments--bacteria, microbes--set up pathologic fermentation, which is slightly toxic when developed in the carbohydrates and fats, but putrefactive and decidely toxic in the animal products. The organized ferments cause a souring of fruits, vegetables, and starches; the acid builds irritations and catarrhal inflammations of mucous membranes; and in this way the stomach may become the exciting cause of organic depression and catarrhal affections of all the organs of the body.

It is very hard for average physicians to get away from the idea that each organ acts in an isonomic manner--that organs break away from the union of organs and develop a disease without the consent of the general government. This is not only false, but it is absurd. When from inherited weakness, or from injury, a part--an organ or a tissue--is below the general standard, it becomes the seat or center of affection when the general standard of health is lowered. When enervation is brought about, and, because of the enervation, metabolism is impaired, elimination becomes imperfect, and, to autotoxemia, toxins from imperfect digestion are added. The system, under these circumstances, becomes so toxemic that the inherited weaknesses, either organic or systemic, take on disease. The disease, however, is an affection; for the cause lies back in bloodmaking and nutrition.

In the tuberculous diathesis the lungs or other vulnerable organs of the body give down with tuberculosis when the general health is impaired and resistance broken. The gouty diathesis favors the development of any type of gouty disease that is in keeping with the vulnerability of organs and tissue of the body. The disease may be articular. If so, joint rheumatism will be the type of the disease. It may be the arteries, in which case arteritis with hardening will occur. The kidneys or liver may be the weakest points; then urinary calculus or gallstones will form.

There is a unity of sympathies and a unity of action. The nerves, the muscles, the motor cells, the blood vessels, and the organs generally are in reality a unit. The muscles and the cells cannot function without the nerves, and if the nerves be enervated from overwork or poison, they fail to function properly. Then the muscles become weak, waste is retained, the cells fail to renew, and degeneration takes place.

To overcome any disease, restoration of nerve energy is of first consideration.

A giving-down of some of the bony structure from injury or from disease, may cause more or less distortion of the entire anatomy. The distortion requires an anatomical readjustment-an endeavor to change the mechanism to meet the new requirements. In the changes that take place, important organs--such as the heart, lungs, etc.--may be forced to take on disease because of the interference with their normal functioning.

The body is at work readjusting every minute. The forces of health and life are at work in the line of readjusting and idealizing all the time. Nature--physiological energies--is all expended in healing--repairing and building. Man needs no doctor, so far as healing is concerned; he needs instruction in knowing how to avoid abusing his body, and how to live to conserve his energies.

If a bone is misplaced, it must be righted. If an artery is cut, it must be tied. Nature heals the bone when broken, if it is kept quiet long enough. If a large artery is tied, nature dilates and enlarges collateral arteries, so that the parts temporarily ill nourished will soon receive a full supply of nourishment.

All malformations are met with readjustments to give collateral aid.

Extirpation of the ovaries produces atrophy of the uterus and often of the mammae.

When the eating habits are such as to crowd and disturb the liver function--impair its function of preparing urea and sugar for further use in the economy--we see kidney affections springing up as a consequence. The cure must get back to the cause--namely, remove nerve leaks and correct imprudent eating. If the remedy is neglected until the liver, kidneys, or pancreas take on organic change, then a cure is often impossible.

The muscular system and the liver are allies. Exercise uses up energy (sugar), which the liver furnishes. If the muscular system is not worked, the liver becomes engorged with glucose, or the glucose is sent to the circulation to be excreted by the kidneys.

Exercise is necessary where there is too great a supply of carbohydrate foods. Either the intake of starch and sugar must be limited, or work must equal the eating.

An organ, when enlarged, may, by pressure, affect other organs. An enlarged liver may impair the stomach and other organs. A dilated stomach, or gas-distended bowels, may create affections of the heart, lungs, or pelvic organs from pressure. Indeed, intra-abdominal pressure may be the cause of heart palpitation, asthma, hay fever, bladder and urethral irritation, falling of the womb, and displacements of other organs.

Because of compression from fat or gas distention, the excretory ducts, such as the bile-duct, are partially obstructed, In gouty subjects the formation of biliary calculi is liable to, follow; in tubercular subjects, tubercular inflammations, etc.

Where compression of a nerve is continuous, neuralgia, spasms, paralysis, and nutritive changes take place.

The part of the body most affected by nerve compression is the head and spine--the face rather than the head. The cerebro-spinal nerves pass out through various passages and foramina (small openings in bone). These openings are liable to have their caliber narrowed from a thickening of the walls from injury and consequent deposit of reparative material. So many are the ailments due to this cause that whole systems of healing have grown up, exploiting this etiological factor into a marvelous universal cause of all diseases.

The tendency for man to allow large sections of his body to lie fallow is the cause of much nerve compression, and consequent pain and sympathetic disturbances. When men stop their boyish exercises and settle into a routine business, only those parts of their bodies are exercised that are used in their business; the rest become fallow. A neglected part in time takes on deposits, and naturally grooves, foramina, and narrow openings between bones will become the repositories of deposits. This brings on compressions, with consequent impingement on the blood vessels and nerves. To secure relief, the patient must exercise the parts, or employ someone to massage; or, what is better, call a physician of one of the bone manipulating schools, who will relieve the nerve pressure. The members of these schools are wonderfully adept in bringing quick relief. But unless the patient--the one relieved--is taught the necessity of right living--taught the necessity of exercise, and how to eat to secure proper elimination--someone will have to be employed all the time to manipulate the unused parts of the body so as to keep down deposits and keep the body comfortable. It is not necessary for people to become athletes in order to avoid taking on these deposits. Athletes have their troubles-namely, over-development, which is not conducive to the best health and long life.

Compression of the pneurnogastric nerve may start up a pneumonia. Certainly there is much stomach derangement due to this cause. From such compression, stomach irritation, inflammation, ulceration, and cancer may follow. Cancer may result from compression on a small artery, causing the territory supplied by it to become ischemic (local anemia). From the same cause, neurosis or gangrene may result. It should not be lost sight of that wrong eating-haphazard eating-bringing on toxemia, has much to do with the manner of degeneration.

Compression on an excretory duct causes a backing-up of excretions; and, if it is of long duration, the blood win not be drained of that particular excretion. Other organs may do vicarious work. When compression is removed, the injured organ may have developed a sick habit and may never get back to the normal. This is daily observed by busy physicians in affections of the liver, kidneys, and pancreas.

When tissues such as the neck or body of the womb, or the pylorus of the stomach, etc., suffer from irritation and hyperplasia, cutting off a normal supply of blood, the effect is to cause an ischemia (anemia) of a small territory of tissues supplied by the arteries compressed. If the ischemia is pronounced, the result may be necrosis or gangrene. If the compression is of such a character as to affect only the venous circulation--the return blood to the lungs--the parts become hypertrophied, the tissues harden, the carbon and oxygen gases fail to exchange. Irritation, inflammation, ulceration, and cancer are different phases of the degeneration that will follow. The chronic state of the tissues from venous stasis is sclerosis. Fibroid tumor of the uterus is a type. It is obvious to the reflective mind that if this change of tissue can take place in the musculature of the womb, stomach, and other organs, when the circulation is interfered with, the same change can and does take place in the muscular tissue of other parts of the body, including the coats of the arteries. The change is brought about by cell compression caused by the irritation brought on from toxins generated in the intestine or f r o m chronic autotoxemia.

Compression of nerves causes neuralgia, spasms, paralysis, disturbances of nutrition, and at times fatal infections.

Compression or section of the pneumogastric nerve is followed by pneumonia.

Cancer of any part of the body in time infects the whole body through the autogenerated toxins--the toxins resulting from the degeneration of the neoplastic growth. The fact that neoplasms of all kinds owe their existence to local obstruction of nutrition should not be forgotten, nor the fact that perverted nutrition is characteristic of the life of these tumors, or growths. The chemistry of these growths is not in keeping with their environments, and it is liable to sudden and destructive changes. When the change of nutrition is great enough to cause a breaking-up or disorganization, the fluids pass into the environmental tissues; and, as the blood and lymphatics have power to oppose and neutralize the infectious infiltration, the spread of the toxin is held in check. But a time soon comes when the body's defenses are overcome; then cachexia rules and the body dies.

Malignant growths are built by obstructing the normal nutrition of otherwise healthy tissues of the body, but which, when abused, soon take on a chemistry in keeping with the sum of their elements plus fermentation. As these perverted tissues are on the descending plane--on the involuting route--it is only a question of time when degeneration will take place and such powerful toxins will be formed that the life of the body, which unfortunately becomes host for the erstwhile innocent neoplasm, will be destroyed.

Cancers are not malignant at their beginning. A fever is not septic at the start. Vaccination excites tuberculosis only in the tuberculous disthesis--it simply arouses the diathesis into activity. Perverted nutrition of the liver is not stone building at first. Hyperemia of the brain is not apoplectic at its beginning. Worry, over-worked emotions, and chronic toxemia ultimately become arteriosclerosis. Yeast and dough may become bread by baking. Organized germs and a beefsteak may end in putrescence, and the generation of toxins that may destroy life. Bacteria cannot poison without the meat, and the meat's toxic potentiality cannot evolve without the

germ. Two atoms of hydrogen are not water; one atom of oxygen is not water; but when the two are combined, water is made. Disease, health, life, and everything pertaining to animal existence, depend upon physiological chemistry for their existence. The immunization practiced on our hundreds of thousands of soldiers will prove to be the exciting cause for lighting up many latent pathologic diatheses; or planting purulent or septic foci which will develop into many unaccountable diseases by and by--diseases which the pension boards will not reckon as so many obligations of our government. Well may the helpless discerning say: "What will the harvest be?"

Neoplastic cells and pathogenic microbes, which are credited by the profession generally as being the cause of cancer, are not creative. All they can possibly do is to become elements in a chemical compound whose individuality is a so-called disease of some kind--cancer or syphilis, if you please.

Heart weakness may be brought on from many causes: fear, overworked emotions, anything that uses up nerve energy and produces its consequent autotoxemia; habitual overeating, and its consequent toxemia; intoxications from tobacco, coffee, tea, alcoholics; enervation from excessive venery. 'The result of heart weakness may be stasis in the brain, liver, kidneys, or pancreas.

Drugs or palliatives of any kind that stimulate the heart muscles relieve the headache, torpid liver, albumin or sugar in the urine; and the edemas (dropsical symptoms) disappear. The arterial tension is temporarily restored, and the patient is well, so far as his feelings are concerned. But the cure is palliative, and will soon prove but a short respite. There is but one cure, and that is to remove the cause. If this is done before organized changes have taken place, the cure will be permanent; if too late for a cure, then comfort and increased length of life may be expected. Those who have headaches often relieve themselves with coffee, or take a drug prescribed by a physician, and they call their reliefs cures; but, alas! the "cure" builds more heart disease, and hurries the end.

Embolism is a sudden occlusion of a blood vessel by a small body traveling in the circulatory system.

A strong organism is not given to gathering moss, so to speak, as we see in the case of the old oaken bucket. However, there is a very strong tendency for the development of emboli from deposits taking place in the heart, on the valves of the heart, and in the blood vessels, when there has been toxin infection running on for years. This occurs when the blood fails to carry a normal amount of enzymes.

A normal blood digests all clots which form from whatever cause. When foreign bodies succeed in gaining entrance into the circulation, they must be very resistant if they are not digested and made a part of the blood. The same is true of the lymphatic circulation. The lymphatic glands have the power of benevolently assimilating toxins that are absorbed.

Emboli are divided into exogenous and endogeenous--those entering the body and those developed in the body.

Endocarditis ends in atheromatous productions which open into the general circulation. The same occurs in arteritis. This accounts for many sudden and unexpected deaths.

Blood clots form on the interior of the blood vessels. They are caused by injury and various diseased conditions. Inflammation of the aorta may at almost any time furnish an embolus. that will swing into the circulation and cause a fatal obstruction.

Inflammation of veins is very liable to cause emboli. Phlebitis is caused by infection, This disease is very prone to cause embolism. It should never be forgotten that, if it were not for man's great immunizing power, he would be unable to protect himself against the many

invasions of his organism.

Course of Emboli: Emboli follow a regular route. Those of the arteries start from a lesion of the pulmonary veins, of the left heart, or of the aorta. They pass into the left carotid. They stop at the sylvian, and produce hemiplegia with aphasia. The embolus may follow the aorta, and may stop in the splenic, the renal, or the iliac arteries.

Effects of Embolism: Arrest may be in the heart. In this case sudden death may occur. A reflex syncope is produced, due to the excitation of the endocardium.

Pulmonary apoplexy may be caused by an embolus.

Softening is a common effect of embolism. Apoplexy is another effect.

When emboli are very small, only headache, dizziness, or some mental disturbance may result.

Partial or complete blindness may result from embolism of the central artery of the retina.

There are fatty and gaseous emboli.

Nerve Connections.--Compression of nerves may cause pain in distant parts.

Irritation of the biliary or urinary passages may cause nausea and vomiting.

Inflammation of the neck of the uterus or misplaced uterus may cause pain in the back of the head.

Excitement may produce paralysis, fainting, and other nervous derangements.

Red cheeks and lung irritation go together. Red cheeks may accompany congestion of lungs and hepatic colic.

Salivation goes with irritation of the stomach. Excessive flow of urine accompanies sciatic neuralgia. Stricture of the urethra, cystic irritation, and prostatic irritation may cause pain in the sciatic nerve.

Hepatic colic causes change in the circulation of the blood in lungs. The heart is also influenced. It may become insufficient, systole occurs, and edema may follow.

The kidneys affect the heart; the heart affects the lungs; the liver and the kidneys affect themselves.

The physician should trace the successive changes that take place. It is necessary to know the morbid sympathies. It should not, however, be understood that organs take on disease per se.

The cause of an organ becoming diseased is usually abuse of some kind. The stress of life rests more heavily on one organ than on another. Whenever an organ goes wrong, others are affected through sympathy. Then, after functional derangement has gone on for a certain length of time, organic changes take place; after which organic disease becomes a cause of other affections.

Inflammation.--Diphtheroid gangrene is declared by bacteriology to depend upon microbic infection; yet at the same time it is declared that a specific diphtherogenetic microbe does not exist. This certainly is true of every so-called specific disease.

Gangrene is the resultant of a morbid process of sufficient virulence to cause the death of the tissues involved in the inflammation. Necessary to this process must be lowered vitality, lost immunization, and a chemical change on the order of disintegration.

"Pseudomembranous sore throat may be produced by numerous microbes." Just the reverse is

true. The chemical changes taking place in the throat, from the initial inflammation to ulceration, on to gangrene and sloughing, due to the influence of the fermentation initiated by organized ferments in the nitrogenous tissues involved. Then these organized ferments take on an individuality and personality in keeping with the chemical medium resulting from the diseased process. In a breaking-down process there are all stages represented. Then why should not these organized ferments--microbes of fermentation--be found in all stages of transformation, from the simple germs of fermentation on to the virulent types found in putrefaction and gangrene?

It is well to keep in mind that putrescence, or the toxin resulting, is not potential in the microbe, but is potential in the protein, requiring the fermenting influence of the organized ferment to evolve the toxin. On the other hand, protein food has peptone as a potentiality; but without the fermenting influence of the unorganized ferment (enzyme), peptone would not evolve.

The material out of which pseudomembranes, are formed is a fibrogenic exudate--the very same material that is thrown out on abraded surfaces, or into solutions of continuity in any and all wounds. The quantity thrown out is always abundant, but the amounts are greater where the local irritation is great.

In pseudomembranous inflammation of the throat everything should be done to avoid breaking or loosening the membrane; for the more it is interrupted, the greater the local poisoning, and the more toxins there will be swallowed to be neutralized by the stomachic secretions.

Positively nothing is to be put into the child's mouth; not a drop of water, for swallowing must be avoided. The act of swallowing breaks the membranous protection. The old treatment of gargling and swabbing was barbarous and, for intelligent people, criminal.

Thirst must be controlled by frequent small enemas of water. Nourishment is not life-saving, as many think, but positively disease- and death-provoking.

Every patient, when prostrated with a disease, has locally or generally passed from enzymic control to bacterial control. All efforts of cure must be in the line of crossing back to enzymic control. This may be done if the intoxication from bacterial fermentation can be controlled before enervation is so profound that the nerve centers are paralyzed.

If the patient is plethoric, and the gastro-intestinal canal is full, and kept full, of food, the bacterial fermentation must thrive so long as such a state is continued. The enzymic production is at a halt, and every particle of food taken into the body becomes an ally to organized fermentation.

Stop food, and wash out the bowels daily; otherwise let the patient alone, except for gentle rubbing and bathing for comfort. High fever means much bacterial fermentation, and should be controlled by baths and the withholding of food.

The fact that the temperature declines with the consumption, or rather with the exhaustion, of the food supply should be proof sufficient to convince the skeptical that feeding the sick is encouraging disease.

A membrane is a protectorate--not simply a protector. For under this membrane is the process of repair, which requires rest, and the control of bacterial fermentation, and an enzymic influence sufficient to encourage all development. There must be enough retrograde fermentation to destroy obstructive accumulation, and enough constructive fermentation to fit the necessary amount of exudate for reparative work. This process requires a covering--a membrane-to protect from traumatic injury and an oversupply of bacteria or organized ferment.

From the foregoing explanation it is obvious how dangerous is the old-time practice of swabbing and gargling the throat. No wonder the mortality was great, and no wonder the

antitoxin treatment has proved such a success. Its success, however, has been of a negative character--on the order of the lesser evil. If the antitoxin has any influence--if it is not inert--it certainly must make a change in the nervous system; and this change must be reconciled, and an equilibrium or readjustment take place, before a normal healing process can be resumed.

The unreasoning cannot see that food is disease-producing from every point of view--from every conceivable influence which it may have on the subject. If this is true of food, why may it not be true of every influence, even though theoretically it is beneficial? It is the same rule that applies in all warfare; namely, the efforts put forth in times of peace for the upbuilding of the morale of a people become treason when attempted while the country is at war. Feeding in disease is treason to the body's government.

Suppuration.--Suppuration is of three kinds: phlegmonous, caseous, and thin pus.

Phlegmonous pus--or what is known as laudable pus--is a yellowish-wbite, creamy, thick, odorless liquid. It is met with in phlegmons and suppurating pleurisies.

Caseous pus resembles soft cheese.

Thin pus is a serous liquid which exhales a fetid odor.

The color of pus varies from a light yellow to an orange, brownish red, or greenish. The coloring may be from bile or blood.

Pus in sputum sinks in water, Pus in urine precipitates with the addition of ammonia. The microscope will reveal pus cells.

Bacteriology gives many pyrogenic agents, but there is much distinction without differences. A ferment and a protein end in fermentation, inflammation, and suppuration. The chemistry of the compound does the rest. Chemistry is the determining factor.

Purulent Foci.--Suppuration may exist in a tooth, in the antrum, in the ear, or elsewhere. When once formed, it may become incysted and take on a fatty degeneration. It may extend toward a hollow organ, as a suppurating appendix, if left alone, will surely insinuate an opening into the gut--a natural cure.

Pus has a tendency to follow tendons and aponeuroses. or muscular interstices, vascular or nerve sheaths. Nature controls pus by the action of enzymes, which keep it laudable. It is only when the organism becomes acid--when acidosis develops--that pus foci begin to break down, the pus becomes thin, and begins to poison the organism. it is then that organized ferments preponderate over the enzymes in the purulent foci. It is then that latent inflammations of a specific character take on activity and are said to be developing the various stages. Why this latent stage? Because the life of the patient is not sufficiently correct to allow a complete cure; hence in from ten to twenty or thirty years, when protection is prostrate, the focal points take on activity and the organism give down to an old enemy.

Chyliform collections are found principally in serous membranes. They occur from rupture of a vessel or even of the thoracic duct. In most cases, however, they are due to a primary purulent collection whose microbes have succumbed to the supply of unorganized ferments furnished by a healthy organism (enzymes) sufficiently to cause a granulo-fatty degeneration. The fat is freed and emulsified, giving the liquid a milky appearance.

If the liquid is absorbed, a cheesy mass remains, which may take on calcareus transformation. Tubercles sometimes take on this change or cure.

Symptoms of a purulent focus are pain, heat, redness, swelling. Pain is the first symptom. It is caused by an increased flow of blood to the part, which causes swelling and heat, as well as the redness.

The pain is of a pulsating character. In time the pulsating pain gives way to a feeling of constriction, due to stretching of the nerves. After pus forms, the pain may subside, to appear only upon pressure. Cold abscesses are considered tubercular. They form without causing much reaction. I have seen reputable physicians confuse sarcoma and cold abscesses.

Gangrene.--Defined, gangrene is mortification or putrefaction of tissue. The process is named necrobiosis. It is declared to be of microbic origin. It is well, however, to be reminded that microbes are always secondary causes, and to declare that a given disease is of microbic origin is to leave the question of real cause in the air, from which it will never come down for a thinking mind until it is furnished an adequate cause. The fact that there is no specific gangrenous microbe is proof that, following the cause of the devitalizing of a given tissue, any organized ferment is sufficient to cause putrefaction of the dead tissue. The colon bacillus is sufficient to set up putrefaction or gangrene of the undigested food in the intestine.

When a part is dead, it must either desiccate or putrefy. Where there is heat and moisture it rots; and that is what gangrene is. The causes leading to death of tissue may be mechanical, physical, chemical, or animate: mechanical when a part is killed by machinery; physical when a part is killed by strong acid, excessive cold, or excessive heat; and animate when a part is killed by bacteria. It should not be forgotten, however, that germs must be aided by a forerunner which first devitalizes. The animate agents follow all agents that devitalize.

Anything that cuts off blood or nerve supply may devitalize to such an extent that germs may finish the destruction.

Fermentation of food may cause sufficient intoxication to destroy tissue. Then gangrene follows.

If it is understood that any putrefactive process, it matters not what the cause, is gangrenous, it will not be necessary to go into detail and name all the diseases which end in the death, or gangrene, of isolated spots of tissue or integument. Suffice it to say that the infections from typhoid fever, syphilitic chancre, gonorrheal bubo, septicemic fever, etc., are all putrefactive--gangrenous--infections.

Every diathesis takes advantage of systemic enervation to use these foci as centers from which to spread its peculiar type of disease.

If those who have suffered infection--an invasion--from a septic disease of any type (so-called contagious or infectious) will live in such a manner as to encourage elimination and an increase of nerve energy, these internal foci will be destroyed--will be used as fuel; and then it may be said that a blood poisoning--a specific disease--is cured.

A cure cannot be made by drugs, because a drug adds nothing to nutrition. A drug may irritate an organ and force artificial functioning, as in purging the bowels. But what does really take place? The bowels are forced to empty, but their functioning is inhibited, and, if the abuse is continued, they will cease functioning entirely. This is true of all medication and all organs affected by drugs. The so-called eliminating drugs irritate, but do not eliminate. They depress, enervate, and join with the enemies of the body in breaking down resistance and establishing infection rule over the entire body, or what "Damaged Goods" so graphically describes as the inevitable taint.

I here and now call upon all truth that is potential in medical science to bear witness to the statement I am about to make; namely: The human body is fully able to eliminate all infections, if it is given reasonable care in the lines of feeding, bathing, clothing, and mental poise. If, from an inherited diathesis, the constitution cannot resist the breaking-down influence of an infection, even when aided by the best of dietetic and hygienic care, the only possible results from medication and baths must be further enervation and less resistance to septic (specific) infection. Nature can eliminate and readjust, if permitted to rest physically and physiologically.

If proper care--a care that favors a better elimination and tissue renewal--fails to rid the body of septic foci, it is a beggarly reasoning power that ran believe that a medication which impairs nutrition and hardens tissue--causes a gingivitis (shedding of teeth) and ulceration of glands and bones, and even blindness--can act favorably and persuade or force a health standard that does not exist and is not potential in an organism.

The consensus of medical opinion holds to the superstition that by some magical power the drugs mercury, arsenic, iodin, potash, or a mysterious compounding--a synthetical blend--of drugs, can be made to go on a still hunt through the organism and drag out of their hidings all septic foci and expel them from the body, "Some dream," I admit; but no unprejudiced mind can find any proof for it in any of the fundamentals of medical science yet recorded.

Tubercles.--Those desiring an extensive bacteriological history of tubercles should procure a monograph on the subject.

All germs of a bacterial or microbic character are capable of generating fermentation in an environment favorable to their functioning; namely, a crowded nutrition, or overworked enzymic fermentation; threatening fatal obstruction to physiologic processes or devitalized tissue from injury.

When enervation is great, those who have purulent foci deposited from septic fevers, syphilitic ulcer or chancre, gonorrheal bubo or stricture, or chronic colitis with putrefactive fermentation, will develop affections in keeping with their diatheses. If they have the tuberculous diathesis, or if they are predisposed to take on glandular inflammation of a scrofulous nature, the type of their disease will be tubercular, which may be developed in any tissue of the body. If the diathesis should be of a nature to develop sclerosis, heart and arterial diseases will develop.

So long as any and all affections (so-called diseases) are permitted to develop only after the body's natural immunization is exhausted, it is very far-fetched to declare that a process which is wholly house-cleaning--wholly an emergency auxiliary to a physiological process--is disease-producing, or the cause of disease. Indeed, disease is a state, and those influences that increase or decrease the comfort of that state are causes of health and disease. Organized ferments are a part of a necessary and a properly organized environment for man. This is equally true of enzymes, food, sunshine, and other elements. Indeed, like every entity in the environment, each can be made man's friend or enemy, food or bane. Food is necessary to health and life, yet it is made man's greatest enemy.

For those with a diathesis there is but one immunization--namely, good health. Instead of seeking cures, prevention is the rational work--not extermination of germs, which is obviously impracticable, even if it were possible. And prevention is encompassed in one word-namely, moderation.

The control of tuberculosis must begin in childhood, if not before. Proper feeding, bathing, and clothing, along with enough intelligence to put such knowledge into practice, will stamp out the disease.

Localization and Evolution of Tuberculosis.--Theories of localized tuberculosis other than of the lungs are quite plausibly worked out. Of course, the pulmonary variety of tuberculosis is pretty generally conceded to come from inspiring infected air, or from taking the germ into the stomach with food. The bacilli introduced by the inspired air ingraft themselves in the apices of the lungs. The reason for this particular localization is attributed to the limited expansion of this part of the chest, and especially the weakness of the expirating movement. The natural sciences--especially mechanics--are frequently used by medical science in reinforcing a theory; but the student should not allow plausible argument to paralyze his real effort at getting at the truth.

If the theories of scientific medicine regarding tuberculosis were true, there could be no plausible reason given why tuberculosis, syphilis, or a fatal contagion had not depopulated the

earth; and certainly, if the theories of bacteriology were true, there could be no good reason given why germs had not prevented the populating of the earth.

The fatal weakness about all the germ science is that it cannot give a good reason why man is not extinct, if its theories of causation are true; and, on the other hand, if all it boasts of its great art and science be true, why disease is not stamped out.

Why do not all people who inhale bacilli develop the corresponding disease? Why are there people who cannot be made to take tuberculosis, and why are there a small percentage: who cannot be prevented from taking the disease? The answer to these questions will give a good working hypothesis on which to base a rational theory of causation.

The theories advanced in the various chapters in this book certainly are plausible, and the fact that, when applied, they work is all the proof that rationality needs. Bigotry and prejudice have never been, nor ever will be, convinced that the other fellow is not an ignoramus.

The theories of diathesis, enervation, and autotoxemia, when applied to tuberculosis, work out and rationally explain the cause, and certainly give the only depend prevention or immunization.

The various types of tubercular diseases--the classified tubercular diseases--are easily explained when it is known that this infection cannot be made to infect a gouty diathesis, but that it is easy to cultivate all types of tubercular affections--graft them, so to speak--on the tubercular diathesis.

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B. PATHOGENY

Instead of microbes being the cause of disease, they are at most only capable of joining with the culture media to develop an affection--certainly not a disease. As cause, bacteria must be classed with the elements and other influences in man's environment which are good or bad for him, depending on his health--resistance.

Efficient cause is anything powerful enough to produce primary disease. There are chemical causes--poisoning--and animal toxins. The poison that can prostrate and kill man must be able to overcome his normal resistance. Nothing belonging to man's normal habitat can break down his normal resistance; hence the idea that germs unaided cause disease is a delusion which the medical world must outgrow, as likewise the idea that serum can antidote germ influence; for germs have no influence except as they join other auxiliary influences and break down resistance.

C. PATHOLOGICAL PHYSIOLOGY

This should not be recognized as differing from physiology. Biology is the same whether the process be normal or abnormal. Law is the same now and forever. Biological laws are the same in health and disease. If a given disease-producing influence is experienced, disease will be established; remove the influence, and the laws, which are always the same, continue to act ideally, and health will return. Death itself is the only way to prevent the ideal working-out of physiological law.

It should be illuminating to those who think of disease and health as distinct entities to be assured that they are states, not entities, and that both are produced by the same laws; that it is within the power of man so to present his body to the laws that the state following will be health, not disease.

Correcting disease must have a limit. Where a disease has been running on until enervation is profound, or until the integrity of a vital organ is far spent, coming back to the normal may be impossible.

A patient complains of pain in the chest. On examination, congestion is found. Congestion not being a disease, on further examination a heart derangement is discovered. The pulmonary congestion is due to heart insufficiency. As there are no organic diseases proper (all organic derangements are reflex or secondary), a cause for the heart disease must be found. There may be a history of an infectious disease suffered years before--typhoid fever, rheumatism, or any of the contagious diseases. In regular medicine the primary cause--say, typhoid fever--is gone. The cause, then, is gone; so treatment is given to the heart, notwithstanding the heart lesion is not considered primary. Heart stimulants are given, which revive the organ for a time; but soon it must give out, for the treatment is stimulation, and the cause of its derangements is stimulation. In the first place, it was overworked by fever, infection, and drugs which left it impaired; then wrong eating and other habits, practiced after recovery from the disease that brought on the cardiopathy (heart weakness), prevented the organ from returning to the normal, which it would have done if it had been left for a few months or years to regain its normal tone.

In making a diagnosis, no consideration is given to daily life by the average physician. Because a patient suffered with syphilis twenty to thirty years ago, and today he has lost his faculty of speech, he must be suffering from syphilis. The intervening years of bad habits count for nothing. If symptoms of tabes dorsalis (locomotor ataxia) present, the best doctors doctor syphilis, even if tests fail to affirm their diagnosis. The past twenty to forty years of sensuality count for nothing; the whole trouble is due to a specific germ that has been hibernating in the tissues of the body.

Indeed, if correct living habits are practiced, no disease can remain in the body for any length of time. The body has the power to renew and purify itself, when given an opportunity; and all the opportunity needed is to receive sane care. There can be no hope of a thorough house-cleaning so long as the organism is taxed beyond a reasonable limit by an oversupply of food, by stimulants, by sensual indulgence, and, neither last nor least, by drugs that cause sclerosis.

Morbific cause is often beyond the reach of our remedies, because we are looking beyond the daily and hourly cause or causes for a cause that will vanish as soon as its support is gone.

In the matter of nutrition, many good and intelligent physicians often treat for the removal of an effect of malnutrition rather than for malnutrition--mistaking the effect for cause. Indeed, nearly all the work done by average physicians is on this order.

D. PATHOLOGICAL ANATOMY

A lesion of any structure when healed leaves a scar. Scar tissue is more liable to undergo degeneration than normal tissue, not because it carries a potentiality of the old disease, but because scar tissue is not nourished so well as other tissue and breaks down much more easily.

An inflammation of the urethra that extend to ulceration will leave scar tissue when cured, it matters not whether the inflammation is specific, or brought on by self-abuse (onanism), or from irritation caused by urine strongly acid from chronic toxin poisoning.

The scar tissue reduces the caliber of the urethra. This partial obstruction prevents self-cleaning. All tubes, ducts, and canals that are partially closed--strictured--fail to evacuate and cleanse themselves thoroughly. Hence, behind the strictured point, irritation and inflamation develop--a catarrhal inflammation which gradually lessens the caliber and finally develops complete obstruction. If the trouble is of the eustachian tube, noises in the head, ringing in the ears, and deafness follow; if of the urethra, slow and difficult urination from obstruction of the urethra and bladder irritation follows, and, as a result, lost coordination is liable to result from reflex irritation. In esophageal, stomach, or bowel obstructions, ulcerations and cancer are liable to follow, with all the evils accompanying partial to complete obstruction.

Primarily there must be a chronic state of toxin poisoning and pronounced diathesis before local inflammations of mucous membranes can take on chronic irritation, inflammation, ulceration, cancer, or syphilis . If a chronic state of toxin poisoning is not developed and maintained by bad habits of life, accidental irritations and nflammations will pass away from lack of support-from a lack of daily fuel supply. The truth of this can be proved at any time by noticing how quickly and well inflammations heal in those who are free from dyscrasia. and intestinal putrefaction. And another proof may be worked out-namely, correct the chronic toxin poisoning, and a stop will be put to all silent, subacute, inflammatory hyperplasia.

I have found no better definition for disease than the following: Disease is the morbid process considered in its entire evolution, from its initial cause to its final consequence; affecton is a morbid process considered in its actual manifestations, apart from its cause.

The so-called diseases, such as heart diseases, rheumatism, typhoid fever, pneumonia--in fact, every disease named in medical nomenclature--are in reality only affections. Real disease is perverted nutrition, caused by toxins generated within or without the organism. It is this chronic state of toxin poisoning that breaks down resistance and allows affections to develop. Such affections as cold --catching cold in the winter time, hay fever in the summer time, and asthma in both winter and summer--are affections resting on a base of diathesis sensitized by toxemia. The more pronounced the diathesis, the less the natural resistance, hence the harder to overcome the disease, which is chronic toxin poisoning.

All affections, commonly called diseases, are "hors de combat without a culture-medium-=a body prepared by chronic toxin poisoning--in which to develop.

E. SYMPTOMATOLOGY

1. The Patient

As it is the physician's business to cure the sick (at least, that is what nearly all laymen, and perhaps ninetynine and nine-tenths per cent of the profession, believe), those who are uncomfortable or in pain place themselves under the care of a physician to be made well, and when the pain is gone a cure is supposed to have been wrought.

The patient presents symptoms, some of which are subjective and a part of which are objective. The subjective symptoms are those about which the patient knows, while the objective symptoms are the changes of the exterior and interior about which the physician knows.

The subjective symptoms are those that have developed in the consciousness of the patient. They may have come on rapidly, or they may have come on very slowly.

The history of disease is that of a coming-on and a going off of discomfort; and on the revolutions--the cycles--made by diseases rests the reputation of all systems of palliation. The patients feel bad, and the doctors of high and low degree, representing schools whose scientific data--theories of cause and cure--are poles apart, and whose therapeutics range from conceit to the fanciful and on to the grotesque, gather around their victims and administer their "dope;" when, behold! as if by the touch of the lamp of Aladdin, the victims are blessed by the remedies, in spite of the fact that these are as opposite in their specific actions as it is possible for them to be. Yet the sufferers are "cured"! Of course, it matters not if the patients are sick again in a week, or a month, or a year, with the selfsame disease--another fanciful "cure" is made, which again our doctors and patients celebrate in the usual way, by telling in scientific terms just how it came about, even the wisest among them being ignorant of the fact that the natural progress of all disease is rhythmical or cyclical--better and worse--until the organism is broken down, and then the patient is better and worse, but never well, until death gives full relief.

It is the history which the patient recites to the physician; and it is the physician's business to weigh, analyze, and criticize what the patient tells him, and, by a physical examination, to determine just what the derangement of body is.

It should be borne in mind that the diagnosis of the exact derangement--discovering just what organ is affected, and determining whether the disease is functional or organic innocent (benign) or malignant--is very far from discovering the primary and insidious cause, without which discovery the treatment must be palliative. There is no cure short of removing the primary or initiative cause. If the initiative cause has passed away, then the secondary cause, which is doing primary work, must be discovered and removed.

The patient may be making his first call upon the doctor. He may be having his first pain or discomfort, or he may have had many attacks of sickness and pain.

The discomfort that caused the patient to seek relief may be a link in a chain of morbid derangements leading back to childhood, or even infancy--not on the order of heredity, for nothing is inherited except a predisposition to be sick in a given way; but if the tendency ever becomes a realization, habits that pervert nutrition must be practiced long enough to break down resistance and start the morbid tendencies to work.

It is necessary to get all the history of the life of the patient, and, when possible, the family history, age, sex, habits, occupation, temperament, beliefs, environments, mode and manner of the care of the body.

It is necessary to know all about the life which the patient is living, and all about the life which he has lived, if he has changed his style recently. It is not only necessary to know the physical habits of the patient, but his mental habits as well; and, in addition, the physician must have the confidence of the patient and know his secret life. The physician must enter into the relationship of "father confessor" with every important case that calls upon him. If he has not the personality to secure this confidence, and draw out the secrets that are hidden in the occult chamber of the individual's soul, he is not possessed of those qualities of character which make for healing. The doctor must have sympathy--not, however, without firmness and sternness, when necessary. The quality of selfishness in a doctor must be covered by a very large coating of politic politeness, or he will not draw patients, and certainly will not be a physician at any time. If his selfishness is pronounced, it is liable to be subconsciously interpreted by the patient, and this knowledge kills influence.

Lost self-confidence, self-respect, and self-control are the psychical elements with which the patient contends in chronic diseases, and which make management of a cure impossible for the selfish, vain, and unsympathetic doctor; for only the sympathetic can draw confessions--and confession is necessary to cure.

It is well, this early, to disabuse the mind of any reader of the idea which he may have that a successful curing system is, or can be, based on a set of cut-and-dried formulas. Indeed not; every case is different and a law unto itself. The only thing that is fixed and unchangeable is the natural laws within and without the patient. It is our attitude before the law that determines health or disease. If our actions agree with the law of our being, or the environment, all is well.

Health results from an agreeable adjustment of the body and mind to natural law and order; and impaired health--a lowered health standard, called disease--comes from disagreeable adjustment of the body and mind to natural law and order.

Diagnosis is determining the symptoms and learning just what is the cause of the morbid process, and its effect on the body.

I practiced medicine in the orthodox manner for twenty-five years. A number of those years were spent in determining just how much my treatment had to do with the recovery of my patients, and how much it did not. Little by little my drug superstition sloughed off. Not rapidly, but little by little, I learned that the physician is a woefully deluded man.

In the first place, it is most unscientific, not to say senseless, for medical colleges to teach clinical medicine, using as subjects men and women broken down in mind and body from years of bad habits, and to use, as a teaching force, medical men who do not consider the influences of the daily habits of mind and body as factors in producing disease. As proof of the folly of such teaching I cite the growth and prosperity of Christian Science, which has proved such a haven of rest for millions that have escaped the barbarous practice of "scientific" doctors who were struggling in a medical way to medicate, vaccinate, inoculate, extirpate, serumize, immunize and demonize patients, but succeeded only in teaching all a large sick habit. Christian Science has always builded better than it knew; but this is one of nature's compensating acts. The regular profession builds in an inferior way with what it knows. Selfishness, snobbishness, and bigotry have blinded the eyes and dulled the understanding of medical schools, as ignorant conceit and religious superstition have blinded the eyes and understanding of Christian Science.

Each system is standing in its own light, and prefers to be wrong rather than to give up its selfish advantages. The medical schools teach without any adequate means of finding out what the habits have been and what part habits play in the evolution of disease. Of course, habits are talked and written about; but, so far as applying the knowledge in the healing of disease is concerned, the subject is a dead letter; it does not enter into consideration, except in the most casual and perfunctory way.

There is but one way to learn of the amount of influence exerted by physical and mental habits--what part they play in a given case--and that is by inducing the patient to give them up, while the physician stands by, keeping hands off, watching nature eliminate and readjust. If the doctor cannot be satisfied to do nothing, except watch nature clean house and see to it that the work is not obstructed by the patient's bad habits or by his medical superstitions, he can never cultivate a dependable working knowledge of etiology; and without such knowledge he must remain in a mentally chaotic state concerning cause, effect, and cure.

Our present scientific teaching leads us through a "fool's paradise" of examinations, using instruments of precision to palpate, auscultate, and percuss; chemically analyze the secretions and excretions; microscopically examine the secretions, excretions, and every fluid and solid of the body; bacteriologically examine the entire body--the exudates, the transudates, and the expectorates; aspirate from every secret chamber of the body, analyze the fluid in every way possible, and then spend weeks in bacterial culture; X-ray every suspicious location, and radiograph the same. After all this examination, the diagnosis is "hung up", and the patient is sent away on suspended judgment, to return again in a few weeks or months to go through the same ordeal. This may be somewhat overdrawn, but certainly not in a few aggravated cases of mania in diagnosis.

What are the real causes of the bodily derangements which send professional gentlemen and their diagnostic specialists and experts through this "fool's paradise" looking for something that is not found in this glorious Eden? What is that elusive something that evades the microscope, stethoscope, test-tube,

analyst, X-ray, and every other instrument of precision, and every analytical, synthetical, deductive, inductive, and seductive diagnostic procedure?

It is life--a state that is commonly referred to as health. It is not an entity--a something to see, hear, taste, smell, or feel.

Health is the meter by which life is measured. When health is below a certain standard, we think disease; we lose the thought that impaired life--the state we call disease--is a lowered health standard, and that there is no such thing as disease.

The primary entities with which the physicians have to do are man and his environment. These are both good and adapted to each other, or they could not exist together. Man did not evolve until his environment evolved him. I assume that, inasmuch as nature never stultifies herself, man and his habitat are suited to each other and are potentially ideal, and that, if the unideal evolves, it is because of a maladjustment which is easy of readjustment.

I further assume that it is the doctor's duty, if he would be a physician, to throw his whole power of intellect into the study of why an environment that produces man also destroys him--why benign and life-imparting influences become malignant and life-destroying influences; and I invite any medical man to try successfully to refute my declaration that there is not one influence in man's environment which is not for his good, if he (man) is properly adjusted to it.

What should etiology be? Learning all about the influence of everything that affects man's body and mind. In this study we find that everything necessary to life, liberty, and the pursuit of happiness may be enjoyed to excess, and that, when it is, it enervates--lowers the standard of health; which means that functioning is impaired and self-poisoning takes place by retention of excretions. When this state is brought about, man loses his normal adjustment and every environmental influence has an exaggerated effect upon him.

If he has lowered his resistance from overeating, overwork, worry, fear, overindulgence in any of his physical or mental pleasures, every influence to which he was once normally adjusted affects him uncomfortably. If he undertakes to eat as formerly, he suffers from indigestion; if he works or undertakes to indulge himself in previously enjoyed habits, he is made uncomfortable and to suffer. One to three cigars distress him, whereas once a dozen could be smoked without any apparent subjective symptoms. The hopelessness of this situation lies in his remembrance that he once could smoke, drink, and otherwise indulge his sensual nature without discomfort, and in his belief that if he can find a doctor to "cut out" his disease, or cure it by some scientific means, he may return to his old flesh-pots. He knows very well that he could once indulge; he is quite sure he may again, if a cure can be found; and on this fool's errand he can find doctors and healers galore to accompany him. We have "perhaps the largest surgical plants in the world" just for the purpose of cutting out disease, so that the victims will not be put to the inconvenience of cutting out their bad habits.

The enervated man cannot indulge himself with any of his former sensual pleasures without being thrown into a state of discomfort. He and the medical expert go rummaging through the dump-pile of primary, secondary, and tertiary symptoms--a few of which are: impaired blood, functional and organic changes in various organs of the body, deranged secretions and excretions, etc.--hoping to find cause. Certainly a fool's errand, when, if they would reflect, they should notice that after every enjoyment the sick man is made worse, and after every disappointment in gratifying appetite and passion he is made better.

In this connection it may be well to give a few of the bulletin reports of the scientific activities of the doctors in their treatment of one of the world's most distinguished patients, showing how innocent the profession is of the grotesqueness of its scientific conceits:

> "The queen is sinking. She is unable to take nourishment. Her medical attendants declare that she can last but a few hours." At the expiration of twelve to twentyfour hours: "The queen has rallied, and is able to take nourishment. The doctors declare that there is a chance for her

recovery, barring complications."

What complication or complications could spring up? What causes complications? In this case the complications were obvious enough to any mind not under the spell of medical science.

Complications usually come from the treatment and nursing.

> "The queen is sinking. The rally of this morning was followed by a sinking spell, and she is again unable to take nourishment. Heart tonics given hypodermically keep what little life there is from ebbing away. Only the superhuman skill of the doctors prevents death from claiming the great woman as its bride."

"Verity, every man at his best state is altogether vanity. Selah." Superhuman conceit killed the good woman before her time.

> "During the night the doctors watched at the bedside of the distinguished patient, watching with bated breath the ebb and flow of the declining energies. Once or twice the family was aroused to view the grand queen and mother of the greatest empire on earth, while there was still a little life left in her body. All efforts at keeping life in the aged queen was abandoned at midnight." Next morning: "Most extraordinary, the unexpected happened! The queen rallied, and at this cabling is taking nourishment. The doctors fear, however, on account of the queen's great age and the weakness of her heart, that the rally will only be temporary. Sir John Blatherskite, an eminent heart specialist, was called in consultation, and he favors strychnin for the heart. This heart tonic will be given in place of digitalis, which has served long and well."

If we of the profession could see how childlike and silly much of our boasted science is, we could then see how like grandstand acting are

The queen did die--not, however, until these disgusting medical bulletins were repeated often enough to have put the whole world "wise" to the stupidity of medical science as practiced, and the shallowness of medical thinking, if the world had been capable of cutting loose from precedent and doing a little bit of independent thinking.

The profession is so used to looking to the unusual, the mysterious, the occult; to finding a cause for disease, instead of recognizing the fact that there is no disease per se--only a normal, supra-normal, or infra-normal state of health, and that these different states are brought about by different degrees of environmental stimulation.

All that can be discovered by examination, be it superficial or scientifically elaborate, is the effects of influences or causes which have passed out of existence, or which are still existent, or which have caused secondary causes before passing out. Scientific medicine spends its force on effects; the real causes are left undiscovered.

For example: A subinvoluted uterus, or a misplaced uterus, may be crowded by intra-abdominal pressure, causing a misplacement and perversion of circulation. The return circulation may be sufficiently impeded to cause a passive congestion and an enlarged hyperplastic state to develop; and the larger the growth, and the more constriction and impeding of the circulation, the larger the tumor (fibroid--for that is the character of this morbid differentiation), until restricted by the pelvic walls. This resistance to growth restricts the size and hardens the tissues. If, however, the tumor drags the uterus into the abdominal cavity, it will then, being freed from restraint, take on new and more rapid growth, sometimes filling this cavity equally to the size attained at full-termed pregnancy.

In this case the primary cause may be a catarrhal inflammation at an old placental site; or a catarrhal inflammation of the mucous membrane of the virgin uterus, due to exposure during menstruation, may take on hyperplastic growth, causing an enlargement of one side of the walls of the uterus. This causes a flexion, and a flexion always impedes the circulation, and a fibroid growth follows. All growths are the result of impeded circulation. When the circulation becomes so mechanically obstructed as to bar the

entrance of oxygen and an exit of waste matter, degeneration takes place--malignancy carries off the patient. The cure must be restoration of the return circulation by removing all pressure that causes misplacement.

2. Appearance of Patient

The patient's appearance will tell whether or not he is able to meet the requirements of existence. He looks able to carry on his work--his particular occupation- or he does not. If he does not, he will give the appearance of being sick with either acute or chronic disease.

At the bedside the patient may look robust, sick, collapsed, bluish or cyanosed, thin, fat, with thick and short neck, or long and slender; he is on his back with legs extended, or with the legs drawn up; or on the side with legs drawn up against the abdomen.

The patient may be unable to give a history or describe his symptoms.

Decubitus (Lying Down).--The manner of lying is significant. On the back means exhaustion. This is the position when a patient has lost consciousness.

In a faint or anemia of the brain, the head drops; in congestion of the brain, the head must be supported on several pillows; in asthma of the lungs, bronchi, or caused by the heart, the patient must have much pillow support.

In heart disease the patient lies upon the right side. A normal person can lie on either side equally well.

When heart disease is advancing to the fatal state, the position is sitting, with head and shoulders supported by pillows.

Pain in the abdomen will cause the sufferer to press upon it, or lie on a pillow. Pressure gives some relief. When the pain is intense there will be twisting and writhing.

In peritonitis, appendicitis, cystitis, gallstones, cancer of the stomach and bowels, the tendency is to draw the legs on the abdomen. In peritonitis, the patient will usually be on the back, with legs drawn up.

In gastric ulcer, when suffering with pain, if the ulcer is in the front wall of the stomach, the patient will lie on his back; if the posterior wall is the location of the ulcer, the patient's position will be lying on the abdomen; or upon the right or left side, if the disease is of the right or left side. These positions relieve pressure on the ulcer.

In tubercular meningitis, the child lies on the side, with legs strongly drawn up against the thighs.

Facial Expressions.--Disease as expressed in the face and posture.

Facies cardiac (heart): An anxious expression seen in the early stages of chronic valvular disease.

A purple or bluish appearance of the face, especially about the eyes, temples, and ears, with veins showing on the nose and sometimes on the cheeks, intensified by lying down: Caused by high blood pressure and an approaching dangerously plethoric state of the body.

Hepatic face: An earthy appearance; yellow tinge, jaundice.

Hippocratic face: Indicating rapid approach of death--pinched nose; hollow temples; eyes sunken; ears leaden and cold; lips relaxed; skin livid, and if the skin is pinched it returns slowly to the plane from which it was pinched or drawn.

Ovarian face: Features emaciated and sunken; anxious expression; forehead furrowed; eyes hollowed; nostrils open and sharply drawn; lips full and compressed; angles of mouth drawn and wrinkled, puckered but protruding"fish mouth."

The stupid face is that of typhoid.

Gastric face in children: A white line around the mouth, extending up by the side of the nose, shows irritation from improper feeding. Add to this sign pungent breath and vomiting, and the child has gastritis.

Gastric face in adults: Chronic irritation of the stomach in adults is indicated by a dragging-down of the comers of the mouth. Add to this drooling or driveling of saliva, and the indication is of starch poisoning; and if there is a broad, pallid tongue, the evidence is strong for overeating on starch.

Hysteria is marked by staring and an ecstatic expression.

Epilepsy is marked by a stupid face after an attack.

Protruding eyes and expressionless face in Graves' disease.

They lypermaniac has sadness written in his face. In general paralysis the countenance is composed and satisfied. The enebriate has trembling bps and a wandering expression.

The child with enlarged tonsils and adenoid growths has a stupid expression; the mouth is open, the lips hanging; the nose is expressionless.

The red nose, enlarged veins, bluish lips, cyanosed cheeks, and puffiness of face of the drinking man are called the mitral face. Where the aorta is diseased there is intense pallor. In Bright's disease the face is swollen and white.

The signs of croup are well known, but the type of disease is not so easily told. There are coughing and suffocating when a foreign body is in the air-passage.

Expiratory disturbance is marked by flushed face, puffed and bluish; the eyes are suffused, and the veins stand out.

In marasmus the features are drawn, the furrows deepened, the neck hollow; emaciation is marked, and, when profound, the whole appearance is that of the monkey.

The consumptive appearance is that of emaciation; protruding, flushed cheeks; pinched nose, with flaring nostrils; short, quick, jerky breathing; halting speech, and more or less suppressed voice.

When the face looks smaller--shrunken--and the nose is thin, long, and drawn, the bones prominent, the skin pale and covered with cold sweat, and, when drawn or pinched, the fold remains for some time, this is the facies of peritonitis, intestinal obstruction, renal and hepatic colic.

Fainting: The heart stops; the patient turns pale and falls motionless, but there is no distortion of the face; breathing is suspended.

Apoplexy: The patient is motionless and lies on the back; all animation is suspended; only breathing and pulse continue; the breathing is noisy, and gradually grows more stertorous. If the patient does not react and improve, the breathing and heart action gradually decline, the skin becomes drawn, the nose thinner and longer, the eyes dull, partially closed, glassy. The breathing stops, starts and continues, until it finally ends with a slight bodily convulsive movement.

Physical appearance must be noted--all deviations from the normal mean something.

Deformities, such as rickets, shorten the stature and cause the head to appear too large; the spine is incurved, the pelvis is deformed, the limbs are curved, the ribs project forward.

When the muscles become atrophied they cause general deformity.

Alterations of the heart or lungs cause deformities of the chest.

The bowels are often too large and distended from gas, fat, or ascites; in fevers, from tympanitis and inflammations.

Enlargement of the liver or spleen causes a large abdomen in the upper region; in the lower abdomen, enlargement may come from tumors, distended bladder, or a gravid uterus.

A large swelling at the base of the great toe, with the toe pointing outward, indicates a bunion. This deformity usually means that there is a slight rheumatism. Deformity of the third joint of the fingers--nodes of Heberden--means arthritis deformans. The nodes of Bouchard on the second joints of the fingers indicate dilation of the stomach--a disturbed nutrition from overeating of the carbohydrate foods. Joint distortions indicate gout, rheumatism, or injury; not infrequently they mean all of these. Frequently injury is complicated by rheumatism.

Hippocratic fingers (clubbing of finger-tips, with incurving nails) indicate heart or lung disease--scrofulous diathesis.

Skin.--A straw-yellow hue is found in cancer cachexia.

Paleness may be from anemia, dysemia, leukemia, amyloid degeneration, or Bright's disease.

Articular rheumatism is marked by paleness, and profuse sweats with strong acid odor.

Anger, fear, and jealousy cause paleness. The cause is vascular spasm. Fainting causes pallor.

Plethoric people are too red in color. A florid complexion means the sanguinous temperament and does not mean too much blood.

Unconsciousness may be from syncope (fainting). The face is pale; either no pulse or very light; the breathing very low and quiet. There are no signs of distress; the face is usually composed.

Cerebral Derangements.--If unconsciousness is preceded by spasm, the cause may be kidney disease--uremic coma. Symptoms may be headache, and flushed face with veins standing out. This means congestion of the brain.

A diagnosis--a decision as to the character of a disease and its cause--requires a close examination into the social life of the patient; the family history; the history of previous disease, and the diseases of the family as far back as possible; the history of the present disease; the history of family habits as well as the habits of the patient. It is necessary to know all about the personal habits of the patient, secret as well as open. The eating habits must be known--even to knowing exactly what is eaten at each meal daily. The sex life must be known--the early abuses, as well as those coming later in life.

A diagnosis, so far as determining that a certain organ is affected--for example, that the kidneys are diseased, that the patient has diabetes or Bright's disease--is far from conveying to the physician's mind an idea as to the true cause of the disease. It is true that the physician sees in his mind's eye hepatic insufficiency, or a failure in the dehydration of glucose in the walls of the intestines. But as to what has caused the malnutrition, in what way the patient has brought on his enervation, and what are his habits, the physician knows nothing from the test-tube, which only tells him that there is sugar or albumin in the urine. The diagnosis, so far as naming the diseases is concerned, may be correct; but no information is conveyed to the mind of the physician as to the primary cause of these diseases. Even when germs or parasites are given as cause, this manner of diagnosis throws no light on the question of why germs and parasites do not cause disease in all whom they infest.

Analysis of symptoms, examination of all secretions and excretions, and palpation and auscultation of all organs, amount to a scientific examination of effects; but a positive diagnosis throws no light on cause. Causes must be found and associated with effects before a curing knowledge can be possessed.

Diagnosis may be very correct, so far as effects are concerned; but cause of effects must be known.

It is necessary to know a healthy man. What are the signs of health?

The eye and the skin are clear. The outlines are normal. Those whose lines are obscured by fat are not healthy. Women who weigh over two pounds to the inch in stature are too heavy. Men who weigh more than two and a half pounds to the inch of stature are too heavy and are diseased.

Women and men who weigh much less or much more than the standards named are diseased. By diseased I mean that they give down early; they have not the resistance they should have; they age rapidly; and come to a premature grave.

A healthy body will desire only normal, natural, and simple foods.

Normal health is rare indeed. This being true, is it so very strange that so few live to one hundred or one hundred and twenty years of age-the normal lifetime of a human being?

A Normal Person--Hunger

A feeling of contentment after eating, and no discomfort.

A desire for fresh uncooked fruits, vegetables, and little, if any, seasoning, or thirst for water. Hunger is always moderate.

Urine amber, clear, and with a pleasant bouquet. Heat and acids have no effect on it. Passed with comfort.

Bowel movements should be brown, molded, but not hard; not offensive, and regular.

Skin should be soft, warm, moist rather than dry, and smooth. No disagreeable odors.

Hair is full, long, and possessed of sheen.

Lungs do their work without discomfort and through the nose.

Sleep is long, quiet, and refreshing.

Work and play are pleasurable.

When trouble comes, when disappointments and losses come, they are soon brushed aside and poise is regained with a resumption of interest in life.

Is not envious, jealous, spiteful, nor given to irritability or temper.

Mind is bright, alert and quick to learn. All attention.

Is honest, truthful, generous, kind, forgiving, economical, and philanthropic.

When sick, recovers more quickly because optimistic, and submits more gracefully to the chastening rod of correction; endeavors to get the benefit of the misfortune by reflecting on the cause, and endeavors to avoid a repetition by correcting the life.

An Abnormal Person-Appetite

A desire for more; dissatisfaction and a feeling of discomfort; gas and belching; acid stomach.

A desire for highly seasoned foods, alcoholics, tobacco coffee, and tea. Appetite is always driving; much thirst.

Urine cloudy, full of sediment, bloody, dark, odorless or rank of odor. Passed too often and with discomfort.

Bowel movements are green, gray, yellow, or white, and form into scybala (lumps). Or they are watery, bloody, wormy, and offensive to smell.

Skin is moist to wet; hands and feet cold and clammy. Always wet under the arm. Disagreeable odors from the perspiration under arms and feet.

Hair is thin, lusterless, and dry.

Lungs show asthma, cough, expectoration.

Sleep is fitful, restless, dreaming, and leaves tired on waking up.

Work is disagreeable and tiresome; no pleasure taken in recreation.

Worry, worry, worry, without much excuse. No interest in life. When trouble comes, the life is devoted to worrying.

Is very irritable, spiteful, revengeful, jealous, envious, quick to lose temper.

Mind is dull, slow, and learns with difficulty. No power of attention. Inclined to sleep, yet insomnia at night.

Is dishonest, deceitful, stingy, selfish, unkind, wasteful of other people's property, even when selfish and miserly with his own.

Recovers slowly because mental attitude is that of irritability and impatience. The abnormal person does not learn from experience. Everybody is to blame for his misfortunes, except himself. He is incorrigible.

A very good standard for health is the ideally beautiful--beautiful in body and mind.

Those who would know a sick man should study art. The artistic represents health, both of body and of mind. Then, to know the sick, contrast them with the normal--the ideal.

Post-mortems tell nothing except how terribly the body may be abused before it dies. Yet the dead organs can tell no tale; they cannot stand up and accuse their traducers, nor tell the manner of abuse.

The modern, popular idea of beauty and health is that the body should be incumbered with fat. Stock shows furnish a type of beauty that fits the modern sensual conception of what beauty consists of. Sensuality dominates everything in modern life. Even medical science, in catering to modem sensualism, has won the everlasting gratitude of Bacchanalians and gluttons, by offering the germ as the cause of disease, and tacitly freeing them from all restraint and giving them license to do as they like. Of course, this will be disputed, but I back my statement by referring to the patients themselves.

3. Pain

The evidence of pain. The patient complains of pain, and directs to its location by placing his hand on the part, or as near to the part as he can.

How much pain has the patient? He may be sensitive, imaginative, and inclined to exaggerate; or he may be frightened. On the other hand, he may be reticent and fail to tell the truth about his suffering. Again, he may be too ignorant to give a clear account of himself.

These are a few ways of learning of pain:

(a) Facial expression and bodily movements;

(b) As described by a friend or nurse;

(c) Results, such as weakness and emaciation from long suffering;

(d) Arterial pressure.

When a patient's face is contorted and his body writhes, doubles up, or stiffens, we have good evidence; yet he may be malingering (acting). However, the experienced physician will not be fooled long. It may take a little watching when the patient thinks he is alone. If he really suffers, he will suffer alone as well as when someone is near.

Many are sorry for themselves and make more complaint than necessary; others complain to secure sympathy. The real physician will discriminate, while the doctor is never anything but an amateur. The former cures his patient by imparting assurance; the latter adds to the disease by first discouraging and then operating.

When a patient who looks well declares he has been suffering for months, and he has not lost weight, and there are no objective signs, such as impaired circulation and heart action, and no tumor at the point where the pain is said to be located, it is safe to treat him as a malingerer or a self-deluded individual.

If nervous, imaginative, and self-deluded patients, describing their suffering as "awful ... .. fearful," "I liked to died last night," "I thought I was a goner," etc., are examined for patellar reflex, this movement will be found greatly exaggerated. This proves that they are very sensitive to pain, and should be questioned regarding eating; and it will be found that they eat much starch, and use coffee and other stimulants. Many will be found to have toxin poisoning.

Women bear pain--prolonged pain--better than men. The reason for this is that they are more self-controlled than men. Man is more self-indulged, hence less able to stand pain.

Types of Pain.--There are many kinds of pain; namely: boring, tearing, lancinating; a feeling of pressure, of heat, of cold, of hunger; a feeling of all-goneness, fullness, emptiness.

Colic is distinctive. It is rhythmic--the patient does not suffer all the time. It begins gradually, and increases to a climax; then subsides, to repeat again. Such pains are characteristic of canals: the intestinal, urethra, ureters, uriniferous tubules, bile-duct, eustachian tube, uterus, and fallopian tubes. An inflammation of these tubes and canals is accompanied by rhythmical pain.

Throbbing Pain: Pain that rhythms with the heart and pulse is caused by hyperemia. Headache and toothache are types. Any inflammation that is accompanied with enough swelling will have a rhythmic pain.

Precordial Oppression: This is a feeling of constriction. Angina pectoris is a type of this pain. This pain is of the heart. Affections of the pleura or lungs give no such pain. Asthma is a feeling of suffocation. It differs from oppression in the fact that it is difficult to draw air into the lungs, whereas in heart oppression there is no difficulty in getting air into the lungs, but it appears difficult to extract the oxygen, and the patient feels that he will die of suffocation.

Reflex Pain: When reflex pain is from angina in the lungs or abdomen, resembling indigestion, rheumatism, neuralgia, or neurosis, it may be relieved by rest, but not with the usual palliatives.

Shooting pains are usually neuralgic.

Relationship of Pain to Other Facts Connected with Disease.--Time of recurrence: If regular in time-say, every day or every other day-the cause may be malaria. Pains that are worse of a morning and wear off during the day are nervous headaches and joint inflammations. Pains accompanied with fever and infections usually grow worse toward evening. Fever always runs higher in the evening.

The position of the body: If the legs are drawn up against the abdomen, the pain may be in the bladder, the uterus, the bowels, the gall bladder, or may be due to pyloric disease, ulceration, or cancer of the stomach.

Inflammations of the organs in the abdomen and pelvis are made worse by standing or walking. Lying

down relieves.

When the bowels are distended with gas, or there is an accumulation of fat in the abdomen, such derangements as misplacements of the womb, piles, pelvic tumors, and cystitus (inflammation of the bladder) are all made worse by being on the feet.

The pains peculiar to chronic joint diseases and muscular rheumatism are made worse by staying in bed.

Pain produced by taking food indicates gastralgia, gastritis, ulcer, cancer, obstruction of the pyloris, gallstones, etc.

Enteritis, obstruction, and appendicitis are made much worse by eating. A few sips of milk will start peristalsis, and when obstruction or appendicitis exists, the patient will be thrown into great distress. Pain that is not made worse by eating is not caused by obstruction.

Pain that is frequently mistaken for appendicitis is caused by colitis, constipation, proctitis, ovaritis, neuralgia of the spermatic cord, strictures of the urethra, and gallstone or gall bladder disease.

Relief from drinking or taking food indicates gastric irritation caused by taking fluids too hot, eating too rapidly, overeating, the use of coffee, tea, tobacco, alcoholics, eating between meals, or gum chewing.

Damp weather, by chilling the surface of the body, causes those who are rheumatic to have pain and stiffness of different parts of the body.

Those who foretell storms and changes in the weather are human barometers, made so by a state of acidosis of the body. They have been using a preponderance of foods belonging to the acid producing class, and cooked foods which have had their enzymes killed by heat. Those who suffer headaches--even migraine sufferers--are made worse by meteorologic changes.

Headaches that occur on bright, sunny days, or when the earth is covered by snow, or on train or water trips, are probably due to eye strain.

Sea- and train-sickness is caused from abuse to the stomach by overeating, eye strain, or reflex irritation. Gas in the bowels, pressing on the ovaries, will cause sick stomach. Any neurosis is liable to be aggravated by train or sea voyages. Anything that enervates such subjects will cause them to be bad travelers.

Vomiting that relieves does not indicate that the stomach is diseased, any more than a cough that relieves indicates that the lungs are diseased.

The effort at vomiting shocks and produces reaction, which relieves pain in any part of the body. Pain produced by gas pressure, gallstone, or pain in the kidneys, womb, ovaries, spermatic cord, and testes, is relieved by vomiting. Heat and cold relieve pain. The patient must decide. Heat is more logical.

The sick habit has become a reality in these piping times of great medical discoveries. The habit of thinking sickness, talking sickness, acting sickness, and being coddled and operated upon, has developed an army of people who have become expert in complaining.

The sick habit and the drug habit are products of the medical profession. One of the principal causes is that the doctor must live, and it is to his bread-and-butter interest that every patient applying to him be very sick, or in imminent danger of dying unless operated upon at once.

The average professional calamity howl set up when a patient calls on "the best physician" in the community is quite enough to terrify, shock, and draw the patient's attention to himself and set up a morbid introspection. Once started, the introspection habit builds mountains out of mole hills; and surgical science has developed to such a state of perfection that it can extirpate every symptom of disease, except the disease itself, which is a large sick habit.

Pain Explained.--Every part of the body is supplied with nerves. Nerves, when pressed upon, give out a sensation of discomfort, and discomfort warns that something abnormal is taking place. The worm squirms away from it; the animal runs away from it, as did man in his early development. Man in his ratiocinative state is supposed to reason on the cause, and to remove it; but no, he runs to a mysterious individual, who administers a mysterious remedy, or cuts out an effect; and all concerned are satisfied, and the cause continues.

Nothing but reason, however, will direct man out of the way of harm and help him to understand cause.

When man reasons, he must know that there are two general types of causes for pain--namely, extrinsic and intrinsic. The outside causes, when understood, may be disposed of. The inside causes must be understood from inductive and deductive reasoning.

For example, when we learn that no one will develop angina pectoris who does not use tobacco, coffee, or tea, then man will know how to avoid such an affliction. When man learns that overindulgence in eating meat, or animal proteids, will slowly but surely set up a general lymphangitis and favor the development of catarrhal diseases, from nasal catarrh to tuberculosis and syphilis, he will know how to avoid such diseases. When those suffering from stone in the kidneys, gall bladder, or urinary bladder learn that these diseases follow the neglect of eating eliminating foods, and refusing to eat mineralized foods and drink mineralized water, man can avoid these painful diseases, and become his own physician.

Inflammations in the different organs create pain, heaviness, and fullness in the organs; pain, if the inflammation involves the surface; a dull, full, and heavy feeling, when the disease is of the body of the organ.

A persistent pain at or near the umbilicus is an indication of obstruction, partial or complete, somewhere in the intestine.

Radiation pain may start from an indigestion which causes gas; the gas presses upon an ovary, and the pain in the ovary causes vomiting. The nerve impulse starts in the ovary, goes to the spine, and from this center is sent to the stomach, producing vomiting. The eye strain on a railroad or sea voyage causes vomiting.

Any theory that all pains must be radiated from the spine, or from organs to the spine and from the spine elsewhere, must be limited. The truth is that pain must be taken care of in the storehouses of the nervous system--the ganglia, which are the inhibitors and dissipators of pain, as the lymphatic glands are the repositories and suppressors of toxins.

If it were not for the ganglia, which act as storage batteries for the distribution of surplus energy, the body would be killed from shock, which, under the system of storage batteries, is absorbed and the body is saved the shock.

When a locality of the body is under the continuous stress of irritation, pain must be felt in quite remote parts, because of the transmission, storage, and radiation.

When the batteries of the body become charged to full capacity, radiation or elimination takes place.

Headache results from this overflow. Its elimination causes pain.

The elimination of surplus energy is marked by pains of all kinds, and fevers. Colds and fevers are the unloading of pent-up energy.

Nerves accompany arteries. When much energy is conveyed over nerves, arterial spasms are experienced. Continual overstimulation of the arterial system ends in arteriosclerosis.

If the current of irritation is caused by envy, jealousy, or anger; or from the toxins of alcohol, tobacco, coffee, tea; or from daily decomposition of food in the intestine, with absorption of the toxins or acids or sepsin; or if the shocks come from lascivious thoughts, onanism, or excessive venery, the continual

overstimulation of the arterial system must end in hardening of the arteries, loss of coordination or tabes dorsalis, apoplexy, paralysis, etc.

It is well to remember that pain it not always located at the site of injury or lesion.

When a nerve is compressed, pain is not always found at the point of compression, nor at the nerve's termination. Epilepsy and convulsions generally have a peripheral origin. To be exact, most cases of epilepsy primarily originate in intestinal indigestion, with toxin poisoning; then one or more organs become affected, these affections transmitting their irritations to the central nervous system.

Affections of the spinal cord may manifest at any point other than at the cord. Infantile paralysis is a spinal affection. Its syndrome is impaired nutrition from food devoid of unorganized ferments and basic elements, and the consequent enervation. Resistance is so impaired that extraordinary thermic changes, or depressing physical changes, cause a giving-down of the nervous system, favoring central lesions--cerebral spinal, and meningeal inflammations. The gastric, darting, and girdle pains of locomotor ataxia are peripheral symptoms of a central lesion, and the lesion is caused by toxins.

Headaches are seldom symptoms of head lesions.

Causes of Headache: Anemia, fatigue, hunger, bad air, alcohol, morphine, lead, blood pressure, arteriosclerosis. The headache of old people frequently comes from hardening of the arteries. If examination is made, however, there will usually be found a kidney lesion; but even that and blood pressure belong to the syndrome of arteriosclerosis. Headaches come often from indigestion, constipation, eyestrain, beginning of fevers, brain tumor, and syphilis. A common headache is known as rheumatic headache. It is characterized by spots of "induration," or sensitive spots. This is without doubt the coffee and tea headache, and can be cured by stopping the use of these table beverages.

Refrigeration is said to cause this headache, but coffee and tea make their victims susceptible to cold.

Rachialgia (pain in the back), at the beginning of fevers, smallpox, and the backache complained of by most women are of no value with reference to the location of a lesion. Constipation and uterine disorders often cause much backache.

A common cause of coldness--a feeling of chilliness that cannot be gotten rid of by the heaviest clothing and warmest rooms--is intestinal indigestion; in which case clothing and hot houses are only fuel added to the fire--or, rather, cold added to the chilliness.

I have often told patients suffering in this way that if they would eat more--much more--and put on a half dozen more suits of underclothing, they would stand a good chance of freezing to death.

Neurasthenics usually complain of heat when their hands and feet are cold.

Those who have paralysis agitans are usually too warm.

A pain at any point in the body may be the aura of epilepsy.

A very sensitive state of the abdominal wall, without gas distention, or with a moderate amount of gas present in the bowels, indicates a neurosis. The real derangement may be intestinal indigestion and catarrh of the uterus,

When deep pressure in the abdomen causes no more discomfort than a light touch, the patient is of a nervous type, and should not be subjected to an operation just to relieve her of the notion that she needs an operation.

Hysteria is a hypersensitive state. The hysterical zones are at the top of the head, in the dorsal spine, at the nipple in man, and under the left mammary gland of woman; in the ovarian region, the spermatic cord and testes, and in the patella. It is not uncommon for the knee to be treated for rheumatism, when the disease is of the ovary.

Many men and women are being operated upon today, in our leading "surgical plants," because of pain in the various hysterical zones.

4. Examination of the Patient

In examining a patient, the family history should be obtained; for this gives a clue to predisposing causes and family habits which lead to specific derangements. Then the patient's personal life and habits, mental and physical, must be reveiwed. This information, with analysis of the objective and subjective symptoms, leads to a knowledge of what the patient's illness is; for diseases are the result of broken health laws.

If the patient has pain, this directs to the part of the body affected. It must be determined if the pain is local or sympathetic.

A patient may be sick at the stomach, and be vomiting; yet the real derangement or cause may be of the brain or uterus. If the stomach is treated, the treatment must fail.

Spinal disease may manifest in the joints of the feet and legs. If the physician foolishly treats the pain in the legs for rheumatism, he must fail to benefit his patient. I have met with a case wherein a boy had been treated for rheumatism of the left knee, when his disease was preputial.

Palpitation of the heart comes from stomach derangement oftener than from other causes.

Pulmonary tuberculosis often presents symptoms of heart derangement; and mitral stenosis will cause much coughing, and even hemorrhage of the lungs, which symptoms are secondary to the heart derangement.

(a) Organs of Special Sense

Only the general symptoms are of importance in eye derangements. The special belong to ophthalmology. Photophobia (dread of light) may be due to hysteria, a brain lesion, or an inflammatory disease of the eye.

Ulceration of the cornea is often an index to the state of the blood--often indicates heavy meat-eating, with consequent toxins in the blood.

Dropping of the upper eyelid may mean paralysis of the third pair.

Protrusion of eyeballs, with heart symptoms, indicates exophthalmic goiter. If but one eye protrudes, it indicates a tumor behind the eye.

Long vision, with lost accommodation of light, means ataxia or paralysis. This is the Argyll-Robertson sign. A bright spot before the eyes (scotoma), with loss of power to contract the pupil before a light, may indicate optic neuritis or tabes. If no other symptoms of tabes can be found, it is an eye lesion.

If a person, deaf in one ear, can hear a watch tick, or a tuning fork, placed on top of his head, equally well with both ears, the disease is not central.

When taste and smell are diminished, it is probably due to toxin poisoning, including tobacco, alcohol, coffee, and tea.

A headache is rare indeed that will not get well after the patient corrects his eating and other habits.

A crisis of tears differentiates a hysterical from an epileptic paroxysm.

Purulent ophthalmia is often an indication of gonorrheal infection.

Halos of light, or scintillations passing from a light, indicate indigestion in children.

There are many eye lesions that will pass away when all stimulants are given up. Toxin poisoning must be overcome by eating in keeping with the digestive power. Venereal abuse brings on enervation of the eye and brain, and, unless corrected, no cure can be made. Adopting glasses for many eye defects caused by excesses in sensuality is the height of nonsense.

When noises disturb and prevent concentration, in those who are trained to concentrate or give attention, the nerves are on edge, and the cause is overstimulation--overeating, coffee, tea, tobacco, alcoholics, excessive venery.

If, by applying the ear or stethoscope to the patient's ear, the physician can hear a crackling sound when the patient swallows with his nose and mouth closed, it indicates that the tympanum is intact.

Taste and smell are often much impaired by catarrh.

It can be said that all the special senses are more or less impaired by a style of eating that builds toxin poisoning.

(b) Vasomotor

Sudden redness of the cheeks indicates meningeal inflammation.

The well-known cheek flush of tuberculosis should not be confounded with nervous flush.

Red cheeks of teething children will be accompanied with other signs of teething.

Red cheeks and a white line around the mouth and nose indicate irritation of the stomach; in children, gastric fever, if there is vomiting. These symptoms may precede the eruptive fevers.

Cold, blanched feet and hands indicate vasomotor constriction and have intestinal putrefaction as their cause. When this condition becomes pronounced, it is called syncope of the limbs. The patient may have "dead finger"--a finger or fingers without feeling--and there may develop points of gangrene; or there may be the opposite state--venous congestion or cyanosis, such as occurs in asphyxia--oxygen starvation. The source of toxin poisoning must be discovered and removed, or this state cannot be overcome.

Acute vasomotor disturbances cause hyperemia of the breasts in women. It is too common to amputate the mammary glands, the surgeon diagnosing fluxions as cancer. The careful physician will find an accompanying uterine disease, which, if cured, will do away with the periodical hyperemia of the breasts.

In severe and advanced stages these hyperemic hemorrhages take place in the skin, mucous membrane of the bowels, urethra, ureters--bloody tears, bleeding from nose, lungs, or kidneys. There may be organic diseases, but hysteria should be suspected. Too often the physician is willing to believe the worst--that the disease is cancer.

Dry mouth may be caused by fear, anger, or fever. Salivation (flow of saliva) may mean mercury poisoning, nervousness, neuralgia, cancer, or may be the forerunner of epilepsy.

Sweating is suppressed in neuritis, neuralgia, and brain disease.

Increased urination may be due to polyuria, diabetes, excessive drinking, nervousness, indigestion, hysteria. Fear, anger, and suppression from kidney disease may cut down the amount far below the normal.

In tabes dorsalis there may be hypersecretion of digestive fluids. Hysteria should be suspected. The neurasthenic is inclined to have exaggerations and suppressions of all the secretions and excretions.

(c) Heart

The normal apex beat is a little below and to the right of the nipple. Lying on either side may change the

location slightly either way, A strong impulse should be inquired into; for the reason should be known. The apex beat may be displaced down, or to the right or left. The apex beat must vary in its location. In women the breast development prevents the nipple from being a landmark. In fullness there may be enlargement, and there may be effusion.

By palpating, any undue dullness can be discovered. Pressure over the heart that causes pain indicates either myocarditis or pericarditis. This should not be confounded with intercostal neuralgia or rheumatism, which is strictly local, on or between the ribs.

Percussion.--In examining the heart, there are two zones--namely, a superficial, which corresponds to a lung-dull sound, and means that portion of the heart covered by the lung; and a heart-dull sound, which is triangular- shaped and flat. The lung-dullness is bounded by a line extending along the left border of the sternum, at the lower border of the second rib, and extending by an imaginary curved line reaching the apex of the heart. Then draw a second line from the border of the second rib to meet the end of the imaginary line at the apex, curving it to the left somewhat. The two lines leading downward from the second rib may be called the right and left arms of an irregular triangle; the point where they meet at the top may be called the apex of the triangle; and the line connecting the right and left arms at the apex of the heart may be called the base of the triangle. The flat or heart-dull sound begins at the level of the fourth rib and terminates at the apex of the heart.

The flatness (heart-dullness) of the base of the triangle may be confounded with liver-dullness; but the physician will follow the outline of the liver and make his deductions as to liver and heart sounds.

It is to be understood that the area of dullness and flatness may vary in health, and the variation must be greater in disease.

The principal modifications are:

First, in hypertrophy of the left ventricle, the apex is pushed downward and outward. The flatness is slightly above the nipple.

Second, in hypertrophy of the right ventricle, the apex is pushed outward, and the flatness is slightly above the nipple and to the right of the sternum.

Pericardial Effusion.--If the accumulation is slight, the flatness extends below the apex beat. When the effusion is great, the flatness extends over much more of the chest wall.

Auscultation.--The most important mode of exploration of the chest is by auscultation. It requires a good ear to be educated into reading symptoms by sound.

Location of Sounds.--The aortic orifice is in the right second intercostal space. The pulmonary orifice is in the left third intercostal space. The mitral orifice is at the apex beat. The tricuspid orifice is at the xiphoid appendix.

The Normal Heart Sounds.--There are two sounds: The systolic, or first, sound is caused by contraction of the ventricles. Then there might be a short silence, followed by the diastolic, or second, sound, which is caused by the closing of the semilunar valves on the arteries. These sounds may be represented graphically as follows: The first sound (venticular) may be represented by the following figure: "u" . Then there is a brief silence, followed by a second sound, which is diastolic and longer, and may be represented by -- Then silence, and the sounds are repeated.

The attention must be educated to distinguish slight variations in these sounds. Many normal hearts must be examined to become familiar with the normal sounds. The first deviation from normal may be said to be that of emphasis on the sounds--they are more pronounced. To get the sound, have someone with a normal heart exercise vigorously for a few minutes; then, if the ear is placed to the heart, the sounds will be louder and faster. When this occurs without exercise, it must be caused by stimulation. The stimulation may be from fear or some other emotions, or from the use of stimulating foods or drugs.

An increase of the second sound may be heard at the pulmonary orifice (left third intercostal space), indicating nothing more than a disturbed circulation in the lungs.

A weakened sound may be caused by an accumulation of fat in the thorax, and it may be due to weakness of the heart. If so, it is the first sound that grows dull and finally disappears. This symptom is not so significant as a weakening of the second sound.

When there is an effusion in the pericardium, the heart sounds are muffled and sometimes extinguished.

Disturbed Rhythm.--There are two types of rhythms described by some authors; namely, intermittent rhythm and arrhythmia (irregular, lack of rhythm). Intermittent rhythm is where the pulse beat is suspended, or misses a beat occasionally. These missed strokes are usually followed by a more pronounced systol (contraction). The cause is enervation from stimulation. Perhaps, if there is one class of stimulants, more than another, inclined to produce this state of the heart, it is the coffee-and-roll or toast habit. It means a preponderance of food of acid potentiality.

Arrhythmia is marked by irregularity in the succession of pulses. Then there is a type presenting a prolongation of one of the heart beats or of one of the silent periods. Arrhythmia is also marked by cardiac bigeminate (double), and trigeminous (treble); which means the production of two or three beats, one after another, followed by a natural pause. Then there is the alternating pulse--one strong beat followed by a weak beat; then there are two short strong strokes followed by two weak strokes. The weak ones are not perceptible at the wrist.

There is the fetal rhythm, in which the two beats become similar, and the frequency is augmented so as to convey to the ear the sound given out by the heart of the unborn child.

The fetal rhythm is of unfavorable prognostic significance. lt develops in some cases of arteriosclerosis. Murmur of recall is a modified second sound which is divided into two short sounds. This occurs in a disturbed pulmonary circulation, which modifies the action of the valves, and is found in mitral stenosis.

Galloping murmur is found in two places. One place is at the left heart, a little above the apex beat, and means myocarditis or rheumatism of the heart. A second location, less frequent, is found in the right heart; this can be heard at the end of the sternum, and accompanies gastric and hepatic derangements, especially gallstone.

A murmur that accompanies normal heart sounds is of less gravity than one that replaces them.

Friction murmurs mean friction of the pericardium. They sound like the creaking of leather.

A blowing murmur is a sound like that of bellows. When accompanying the first heart sound, it is called systolic blowing; when with the second sound, it is called diastolic blowing; mesosystolic, when it occurs in the silence between the regular sounds of the heart; presystolic, when occurring before systole; in this case it may be called auricular systolic.

Heart murmurs that disappear on holding the breath are cardio-pulmonary, not endocardial.

Murmurs accompanying the radial pulsations are systolic; those that precede the pulse are presystolic; those following are mesosystolic. The diastolic murmurs accompany the second sound and are more quiet.

During the systole the ventricles contract. If the murmur is at one of the auriculo-ventricular orifices, it indicates that the blood flows backward from ventricle to auricle. This means insufficiency or incompetency of the auriculoventricular valves. When the sound is at the arterial orifices, it means stenosis of the aortic.

When the murmur is diastolic, it Corresponds with the second sound, and means that the blood flows back- ward from the arteries to the ventricle. This is aortic insufficiency. The rolling murmur heard at the apex means stricture or stenosis of the auriculo-ventricular orifice, usually the mitral.

Reduplication of sounds indicates that valve action is not simultaneous and that there is heart strain present, or high arterial tension, as in stenosis or kidney diseases.

Mitral insufficiency often gives out a whistling, musical piping sound. Aortic insufficiency is a mild, soft, and blowing sound. Mitral stenosis is a rolling sound.

When the murmur is heard outward or inward from the apex, or at the left border of the heart, it may be said that it is functional; when in the aortic area to the right border of the sternum, it is organic. Murmurs along the left border of the sternum are organic.

Before it is safe to say that a given murmur is organic, an apex murmur must be heard in the axilla and in the back, and basic murmurs must be heard through the vessels originating from the affected orifice or along the sternum. When aortic incompetency is suspected, the stethoscope may be applied to the femoral artery, and in these subjects to the abdominal aorta.

Ile following are graphic sounds of the heart:

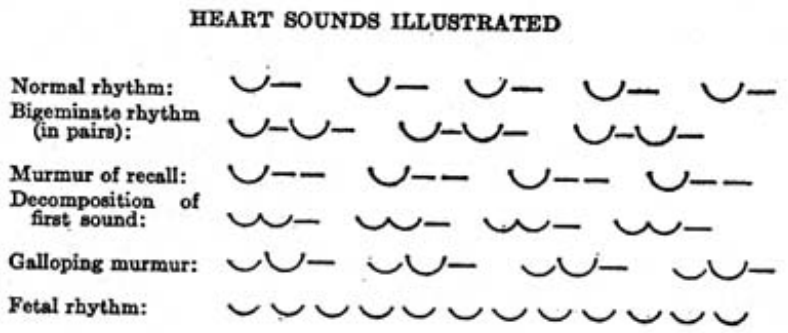


TABLE OF HEART SOUNDS, LOCATION, AND SIGNIFICANCE

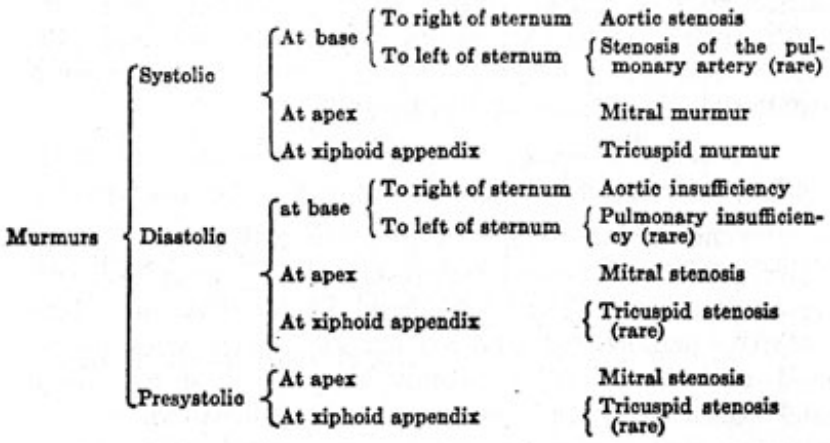
First Sound	Short Silence	Second Sound	Long Silence
Ventricular systole. Heard at apex--apex beat. Felt at radial pulse. Systolic blowing murmer heard at this point.	Mesosystolic. Blowing murmur.	Closure of the semilunar valves between heart and arteries.	Diastole, or auricular systole. Presystolic murmur.

At the first sound, the ventricles close (systole). If there is a murmur at one of the auriculo-ventricular orifices, it is because blood flows back to the auricle. This means insufficient closure of one of the valves.

When the murmur is heard at one of the arterial orifices, it indicates that the blood does not flow through so easily as it should. This means a diminution of caliber. Stenosis is the cause.

Diastolic murmur coincides with the second sound, and means that the blood regurgitates or flows back from the arteries to the ventricles. This means aortic insufficiency--occasionally pulmonary insufficiency. This murmur is heard at the apex and has a peculiar character--namely, a rolling, rather than a blowing or purring, sound. It means stricture of one of the auriculo-ventricular orifices, more often the mitral. Presystolic murmur means the same.

The following table describes the location of the murmurs:



Mitral insufficiency is often a whistling, musical, or piping sound.

Aortic insufficiency is mild, soft, and blowing.

Mitral stenosis is like a rolling sound.

Congenital malformation is marked by a systolic, forcible, vibrating murmur, heard at times in the center of the chest, not accompanied by purring, and heard best over the fourth dorsal vertebra.

Mitral murmur should be looked for in the left axilla; also behind, under the angle of the scapula.

Murmurs of the pulmonary orifice are conducted toward the left clavicle; they stop before reaching the bone.

Aortic murmurs extend toward the right clavicle, and often reach beyond even in the neck.

The diastolic murmur of the aorta passes along the sternum to its end, the xiphoid appendix. The murmur is a soft, blowing sound. There is accompanying this murmur a jerking pulse--a throbbing or dancing pulse.

To sum up: In a weak heart, when both sides are affected, there is observed venous stasis, with functional disturbance of lungs, liver, kidneys, stomach, and brain, with their various symptoms: dyspepsia, dyspnea, local pain, vertigo, palpitation, etc.; with, as termination, dilation and collapse of the heart.

A valvular defect is important as regards accommodation, whereas a dilation has a very serious importance.

Venous stasis from dilation presents cyanosis, turgid veins, with and without pulsation of the jugular and other veins, cardiac asthma, hyperemia of the liver and lungs, catarrh, hemorrhage and edema of the dependent parts and cavities. Cardiac asthma may be due to swelling and stiffness of lung substance from congestion.

Heart weakness may be due to muscular or valvular insufficiency, or both. It may be primary or secondary to other derangements which obstruct the circulation. The liver and kidneys must receive attention.

Congenital Heart Defects.--Potency of the foramen ovale, ductus arteriosus, defects of the ventricular system, and lesions of the pulmonary orifice. Prematurity is the usual cause of these defects.

Symptoms: Cyanosis (blue child-not always present), dyspnea, cough, convulsions, edema, and restlessness.

(d) Respiratory Apparatus

The larynx must be examined with special instruments. The bronchi and lungs present pain in the side, chest cough, difficult breathing, and expectoration. Difficult breathing and dyspnea may be due to either lung or heart affection. It may be reflex; if so, any of the organs may cause it.

Cough may be lung cough, or it may be reflex.

Respiration and pulse normally have a ratio of about one to five.

Cheyne-Stokes respiration belongs to cerebral or meningeal lesions, At first it is rapid and superficial, and gradually becomes more profound. This is followed by a diminution, with a final arrest; then a short period, followed by short, shallow breathing, gradually becoming faster, with a repetition of the former sounds.

Diabetic coma is characterized by abrupt and deep inspiration, followed by a pause; then a quick expiration, and a pause. These types of breathing are due to medullary derangement-possibly toxin poisoning.

Rales are of three types:

Dry or sonorous rales are called rattling when they have a grave pitch; sibilant when acute. They indicate bronchial inflammation or catarrh.

Crepitant rale is like rubbing a lock of hair between the thumb and finger close to the ear. It means pneumonia.

Moist rale has a bubbling sound. When high, it indicates tuberculosis, when of fine bubbles, capillary involvement.

A blowing sound, when heard between the shoulders, indicates bronchitis. It is tubal when it has a slightly metallic or whistling character. The pleuritic murmur has the sound of "i" spoken in a whisper through the closed fist as an ear trumpet. The sound will be modified in keeping with the amount of effusion.

In empyema (pus in the pleura) the percussion dullness will be flat like the liver sound. If the patient will count "one, two, three," while the ear is placed on the chest, the sound conveyed will be far distant-removed; whereas the voice will come to the ear when there is no accumulation.

Egophony.--While the patient is speaking, if the voice comes to the ear with a tremulous murmur, this is called egophony, and is indicative of pleurisy or splenopneumonia.

(e) Digestive Apparatus

The teeth should be inspected--the entire mouth, lips. tongue, and throat. Many stomach derangements are cured by keeping the mouth and teeth clean. Pyorrhea begins with neglect of cleanliness, and starch and sugar poisoning. Scurvy and mercury are leading causes.

"In diabetes the second lower molars are affected, and their alteration serves as guide to diagnosis."

Premature loss of teeth indicates failing nutrition from wrong eating (too much starch and sugar, and not enough raw fruit and vegetables).

The tongue is somewhat of an index, but altogether too much is made of it, as likewise of the temperature of the body, by most physicians.

A broad, pallid, thick tongue indicates too much starch eating. A long, pointed tongue denotes irritation of nerve centers. A small tongue indicates insufficient nourishment. A red tongue, with enlarged papillae ("strawberry tongue"), means great irritation of the stomach. This is the scarlet fever tongue.

Ulcerations on the tongue often mean injuries from teeth. Continual tongue irritation and ulceration should be investigated by a dentist; if not corrected, nocturnal epilepsy should be suspected.

The throat, when abnormally red, indicates irritation of the stomach, tobacco or alcohol poisoning. The throat is an index of the stomach. Treatment of the throat is very far-fetched. The throat will not go wrong unless the stomach or bowels go wrong--no, not even the tonsils. Tonsillitis is symptomatic of wrong eating--wrong combinations.

Many derangements start with an angina; but I insist that all diseases--yes, the eruptive and so-called contagious diseases--get their infective agent in gastro-intestinal putrefaction, and that without this cause they can have no existence. Hence, to cure any and all of these diseases, correct the generation of toxins. To do so is not only curative, but preventive. All so-called contagious diseases are autogenerated. This truth may require years to become popular--be accepted by the profession--but it will come.

Stomach derangements are brought on by abuse at the table. Heartburn means overeating, or too much starch or sugar eating, or all three causes.

A fullness after eating means overeating, or wrong combinations, or too rapid eating, or too much fluid with meals.

Flatulency.--Gas means overeating, or waterlogging with too much fluid intake. Navy beans, peas, sweet potatoes, apples, and other foods cause gas. Apples and other fresh fruits cause gas in those who are starch-poisoned. The habit is built by much water drinking between meals. Constipation is built by gas distention and too large fluid intake, forcing the kidneys to do the eliminating for the bowels. The present universal habit of water drinking to overcome constipation is another medical fallacy.

The tired feeling of a morning means food poisoning--toxemia. The physician should know the influence of food taken in excess, the influence of wrong combinations, and the influence of all mental and physical habits; then he can prescribe intelligently.

Vomiting.--In case of indigestion the vomitus is usually acid. It is alkaline in cases of catarrh and cholera.

Vomiting may be watery, alimentary, bilious, fecal. hemorrhagic, or purulent.

Aqueous vomiting is often viscid and soapy because of the presence of mucous. It is seen in alcoholic gastritis, ulcer, cancer, sick stomach, and cholera.

Alimentary vomiting is of food recently swallowed. Bilious vomiting shows the bile in the ejected matter.

Fecal vomiting is of the contents of the bowels, and means obstruction.

Blood vomiting may be hemorrhage of the stomach. If bright red, it means ulcer; when dark and like coffee grounds, it indicates cancer.

False membranes, and long casts of mucous, are sometimes passed. These indicate muco-entero-colitis.

White, jointed, tapelike appearances may be tapeworms. If found, watch should be kept for a few weeks. If there is really a tapeworm, portions of it will pass almost weekly.

Stomach

Deformities are often produced by corsets. The organs are pushed down; then there is compression from the liver being forced against it. Indeed, the stomach may be pushed in all directions by corset pressure, causing difficult breathing, palpitation, etc. A high stomach means hearty eating; a pendulous abdomen means debility and visceroptosis (falling or prolapsus of the viscera). Medium enlargement in the upper part indicates enlargement or dilation; and dilation means overeating, fermentation, and gas distention.

Depression at the pit of the stomach, when the patient is turned on the side, indicates inanition--great weakness. A bulging at this point means distention of the stomach. Flattening below the navel, with protrusion below, means visceroptosis.

Palpation discovers sensitiveness. A general sensitiveness to touch, without fever, indicate a general toxin infection from gastro-intestinal decomposition of food. In these cases there are usually constipation, colitis, catarrh of the womb, piles, etc.

To palpate the abdomen successfully, the patient should lie on the back, with legs flexed on thighs and thighs flexed to a right angle to the abdomen. The hands of the examiner must be warm; otherwise contractions will occur.

The sloshing sound or clapotage (a sound like that obtained by shaking a bladder half filled with water) should not be heard six hours after eating. When it is, it indicates dilation, ptosis, slow digestion, cancer of the stomach, etc.

Pyloric thickening, or cancer of the pylorus, is felt as a hard lump or tumor at the right of, and two or three inches above, the navel. If this lump is found, and there is vomiting, every two or three days, of ingesta (previously eaten food) that were eaten, one, two, or three days before. and there is clapotage six or more hours after eating, and this sound can be elicited at all times, except immediately after lavages, or until heavy vomiting takes place in advanced cases, the ejecta will present blood of a grumous character. This symptom, with cachexia, means cancer. All cases can be cured by lavage and restricted diet before this stage is reached. Surgery will not cure after this stage, and it is not necessary before. If performed, it will handicap and inconvenience the patient for the remainder of his life. These cases are non-cancerous at the start, and, if properly treated, should recover.

No case should be pronounced cancer until everything has been done that can be. The surgeon is an advocate of his calling, and will declare that surgery is the only cure. Indeed, it is never a cure, except when it fortunately removes a cause.

The stomach should be washed out daily, and the patient properly dieted. If attended to carefully, many cases pronounced cancer can be saved.

A dilated transverse colon may give out the peculiar clapotage sound; but there is always more tympanitis with the colonic affection, and the sound is farther below and at the points marked by the ascending and descending colon.

A tumorous state of the pylorus and the great curve of the stomach--the left of the stomach--can usually be palpated, while it is more difficult to discover tumifactions of the cardia or esophageal orifice.

Intestine

Many mistakes are made in examining the intestine. Constipation with accumulation is often diagnosed as floating kidney (a very rare affection), appendiceal abscess, ovarian enlargement, uterus tumor, pregnancy, tumor or cancer of the intestine. It is true that such mistakes are ridiculous and do not occur often with skilled diagnosticians, but first class professional men do make these mistakes often enough to cause laymen to seek confirmation of a diagnosis before submitting to an operation. It is not proper to seek confirmation by calling upon a physician selected by the physician in charge; for he will pick one who will agree with him. Either call a physician, and do not allow him to know that a diagnosis has been made, or call a rival of the one making the diagnosis. At all costs, try to eliminate the subterfuges of medical ethics, which means all things to doctors, even if it spells ruin to patients.

Professional ethics is a medical Potter's Field where the mistakes of doctors are interred without publicity. Consultation is where two or more professional men gather together to enjoy a private smoke and to discuss the mistakes of Moses or anyone else who haplessly is not present.

A painful point in the intestine may be caused by inflammation, impaction, gas, tumor, or cancer.

If inflammation, there will be mucous with the stools, and an accumulation of fecal matter will cause pain from pressure, and gas will cause pain from distention. A pain at McBerney's point indicates inflammation, gas, or constipation. Colitic pain is peri-umbilical, or in the right or left iliac fossa. In dysentery the pain is in the left flank and extends to the anus.

Fecal Matter.--When dry and covered with mucous, it indicates constipation and colitis. When of rank odor (putrid-smelling), it means overeating of animal proteids. When sulphureted in odor, it may be due to sulphur or sulphate of magnesia taken to relieve sluggish bowels.

The consistency may be hard, soft, liquid, mucoid, or bloody. If watery and mucoid, it indicates diarrhea and catarrhal inflammation of the mucous membrane.

When the stools are small, and largely mucous, with much bearing-down pain, the disease is probably flux or dysentery.

When the stools are of peculiar form--small and round, ribbon-like or pencil-like--there may be stricture.

Dark color may be from food or drugs; green, from spinach or other vegetables; or, in infants on milk, it means acidity and indigestion from overfeeding. Green, mucoid stools, studded with white curds, indicate overfeeding. and unless a fast is given, followed with a cutting-down in quantity, the child may be very sick.

Light color, if not from an exclusive milk diet, means lack of bile secretion and sluggish liver.

Blood in the stools may be from piles, ulcer, or cancer. When red, it indicates that it comes from the lower bowels. A local examination should discover whether the bleeding is of the nature of piles or local fissure, ulcer or polypus.

Black blood from the bowels must be considered in connection with other symptoms. Give the patient the benefit of the doubt as to the disease being malignant.

Bismuth may color the stools dark for some time after its administration has ceased.

Typhoid discharge, when the patient is fed, is yellowish and nauseous in odor.

Whitish stools indicate fat; fatty stools indicate that the pancreatic juice is unable to emulsify, or that the juices are cut off.

Sand or gravel in stools indicates that stones in the gall bladder have disintegrated and passed out--a natural form of elimination.

Abdominal Pain and What It Signifies.--Sudden abdominal pain diffused, or in the umbilical region, will in a few hours become localized in the region of the affected organ. Deadening drugs should not be given, for they will mask the affection and obscure diagnosis, Sudden abdominal pain, with vomiting, is indicative of peritonitis. The cause may be volvulus, invagination, internal or external hernia, extension of septicemia, rupture of ectopic pregnancy, or rupture of an abscess into the peritoneum. The abscess may be typhlitic, perityphlitic, appendicular, tubal, pelvic, subperitoneal, cellulitis, perforations of ulcers, ulceration caused by biliary or renal calculus, etc. An operation at once, with drainage, should save most cases. Delay means death. Unfortunately, advantage is taken of this truth to urge people with intestinal indigestion, gas pains, uterine and other pains, to have an operation at once.

Absolute quiet, frequent copious enemas, and abstinence from food, is a safe "watchful waiting." To use cathartics is unnecessary under all circumstances, but to give them where any of these symptoms exist is positively criminal ignorance.

In peritonitis the pulse is of more value than the temperature. The pulse is rapid and small (120 to 150); the temperature may be normal, subnormal, or high; the breathing is costal and rapid (30 to 40); the urine is usually highly charged with indican. Collapse threatens early. The face is anxious, the skin cold, and

the mind clear. Often the intoxication is so great that the patient talks and acts as if there were little the matter. This, however, depends on the cause. Puerperal cases are liable to act in this way. I have seen cases dying; yet they were hopeful and believed in an early recovery. When the organ involved in causation is the liver, pessimism is present.

Pain that precedes or follows bowel movement indicates rectal disease, hemorrhoids, fissure, ulceration, cancer.

If pain recurs with menstruation, the reproductive organs should be examined.

Sudden pain experienced for the first time should be analyzed carefully. If the same character of pain has been experienced before, time may be taken, if necessary, to find the cause. If pain follows exertion, it may be from hernia, rupture of tubal pregnancy, rupture of peritoneal adhesions with hemorrhage, volvulus, rupture of cystic tumor, or twist of tumor on its pedicle. Pain following trauma may be from rupture of the bladder, stomach, intestines, or other viscera.

Pregnancy, with threatening abortion, may be the cause of pain. Horseback, or rough riding, of any kind, followed with pain, is suggestive of calculus. Repeated abdominal pain due to painful peristalsis in the uterine, fallopian, biliary, ureteral, urethral, intestinal, spermatic, and other ducts, is not often recognized. If it could be, many mistakes would be overcome.

I have seen neuralgia of the spermatic vessels diagnosed appendicitis, and, after the appendix was removed, the pain that came back was diagnosed adhesions. It is no uncommon thing to have the appendix removed, then the right ovary, then operations for adhesions, then operation on the gall bladder, because of genital affections; namely, spermatorrhea, ovarian irritation, endometritis with stenosis of the neck of the womb (a very common cause of abdominal pain in nulliparous women), or urethral tenesmus.

There are many gall bladder operations because of painful peristalsis caused by gastro-intestinal indigestion, and irritation and inflammation of the viscera. After hernial operations, pain may continue because of adhesive bands. I know of one death caused by obstruction from adhesions at the internal ring of partial hernia.

Women of menstrual age should be examined for affections of the genito-reproductive organs.

Sudden abdominal pain in anemic young women should cause the physician to suspect perforating ulcer of the stomach or duodenum. In children, abdominal pain usually means gastro-intestinal derangement, such as gastritis, enteritis, twist, invagination, colitis, appendicitis.

In those past middle life, particularly in old age, cancer is the common cause of abdominal pain

The character of pain should be noticed. In perforation the character of the pain is the same in all viscera.

In invagination the pain is paroxysmal and periodic, due to peristalsis. Strangulation is generally intense and periodic, due to peristalsis; later there is aching and dragging. In appendicitis the pain comes on suddenly, and is intense in fulminating cases. There is a type which comes on slowly, and is easily controlled by fasting and quiet. A sharp, lancinating pain, continuous in character, is possibly due to perforation. A continuous, agonizing pain spells diffuse peritonitis, and means death unless immediately relieved by operation and drainage.

Pain caused by obstructed peristalsis is periodic, and will subside if no food or drink be given. In appendicitis the patient will remain comfortable, but in obstruction from a twist or invagination, discomfort and pain will not leave, the pulse will run high, and the face becomes anxious.

When a stone is passing, the pain will be periodic. When it comes on, it will be excruciating. Between agonies (which means between the rhythms of peristalsis) there remains a feeling of soreness--a tolerable aching, which, contrasted with the greater pain, is insignificant, but which would in time become intolerable, if full relief could not be found.

Pain from stone lodged in any canal--appendix, enteron (intestine), colon, biliary, pelvis of the kidney, ureter, urethra, etc.--is very excruciating, and food increases the pain,

Gastric ulcer is inclined to give out pain when chilled with cold drinks or ice cream. When it is fully developed, pain may be caused by the ingestion of solid foods.

In coming to conclusions regarding an affection, pain is a guide; hence it should never be suppressed by drugs, nor ignored or disputed.

Pain on palpation may be caused from radiation; hence the hands of the physician should be warm, and the temperature of the room should be warm. It should not be forgotten that the personality of a physician may be such as to cause pain. Such surgeons find much excuse for operating.

Facial expression, position of body, tension of muscles, all may manifest pain.

On account of the number of organs and the complexity of the nerve supply, the great variety of functions, etc., the abdomen sends out the greatest variety of pains.

The gastric crisis of locomotor ataxia presents paroxysmal vomitings and severe gastric pain, lasting several hours or several days, which may recur after days or weeks. Other symptoms of tabes dorsalis will clear up the diagnosis, and save a foolish and unnecessary operation for some abdominal affection which happens to fit the particular insanity of the surgeon called. If there were not such senseless operations performed, I should not make such disagreeable statements.

Nephritic crisis (kidney crisis) is caused by a dislocated kidney. The nerves and blood vessels are twisted more or less, and the ureter is flexed. This axial rotation may cause serious strangulation. Where the right kidney is misplaced, the symptoms are nausea, vomiting, pain in the back and thigh; excessive or defective secretion in the bowels, causing indigestion and similar disorders in the renal secretions.

Gas in the bowels frequently causes pain. The gas produces the pain by stretching the peritoneal covering.

Pain at a given point does not always signify that the cause of the pain is located in that region. Absence of pain in regions is often significant,

Pain at the navel is not diagnostic; yet it often signifies appendicular, fallopian-tube, or invagination affections, cancer of the stomach, etc.

If, when pressing the abdominal wall, there is one spot that gives out pain or discomfort, and no other point is sensitive, it is reasonable to believe that the disease is located. When the whole abdomen is sensitive, the pulse is quick, and there is an anxious expression of the face, the disease is peritonitis. If the patient is bright and all attention, and the symptoms appear within a week after confinement, the disease is puerperal peritonitis. When there is no fever, and the pulse does not vary very far from the normal, yet the patient complains at every touch. and the bowels are disturbed with gas, the case is that of trauma, or stretching of the peritoneal sheet, which is made sensitive by toxin poisoning from gastro-intestinal decomposition. This is an affection that is turned aside by a class of physicians as hysteria. Because the patient complains of pressure on one part as much as on another, the doctor decides that there is nothing the matter--just hysteria. Another class will diagnose the case according to the delusion that happens to possess them at the time of examination. It may be fibroid tumor (such cases are liable to have a fibroid); and, of course, the tumor is the cause, and it must be removed. If the doctor's delusion runs to the appendix, gall bladder, floating kidney, enteroptosis, displacement or prolapsus of the womb, etc., etc., the operation selected will be in keeping with his delusion. Is this statement of mine a delusion? I wish it were. These delusions are created and propagated at medical societies. Two or three leading men force their delusions on the rank and file. Medical societies should be suppressed; for they are a menace to society. For a few months after the A. M. A. meetings there is an epidemic of operations, ninety to ninety-five per cent of which are inexcusable, except for the delusions inoculated at the last meeting of the association. Of course, this statement will be pooh-poohed by those whom it fits; but if proof of insanity is desired, surely the inmates of an insane asylum should not be consulted regarding their delusion.

An accumulation of fluid in the abdomen will, on palpation, show flatness at the most dependent point, and resonance at the highest points; whereas an ovarian tumor will show the reverse. In a vaginal examination, with a finger on the vaginal roof and the hand upon the abdomen, the transmitted movements will be felt if there is a tumor; if dropsy, there will be no sensation transmitted. Advanced pregnancy should not be mistaken for tumor or dropsy; yet this mistake has been made by "first class" surgeons.

Arterial pulsations in the epigastric (stomach) region are seldom due to aneurism. To keep from making such an awkward mistake, patients with tension and severe throbbing of the abdominal aorta should be examined daily, and kept on a fast for a few days. If the condition is high blood pressure, the throbbing will soon pass away, and will not return unless overeating or improper eating be indulged in, or sensuality in some form be practiced. The symptom is often found in habitual coffee drinkers.

Obscurity of Abdominal Symptoms.--Reflex pains often get physicians into trouble. Operations on the abdomen have been performed by wise physicians for reflex pains in pneumonia; the symptoms being pain, tenderness, gas distention, temperature, frequent respiration, but lacking the pulse of peritonitis. Extensive intercostal neuralgia may be mistaken for abdominal affection; also for lung disease. The intercostal nerves end in the abdominal wall.

Abscess in the wall of the abdomen may be mistaken for peritoneal disease. More than forty years ago a case of abscess of the abdominal wall came into my hands, after several good physicians had named the disease peritonitis and given an unfavorable prognosis.

Volvulus (Twist in the Bowels).--This is a rare obstruction, constituting about one-fortieth of an intestinal obstructions. Men are said to have this affection oftener than women. The cause is probably an extra-wide mesentery. Invagination is probably made possible from the same cause.

Volvulus symptoms are tympanitis; great peristatic pain; inability to have an action from the bowels after the segment below the obstruction is emptied with enemas.

At first the pain is periodic. It gradually increases and becomes more constant. If no food is given from the start, pain will not be so marked. Vomiting will be a more or less constant symptom. Symptoms must vary to agree with the temperament and excitability of the patient.

The disease is so rare that a diagnosis will be made after an operation. Any case presenting symptoms of obstruction with symptoms of profound prostration--giving the appearance of being on the verge of collapse--should be opened up, and whatever is found should be righted as quickly as possible. Such cases do not stand the shock of prolonged operations well.

Robinson declared that the chief etiology of volvulus sigmoid (this furnishes about sixty per cent of the locations) is elongated sigmoid, possessing a narrow foot, accompanied by inflammation caused by vigorous action of the left psoas muscle, which injures the sigmoid, inducing migration of germs or their products through the coats of the bowels, inciting plastic peritonitis. Adhesions follow, favoring the development of this mechanical obstruction. The cause back of all causes is intestinal decomposition, with infection by toxins. Man pays and pays for lack of control in eating--for food drunkenness.

Volvulus occurs in subjects over forty years of age. Marked tympanitis, or meteorism, or gas distention, is first located in the left iliac fossa. This may be remembered as a small, but not dependable, diagnostic point.

Liver

Hypertrophy of the Liver.--A fullness is observed under the ribs on the right side. Tumefaction of the spleen co-exists. When it does, there is tumefaction of the upper half of the abdomen. This is especially noticeable when the patient stands. The liver is more developed in children than in adults.

To determine the amount of enlargement, place the patient on his back with legs flexed, and begin the palpation and percussion on the lower abdomen, gradually going up toward the ribs. In enlargement the

dull, flat sound will be found anywhere below the ribs, depending upon the amount of enlargement. Under normal conditions the flat sound begins two fingers' breadth below the nipple, and terminates at the costal border (border of the ribs).

The liver is prolapsed when the flatness is below the points mentioned.

The border of the upper line of the liver is on a line drawn from the right border of the sternum at the level of the sixth costal cartilage. It then follows the sixth rib to the right mammary line, and reaches the seventh rib on the axillary line, the ninth on the scapular line, and ends, at the spine, at the eleventh rib. Strong percussion is needed above to bring out the dullness, but light percussion is sufficient below.

Normally the lower limit of the liver may be confounded with kidney flatness at the axillary or the scapular line. The liver extends from the eleventh rib, following the costal border midway between the ensiform cartilage and the umbilicus, and terminates in the left side at the level of the apex of the heart. Liver flatness is diminished when there is emphysema of the lungs, gas distention of the stomach or bowels, or distention from ascitic effusion.

Atrophy of the liver occurs in cirrhosis and yellow atrophy.

General hypertrophy occurs in alcoholism, and the enlargements occasioned by liver and heart derangement brought on from excessive eating of starch and sweets,

(f) Urinary Apparatus

Lumbar pain is an accompaniment of all derangements of the pelvic viscera. The lay mind associates backache with kidney disease; but backache may mean rheumatism, constipation, piles, fissure, prolapsus of the womb, endometritis or endocervicitis, enlarged prostate, stricture of the urethra, etc. Too much attention is given to lumbar pain or backache in connection with kidney affections. Indeed, severe kidney disease may be developed without much discomfort in the back.

In nervous diseases, pain in the bladder is felt in urinating, especially at the expulsion of the last few drops. In urethral irritation it is the first urine that causes discomfort. Hysterical women are very prone to have urethral irritation. Hysterio-cysto-neurotics are usually subjected to so many operations that they are ruined, but never cured.

In this connection I wish to chronicle an observation that I have made: In all cases of tabes dorsalis I have found granular inflammation and great sensitiveness of the urethral mucous membrane, and almost invariably stricture. I have made a practice of using the olive-tipped sound and rubbing away the granulations, and at the same time dilating any stricture that may be present. I have found this treatment a valuable adjunct to the general treatment.

Of all influences leading to the development of tabes, venery stands first. Hence a successful treatment of tabes dorsalis must keep in view the need of remedying the sexual neurosis.

In locomotor ataxia, and in some cases of arteriosclerosis, desire for urinating is lost. The subject must use his reason and attend to this function at stated interval. The urine is sometimes voided without consciousness, and unless the subject sees it pass he will not know it.

Frequent desire to urinate may be wholly due to nervousness; or it may be due to stricture, granular inflammation of the urethra, irritation and inflammation of the bladder, gravel or stone in the bladder, polyuria (hypersecretion of urine) due to drinking overmuch, or eating sloppy foods--soups.

In urethral stricture the stream is often divided, the length and volume of the stream is diminished, and a few drops will be passed after leaving the urinal. This is also true of prostatic enlargement. When the urine stops suddenly, it indicates stone in the bladder. Pain at the end of the penis is another sign of stone in the bladder.

Retention of urine is where the urine is held in the bladder without power to empty it. This demands

catheterization. Partial retention is the habit of carrying residual urine--a small or large amount may be retained after all is passed that can be passed. This in time causes a filthy bladder, and consequently bladder disease. Catheterization and washing out the bladder with tepid water will give great relief. Enlarged prostate, stone, and partial paralysis are the causes of this affection.

Anuria is suppression of secretion, and the bladder is found empty.

Examination of Urine (see tests in medical dictionary).--Urine varies in quantity. When below 1,200 grams (38 ounces), oliguria (scanty urine) is said to exist; when above 1,500 grams (46 ounces), polyuria exists.

It is necessary to note the amount of urine voided in twenty-four hours. Make a note of the time of urinating, and throw the first urine away. Then save all voided, including that which is passed at the close of the last hour in twenty-four. If there are about thirty-eight to forty ounces, with no symptoms of kidney derangement, such as sugar or albumin, all is well.

Note the color, transparency, consistency, odor, filaments (threadlike appearances), substances in suspension, sediments, and always the reaction and density.

When the urine is turbid, its cause must be known. This condition is due to the presence in it of mucous, pus, uric acid, urates, phosphates, etc. Mucous precipitates by adding acid; pus forms a curdle by adding ammonia. Uric acid and urates are dissolved by heat; phosphates become soluble by adding acetic acid.

The cause for change in color should be determined. A reddish or brown appearance is caused by the presence of blood. However, certain drugs cause this appearance (coal-tar remedies in certain subjects). The microscope reveals the red corpuscles. Hemoglobinuria, requires the spectroscope; also urobilinuria. An intense color indicates bile pigment. (See test table in medical dictionary.)

The most important tests are for albumin and sugar. A simple test for laymen to determine the presence of albumin is to boil urine in a test tube, or a spoon if a tube cannot be procured. If the urine becomes milky or cloudy, add a few drops of lemon juice. If the urine clears up at once, there is no albumin. When suspicious of albumin, the patient should consult his physician and have the urine thoroughly examined.

Normal urine has a peculiar, well-known odor. When urine gives out an ammoniacal odor (smells of ammonia), it indicates bladder derangement, retention of urine, or possibly it may come from eating raw vegetables. Fecal odor indicates a vesico-rectal fistula--an opening from the bladder into the bowels.

In diabetes the urine, like the breath, may have a sharp, pungent, metallic, or ether smell. This odor is an unfavorable prognostic sign. It indicates a threatening diacetemic coma (diacetic acid in the blood). When this odor is present, the urine should be tested with ferric chloride, which gives off a burgundy-red color.

In dyspeptic coma, related to diaceturia (diabetes), diacetic poisoning, the principal symptoms are: a sharp epigastric plain (stomach pain); an increasing wandering or beclouded state of the mind, which gradually terminates in coma; then comes the final state, which is marked by a characteristic breathing, described by Kussmaul as follows: "The breathing is divided into four stages; namely, a brisk inspiration, a pause, a brisk expiration, and a pause," This syndrome (aggregate symptoms) is liable to be precipitated by anything that will produce fatigue. A journey is liable to precipitate the symptoms. I have noted that diabetic subjects, on coming to Denver from low altitudes, are liable to do themselves harm through their desire for sight-seeing--they are inclined to walk overmuch and overdo in many ways.

Before the ending referred to develops, there may be detected a peculiar odor of the breath and urine; namely, a strong ether odor, in some cases very pungent. This odor from the breath of diabetics is not characteristic; for I have met with it in children suffering an attack of gastritis, also in fasting to overcome various morbid affections. This peculiar breath develops in those suffering great anger, and from other excessive emotions.

It is said this odor is caused by the development of acetone in the blood. Rheumatism--the arthritis-deformans type--is especially marked by the development of acetone (vinegar) in the blood.

It is thought that diabetes is more probably caused by the development in the blood of a ptomain. I have found that gastro-intestinal decomposition is invariably a precursor of diabetes. When digestion is reduced by dietetic abuse, and the nerve energy is broken because of enervating habits, power to digest the carbohydrate foods is lost, when they are ingested, acetous fermentation must take place. Just what syndrome is set up will depend upon the physical state and the personality of the patient. A diabetes may develop; some form of rheumatism may be the manifestation; insanity or crime may be the ultimate result of the morbid process.

Where this state of the blood or urine is suspected, the following test should be made: Place urine in a test tube. Allow a drop or two of perchloride of iron to trickle down one side of the test tube. The iron, being heavier than the urine, falls to the bottom of the tube. If there is sugar present--if there is ethyl-diacetic acid present--the perchlorid turns the urine brownish. This coloring is not characteristic, for the same color can be obtained if the patient has taken antipyrin. The use of the drug should be suspended until the sugar test is made, and then the drug should be abandoned by those who would like to get well. Anything that depresses the body will prevent recovery.

Turpentine, onions, and asparagus impart a disagreeable odor to normal urine.

The consistency of urine varies. Sometimes it is thick, and viscid. It may froth easily. This should lead to examination for albumin. If a spot of urine on the clothes attracts flies, sugar should be suspected--which, of course, suggests diabetes.

The color of urine varies. It may be very light-colored in diabetes, inflammation of the kidneys (interstitial nephritis), nervous polyuria, and at crises--which latter means at the time when symptoms of disease decline.

The color is deep when disease is intense; for the excretions are scanty. The urine then is a reddish or brown color, due to bile. When the urine is very red, blood should be suspected. If in women, menstrual discharge may account for it. If the blood is from the urethra, it will pass when not voiding urine. When from the kidneys, the blood is more uniformly mixed with the urine. Carbolic acid imparts to urine a blackish-brown color; rhubarb, logwood, and senna color the urine red; santonin gives it a greenish yellow appearance.

Chyluria.--Instead of urine being clear, it becomes turbid when containing chyle (emulsified fat) or pus.

An excessive flow of urine--a temporary polyuria--may be caused by eating freely of vegetables, soup, fruit, and salads. Besides, there may be a slight urethral and bladder irritation, produced by the excessive alkaline intake. Coffee and oranges, or other fresh fruit eaten for breakfast, exclusive of other food, will often cause an excessive flow of urine. Watermelon causes an extra secretion of urine, and should not be eaten by those of a constipated habit, because it diverts fluid elimination by the kidneys. Any foods inclined to stimulate the kidneys to extra action should not be eaten by those with an established constipation habit. Thirst should be endured; for it is a demand for fluid in the gastro-intestinal canal, and unless supplied by drinking or using an excess of fluid furnishing foods, the eliminatng organs will yield to severe demand (thirst), and the necessary amount of fluid to supply the thirst will be forthcoming from the blood for normal secretion, and excretion will be established by the bowels; which means that the vicarious work of the kidneys will be given up when elimination by the bowels has been reestablished.

Scanty secretion of urine--anuria--may be caused by diarrhea or obesity. In the former case the bowels have taken up vicarious work for the kidneys. In the latter case the tissues of the body take the place of a lavatory. In unmasked language, the victim of this physical state urinates into his own tissues.

One of the very necessary states of the body for maintaining health is the proper disposition of water in the system. When constipation exists as an established habit, swilling the stomach with water fails of accomplishing the desired end--causing the bowels to act. On the contrary, it waterlogs digestion, causing fermentation, diluting the enzymes, and flushing them out of the body by way of the kidneys, leaving the bowels as dry as Sahara.

Bladder.--When the bladder is distended, a hand laid over it will feet a globular swelling, which gives out a dull sound on percussion.

(g) Genital Organs

Sex power should be examined into. At the beginning of nervous diseases the power is often increased, but it diminishes as the disease advances. Anaphrodisia is viewed as unfavorable in diabetes, Abuse of this function hastens old age and old-age diseases. A natural lack of this power indicates inefficiency, lack of ambition, and low resistance.

Masculinity is necessary to accomplish work. Sex neurosis must not be mistaken for power. Lasciviousness means mental weakness and lack of discipline. Drunkenness cannot be said to be thirst or a desire for water.

Empire-builders and great men are those who use their power for self- and world-building and not for self- and world-destruction.

Disease from sexual abuse brings on paranoia sexualis or primary monomania--a delusional insanity confined to the sex subject. 'Those in this state are given over to physical and mental abandonment, to satyriasis (excessive venereal desire). In women the disease is named nymphomania (excessive or furious desire); other names are hysterio-mania and furor uterinus. As the name implies, there is an affection of the womb and ovaries, bringing on the sex excitement.

The mental state of the sex neurotic is beyond the influence of moral suasion. Physical and mental training may overcome the disease. Local diseases must be corrected. Urethral irritations, inflammations, and strictures must be overcome; uterine irritations, hyperemia, inflammations, enlargements, and ovarian affections must be corrected. Constipation should be attended to first, and morbid appetities must be corrected. Candy, cake, and ice cream eating is injurious. The mental state must receive special attention; for all derangements of a sex nature are more mental than physical.

Lasciviousness is a bad mental habit which is easily. enough overcome before the habit is fully formed. But like all bad habits, it requires all the power, and in man; cases more than the power, which the sex neurotics have, to throw off the disease.

Self-abuse appears to be universal; but the better class abandon the disgusting habit early in life. The harm comes from lost self-respect and the curtailment of efficiency. Men are handicapped in every race in life. The silver-tongued orator barters brain power for sex pleasure, and forty-five years of age finds him no more interesting than he was at twenty-five. Man, to be interesting, must continue to grow as long as he lives. Only the sensualist retires and is satisfied with half-achievements.

When the sex power is utilized in self-development, man never ceases to grow mentally. This is the reward of self-control. All men who have made history have done things-have actually lifted themselves by their own mental boot-straps. They have been strongly sexed, and have not dissipated their energies lasciviously.

Women who allow themselves to develop lasciviousness lose their color early. They become nervous, irritable, and shrewish. Old age comes too soon. They may attract by giving their personal appearance much attention; but their aura sexualis attracts satyrs who are lust-drunk, rather than those who are looking for loyal friends. A nymphomaniac--a woman whose psychology is pronouncedly hysterio-maniacal--cannot find satisfaction in the love of one man. As a rule, there is one for whom she would lay down her life, but loyality is not in her make-up. Promiscuity is one of the features of monomania sexualis. Voluptuaries, if ever cured, must eat properly, take the proper care of the skin, and be very busy in a work that will occupy every hour. lf such people have one idle hour, it will be spent in disloyalty to self, friends, and family in unlicensed liberties.

A man may have but one bad habit, and that habit in time will ruin him. There is but one safe life to live for man or woman--namely: be busy, cleanly, and constantly on guard in resisting the formation of bad habits; for everyone who builds bad habits in time is mastered by them.

Fortunate, indeed, is the one who is mastered by good habits.

Children should be examined for tight prepuce. Circumcision is seldom necessary. Simple dilation with dressing forceps is sufficient. Then, if there is adhesion, the foreskin may be rubbed or pushed back.

Little girls often are troubled with leucorrhea. The cause is acid poisoning. The acid comes from gastrointestinal fermentation. The treatment is cleanliness and proper diet.

In examining adult males, scars on the penis point to soft chancre. The hard chancre does not leave a mark, unless it has been subjected to severe cauterization, which is unnecessary in either form of chancre.

Eruptions, eczema, herpes, syphilitic papules, etc., are often found. Too often herpes will be treated for syphilis by someone who is either ignorant or knavish. The greatest harm to the victim of such treatment is the developing of syphilitic mania--syphilophobia.

Varicocele (enlarged veins in the scrotum) is known by the sensation of a bag of worms. Surgery for this derangement is malpractice, the same as operating to remove varicose veins of the legs. Venereal abuse, self-abuse, lasciviousness, are the causes, along with digestive abuse. Eating in a way to generate toxin poisoning is a live second to venereal abuse. The cure must be the correcting of bad habits of mind, body, and eating. All cases can be cured, if properly treated early.

Hernia is easily diagnosed. There is a history of a small tumor that comes on standing and coughing, and goes away on lying down.

Enlarged prostate may be discovered by introducing a finger into the rectum. About three inches, or from two to four inches, anterior, a round, hard, tumor-like body will be felt. This is the prostate gland. Much injury is done this organ by massaging it--a treatment that is quite a fad among a certain class of medical men. This treatment is often as far-fetched as giving digitalis or strychnin for an already jaded heart, or morphine for a restlessness brought on from oxygen starvation in pneumonia, or for precordial oppression when the heart is enervated, or for headache due to hyperemia of the brain. There is a difference in the results, however. The drugs used in such haphazard fashion often cause death, while the massage cultivates an enlargement of the prostate; or perhaps I should say that the massage becomes an ally of venery, coffee, tea, alcoholics, tobacco, sugar, meat, and starch in hastening a senile tendency.

Manipulating the prostate is one of hundreds of nonsensical professional inanities. The average human being is inexcusably gullible toward the title-decorated profession; and the professions, being made up of the same common clay, do not hesitate to park their wants on a common so succulent.

The mass of humanity--the high, the low, the rich, the poor--nearly all are educated to stand for useless professional service amounts to--are superfluous and have in palliating or extirpating symptoms or effects (affections)--and this is what ninety per cent of present-day professional service amount to--are superfluous and have no excuse, except that the people are unwittingly educated into an officious impertinence which would be criminal if the acts were not covered by the ethics of social custom--which is only another name for the dogmatism of convention.

There is but one other as tragical parallel in civilized life, and that is war. The ethics of war allows those connected with it to commit crimes so impossible and atrocious that hell weeps at their enormity.

Custom is a refuge for inhumanity; and in the matter of healing, the sins committed in the name of professional science, charity, humanity, and skill--expert service--are equaled only by our present World War.

Such a small affair as massaging the prostate gland is professional impertinence practiced by those who look enviously on those intrusted with larger impertinences, such as removing the appendix or ovaries, operating on the gall bladder, and all other internal organs, with no more excuse for the crime than that professional ethics and human gullibility permit it.

Impotency may be a symptom of nerve-center derangement, excessive venery, auto-suggestion, or

mental worry.

Priapism is a sex neurosis brought on from abuse of the grand passion, eating overstimulating foods, and "going the pace" until the body is desperately enervated. It is a sign of sex exhaustion.

Only the olive-tipped sounds are fit for diagnosing and successfully treating stricture.

The examination of women should begin with an inquiry into the function of menstruation--its regularity, if painful, quantity, etc. Painful menstruation may be due to inflammation of the mucous membrane--catarrh--flexions, versions, ovarian engorgements. The primary cause of all uterine and ovarian derangements in young or single women is infection of the pelvic lymphatics from intestinal putrefaction. Correcting the dietary, mode of living, and care of the body will soon correct the worst forms of pelvic affections of single women. In married women--especially those who were married suffering from pelvic-lymphatic infection--all sorts of evils will follow confinements. In the first place, labor will be longer and more painful than it should be; injuries will not heal kindly; slight septic infections will be experienced, which will cause a perversion of the milk, followed by sick children; and mothers Will be left with enlarged wombs, with an impetus in the line for building uterine or ovarian tumors, and, in time, with chronic toxin poisoning and some form of cancer.

Uterine hemorrhages in virgin women may be due to ovarian and uterine engorgement, brought on from lymphatic infection, lascivious habits, idleness, reading of trashy literature, and picture show suggestions,

Hemorrhage in married women is due to three causes, aside from puerperal hemorrhage; namely miscarriage or abortion, submucous fibroid, or cancer.

Leucorrhea.--A slight discharge before and after menstruation does not mean anything except an acidity from overeating or eating improperly--eating candy or too much sweets.

A thin, catarrhal, albuminous discharge, greenish, yellowish, or white, means catarrh.

A muco-purulent and copious discharge is indicative of venereal disease. A fetid odor may mean an incomplete abortion, or cancer.

Abortion Habit.--It is generally thought that repeated abortions are due to syphilis. I have not found this true. I have found that there are temperaments that establish habits very easily. Such people, when they meet with one miscarriage, are liable to have others follow. Correcting life and habits will cure.

Enlargement of the lymphatic glands in the groin (adenopathy) often indicates an ulcer or chancre in the vulva. Where there is enlargement of these glands, and they feel like bird- and buckshot under the skin, this condition indicates toxin infection from putrefaction in the bowels. This is true of men as well as women. An infection with syphilis under these conditions is favorable, with the usual treatment, for developing a very formidable type of disease. These glands enlarge in cancer of the womb or rectum.

Inflammation and suppuration of the glands of Bartholin, situated on either side of the lower part of the vagina, indicate gonorrheal infection. Unless such cases are treated carefully, systemic infection may spread, break down the health, and cause death.

(h) The Nervous System

The facies (appearance) of paralysis is quite pronounced, and understandable to those acquainted with the various expressions.

Paralysis and its deformities are many. Any part of the nervous system may be involved. The muscles and organs to which the nerves are distributed must become atrophied, and the opposing muscles are rendered rigid and spasmodic. The intellect must be affected, and the countenance becomes an index.

Action or motility must be observed.

Motion--voluntary motion--is lost. The amount of paralysis must be in keeping with the amount of lost power.

Monoplegia is where one limb is paralyzed. **Hemiplegia** is where one arm and one leg are involved. Where the face of one side and the limb of the opposite side are involved the name of **crossed** or **alternate paralysis** is given.

When the two upper or two lower limbs (which is rare) are affected, the name of **paraplegia** is given. Where the paralysis is confined to less than one limb, or to a part of the extensor, or part of the contractor, muscles of one limb, the paralysis is named **partial paralysis.**

Where the limb is entirely paralyzed, it is readily recognized; for it is devoid of all motion and cannot defend itself at all. When raised, it falls as dead, if allowed, if burned, it cannot get away from the torture.

Where the paralysis is of a muscle or two, the auxiliary and opposing muscles undertake to do vicarious work. Where this condition is pronounced, deformity must develop; for the muscles which are doing extra work are unduly developed, and those which are paralyzed go into a state of atrophy. The two extremes in a limb cause the limb to be deformed. If the strengthened muscles are extensors, the limb is forcibly extended, and vice versa.

A paralyzed side of the face is smooth. This contrasts very greatly with the opposite side, which is overdrawn and contracted because of losing the counterpoising effect of the paralyzed opposite side.

If the patient attempts to whistle, spit, or put out the tongue, the movements mark the change that has taken place. The movements lack uniformity.

The orbicularis palpebrarum (the muscle that closes the eyelids) is paralyzed when the cause is peripheral (external); but when the lesion is central, this muscle is left intact. When this muscle is paralyzed, the eye remains open, and the dust settling in it is a source of much annoyance as well as discomfort.

Where muscles are relaxed, the paralysis is said to be flabby; the opposite is contracture.

Where there is contracture or rigidity of muscles, the upper extremity hugs the side, while the lower extremity extends. The arms stick to the side; the forearm is bent at a right angle; the hand is flexed and pronated (palm down). The toes of the extended leg are flexed toward the sole.

Contractures may be hysterical or functional; but often they are due to organic change, caused by an inflammatory state brought on from toxin poisoning or a traumatism (injury). Atrophy of the brain, spinal cord, or membranes accompanies or causes paralysis. All permanent lesions end in contracture. The reason for this, as stated before, is overdevelopment of opposing muscles and atrophy of the paralyzed muscles. A time comes, however, when there will be a wasting of even the muscles not paralyzed, because they become so contracted that they have no other movement than that of contraction. The effect is that of inactivity, nutrition fails and the whole limb withers.

Much of this sort of deformity follows infantile paralysis. The disease is central. Where the paralysis is of vital organs, the children die. Where the paralysis is of one extremity, complete, there will be no contractures, hence no deformity. Where the paralysis is partial of one limb, or partial in two limbs, there must be contractures, hence deformities.

Much unnecessary financial burden is placed on the parents of paralyzed children. In many instances the burden is too great, when the end is, or should be, known to the medical adviser. The end of all treatment must be contracture, which means deformity. Possibly the cutting of tendons to correct a very inconvenient or unsightly deformity may be advisable; but if the object is a cure, or holding out a hope of cure, it is cruel to parents to give hope where there is none to be given.

All lesions sooner or later end in contracture, and mean degeneration. Of brain diseases it may be well to mention: inflammation, hydrocephalus, tumors, hemorrhages, traumatism (injury), degeneration,

medullary diseases (diseases of the white substance of the brain), myelitis, sclerosis, tabes, and meningitis; for the latter disease has contractures among its symptoms. Indeed, it is reasonable to believe that infantile paralysis is cerebro-spinal meningitis.

Gait.--Where the contracture is not too great to prevent locomotion, the following symptoms appear: In flabby hemiplegia, or hysteria, the leg drags (helcopode). The sole of the foot drags or sweeps the ground; or the movement may be circular (helicopode), and the foot comes to the ground on the toes.

In flabby paraplegia the step is short, the legs are apart, and each limb is alternately dragged without clearing the ground. The hips incline and rotate while walking.

Paraplegia with contracture is marked by short and slow steps. It is difficult to lift the foot, and only the toes touch the ground. There is a tendency for the feet to cross each other; the knees touch, and the thighs are held close together. The body reels as in balancing. This gait is called "cross-legged progression."

In paralysis agitans there is the added feature of an irresistible propulsion, which gives the patient the appearance of falling forward. Those unacquainted with the gait will have a feeling that the patient is putting on, or otherwise he surely must fall; yet such patients will walk for blocks, pitching forward as though they must fall.

"Steppage" is the gait of tabes dorsalis. Paralysis of the extensor muscles, especially of the anterior and external muscles, of the leg allows the toes to drop. This necessitates the lifting of the leg high (a stringhalt lift), so as to swing the foot which hangs, and the toes strike the ground first.

There is a pseudo-tabes of alcoholic, lead, and other toxin poisoning. Its gait is different from that of locomotor ataxia. The latter gait is not from paralysis; there is lost power for coordination (directing movements). When such patients close their eyes, or undertake to walk in a dark room, they cannot take a step.

It requires a close observer to detect the early symptoms. In the early stages the patient is awkward in turning back abruptly or standing on one foot.

Combined sclerosis--namely, posterior and anterior lateral hardening of the cord-is known by spasmodic rigidity of the extremities and a tabes--spasmodic gait--an exaggerated tabes gait.

There is another incoordinate gait of mixed tabes dorsalis--namely, that of the drunk man--in which the patient straggles and strays from a straight course. He sways and staggers, regains his equilibrium, to again lose it and then reestablish it, etc. In this case the patient holds his arms extended in the manner of balancing. This gait should not be confounded with chorea.

Convulsions.--Convulsions are readily recognized. The symptoms are characterized by a series of abrupt, involuntary contractions, which at times last long enough to keep the affected part in a set position for a while. These are named tonic convulsions. At other times the contractures follow each other rapidly--an intermittent contraction. These are called clonic convulsions.

Convulsions are general or local. In children, convulsions are common as a result of toxin poisoning. The earliest cause of convulsions in childhood occurs in the first month, and sometimes the first week, of life--namely, septic poisoning. The mother receives a laceration, or a bruising, which sloughs off, allowing absorption of more or less septic material. The only symptoms experienced by the mother are a slow getting-up, a slight fever, pallor (septicemia), and slowness in returning to normal. The septic state may be due to imperfect womb drainage. Rarely septic poisoning may be produced by a putrescent cord resting on an excoriated surface at the umbilicus. The convulsions from septic poisoning range from a slight one or more, to seizures repeated every twenty to thirty minutes for days.

Several years ago I was called to see a child, two weeks old, who, I was told, had been convulsing for eleven days. I watched it for an hour, and it had four during the hour. The spasms were short, not lasting more than two minutes. Recovery followed by proscribing the mother's milk. Another case comes to mind. This child, a bright boy a week old, had severe convulsions for twenty-four hours, which put his mentality

in statu quo. He lived an idiot, and died at twenty-two. Now I am told that his mother is dying of cancer of the womb, twenty-five years after the birth of that boy--undoubtedly due to lack of proper attention to the injury received at the birth of that child. This woman was a Christian Scientist at the birth of her child, and is yet, so far as I know. Nature moves on ideally or not, as she must; faith, backed by intelligence, ends well, but, when backed by fanaticism, it ends in disaster and ruin.

Convulsions in children, coming from irritation in the bowels from fermentation, and toxic poisoning from decomposition, are of daily occurrence. Convulsions starting in this way come and go. The child may outgrow them--whatever that means; but the epilepsy of after-life takes its origin in childhood convulsions.

Jacksonian epilepsy is a partial or sympathetic convulsion confined to one-half of the body. The herniplegic type, which belongs to the epileptic type, involves progressively the two limbs of one side. This type of convulsion is not accompained by loss of consciousness at first or in the beginning of the seizure. The patients watch their own paroxysms. This form of epilepsy indicates a lesion of the brain on the opposite side.

There are abrupt, involuntary contractions of one or several muscles of the face. The cause is neuralgia; and the neuralgia is caused by toxin--coffee, tea, tobacco, alcoholics, or gastro-intestinal decomposition.

Trembling or Tremors.--A motor disturbance. There are three varieties: (1) rapid rhythm-eight to twelve per second; (2) that having from five to five and a half to seven and a half per second; (3) slow, having four to five to the second.

One variety stops during voluntary movements (paralysis agitans); the other begins with the movements and grows more violent as the end approaches (multiple sclerosis). Then there is a type confined to one limb--the hemiplegic type.

Chorea belongs to children's diseases. It is an indication of bad care--lack of poise. Rest and correcting the manner of living, is the proper treatment.

F. NOSOLOGY

Nosology is naming and classifying disease; but as there is but one disease--namely, **Toxin Poisoning**--the names given to the organs affected are really nothing more than naming and classifying affections. Real disease may be likened to a string or cord on which affections are strung as beads. Break the cord, and the beads are lost--correct the toxin base, and affections must scatter. (See "Crises.")

II. Diagnosis

Diagnosis is a mystifying subject, because, unless great care is used, affections will be mistaken for primary disease, and treated as such until the organ takes on such pathologic changes as to become organically changed. For example, irritation of the stomach, kept up long enough, ends in cancer.

Inasmuch as mistakes of this kind are being made all the time, and not alone by mediocre professional men, too much caution on this subject cannot be preached.

When tumors are removed without even a thought of their cause, it is time to get busy on cause.

When gallstones are removed, when the appendix and ovaries are removed, without a thought being given to the cause of the derangements, we think of lack of etiological efficiency in high places.

Bacteriology is to blame for a great deal of shiftless laziness on the part of average physicians.

There are several orders of phenomena to be noticed in every disease; namely, direct cause, and reactory effects. A morbific cause starts up a physical or mental derangement; then follow organic affections. For example: Excessive eating brings on indigestion; indigestion causes gas distention of stomach and bowels. The pressure from gas on the diaphragm causes thoracic symptoms, such as dyspnea, oppression, heart

palpitation; eructating gas causes irritation of the throat. In time a sensitive throat and catarrh, enlarged tonsils, adenoids, and all the diseases peculiar to the mucous membrane of the nose and throat, will in turn be added.

The gas distention kept up by heavy eating causes distention in the lower bowels causes displacement of the stomach and bowels, and constipation. Constipation causes colitis, typhlitis, appendicitis, and inflammation of the lymphatic glands from absorption of putrefaction. Gas distension in the lower bowels causes displacement of the pelvic organs, interfering with the pelvic circulation, causing prolapsus, tumors, etc. The bladder also suffers from pressure; and in males this pressure produces irritation of the neck of the bladder and prostatic enlargement. The rectum becomes involved; piles, proctitis, and prolapsus develop. While these and many minor and obscure affections are in process of development, the nervous system is being affected; enervation is established to such a degree that resistance to disease-producing influences is lost; the environmental influences, which once were passed unnoticed, affect profoundly. Digestion and assimilation are profoundly affected. At this stage, germs become a complicating cause. This is the stage in this vicious pathological circle where tuberculosis and glandular involvement show up. In all this morbid circle, germ influence is an after-consideration; for in about a year and a half after tuberculosis has started in the lungs, germs are discovered, and it is said that the germs are not found earlier except in cases that progress rapidly. Man, like an apple, resists decay until resistance is lowered. Germ decay follows a bruise to the apple. In man, germ influence follows enervation.

Epidemic, infectious, and contagious influences get their work in after mankind's resistance is lowered by a thousand-and-one influences that break down resistancethat enervate.

The graphic picture of affections following the single cause--namely, overeating--must vary in keeping with the peculiarities of the patient. This vicious circle may be established in a child or adult who looks well to the unprofessional eye. Yet he is inflammable, so to speak, and only waits for the fulminant, which may be a germ of diphtheria, scarlet fever, measles, or some other external morbific agent.

After enervation, the affection follows the cause--overeating; then germ or contagious and infectious influences become secondary causes.

When a pathological chain of causes and reactions, as described above, is once started, it is obvious how very impossible it would be to fit a satisfactory nomenclature to it. Nomenclature forces too much attention to names, and so-called diseases are nothing more than affections set up by morbid sympathies. A nomenclature has, however, been evolved, and it is safe to declare that, instead of its being a benefit to the profession, it is a hindrance to right thinking; for it is almost impossible to find two expert physicians who will agree on a diagnosis.

Much to the disgrace of the profession, it is generally known that, if a score of physicians are consulted, the patient, when through with his last counselor, will have from ten to twenty different opinions.

Why is this? No doubt there are many reasons that could be given of an irrelevant nature; but only one reason is necessary, and that one is that all these different diagnoses are right and they are all wrong.

The rhinologist finds adenoids and bony growths in the nose. His diagnosis is right! The throat specialist finds catarrh, enlarged tonsils, and follicular inflammation. He is right! The heart specialist finds an overworked heart; if the disease has been running on long enough, he will find a heart lesion. He is right! The stomach and bowel specialist finds ptosis of the stomach and transverse colon, retarded digestion, and retention of food in the stomach. He is right! The gynecologist finds inflammations, prolapsus, fibroid tumor, maybe an ovarian cyst. He is right! The abdominal surgeon finds appendicitis, ovaritis, tumors, misplacements, etc. He is right! The genitourinary specialist discovers an enlarged prostate, and a foul bladder from retained urine. He is right! The kidney specialist finds albumin or sugar in the urine, and his diagnosis is Bright's disease or diabetes, He is right! The syphilophobiac finds a positive Wassermann test, and his diagnosis is syphilis; and he is right!

All other specialists find something relating to their specialty; and they are all right, and, as stated

before, they are all wrong. Their failure in curing the case is proof positive that they are all wrong. Of course, more or less palliation is given, but no cures need be expected; for all these so-called diseases are affections--sympathetic derangements--and, to get rid of them permanently, the cause must be removed. Such patients are better after taking the prescriptions of one doctor, and worse after taking the advice of another; but the ebbing and flowing, or the oscillating between better and worse, is the legitimate and characteristic progress of toxemia or intoxication, and the getting better or getting worse after taking a given treatment is simply coincidental. In this fool's paradise some doctors are made famous and others are ruined. It is largely a game of chance, except when social favoritism loads the dice. (Read in this connection chapter on "Crises.")

III. Prognosis

To foretell the evolution of diseases without a comprehension of real cause is attended with delusions--mental mirages.

There is such a thing as classifying experiences based upon the habits and customs of society, disease-building though they be, enabling those who become expert in the science to diagnose and render aid, without the priests of the system having even a conception of what a change of habits and customs would do for their theories built on the sands of error.

For illustration: Physicians who are adjusted to a clientele that uses alcoholics, tobacco, coffee, and tea would be professionally lost in a society of abstainers. A science of palliation based on debauchery will ill fit one based on normal habits or sobriety.

Cause of disease can never be discovered in those who are abnormal from debauchery. Health, and what it takes to maintain it, is the only way to find a correct diagnosis and prognosis. When cause is found and removed, therapeutics is superfluous. (See chapter on "Therapeutics.")

IV. Therapeutics

Therapeutics is that branch of medical science which considers the application of remedies as a means of cure.

The drug idea is to relieve and cure. In the very nature of man, the drug-and-relief idea is bad; but if man is one thing more than another, he is a habit-forming animal, and if his habits are bad and work for his destruction, he will accept relief rather than stop his habit, which is a natural cure--if to stop a disease-producing habit can ever be considered in the sense of a remedy or cure.

Drugs, or anything that will relieve without removing cause, is a questionable good, and certainly an outrage and a crime where the remedy blinds the physician as well as the patient to the need of searching for cause and removing the same.

To illustrate: Today 1 received a letter from a gentleman who wrote me concerning his wife. He declared that for the past twelve years his wife, fifty years of age, had enjoyed very good health, with the exception of occasional slight indispositions, which were quickly cured by ----- a drugless physician. He then so graphically described symptoms which had made their appearance within the past month that it left no doubt that his wife was far advanced with cancer of the womb. Should such tragedies happen? Never! They are the fruits of a fallacious system's understanding of the cause of disease. A physician who was not in bondage to a creed-bound etiology would have discovered this woman's perverted nutrition in time to save her.

There is no excuse today for systems of healing which ignore the truth that there can be no cure without righting errors of nutrition, and there can be no errors of nutrition the causes for which cannot be found in the mental and physical habits of the patient, and the patient's attitude toward his or her environment; for be it known that we attract what we have.

To relieve a pain with drugs, by manipulations, by ignoring, by suggestion--in a few words, to relieve in any way without knowledge of the true cause--is a crime against the patient, against society, against

morality, against ratiocination, and tends to bind man hand and foot below his possibilities.

Discomfort and pain are educators. If man could not find palliation, he would be forced to seek the cause of his discomfort and remove it; and, in doing so, he would discover himself and his God--which is the object of being. Know thyself!

First of all, man seeks thrills and shocks, after he has dulled his sensations on the commonplace--after abusing his privileges. When he takes to the toboggan because the travel on the plain has grown monotonous, his pace will soon force him to seek relief. It is at this stage of man's career that he flounders in reliefs.

What is a saloon? A place to secure relief from discomfort. What is a cigar store? A place to find a new sensation--relief from discomfort. What are midnight lunches? Means of finding relief from discomfort. What are bawdy-houses? Homes for lost souls seeking relief from discomfort. What are doctor shops and drug stores? Places for seeking relief from discomfort and pain. The same is true of hospitals and sanitariums, resorts of all kinds, including globe-trotting, sight-seeing, etc., etc. And, neither last nor least, what are churches? Places for those who are uncomfortable in mind and body--palliation.

After a glimpse at a few of man's institutions for seeking relief from suffering, it is well to think over the question of whether all this restless seeking after relief is necessary. Yes, anything that is, is necessary, and will remain until something better can take its place, The relief which man seeks is in keeping with his development, and his development must be held down to the horizon of his sensations.

Those who are looking for a better plan to secure mind, heart, and body ease would do well to read this first volume over and over; it should be found a rational way out of discomfort. It is not a doctor, a healer, a drug, a formula a diet chart, some peculiar exercise or bath, that man needs. He needs to know what causes his discomfort; and then he can become his own physician, as soon as he proves the truths of the book in his own life. When man learns to know how and why he fell, he can lift himself up.

The day for healers and saviors should be past. Teach man to be his own healer and savior--then civilization can reorganize on a rational basis. So long as it is man's duty to save the world, the world will not be saved; but when man learns to save himself, without any intermediary, then the world is saved.

We need no therapeutics--no remedy; we need knowledge of life. Instead of the professions being a good, they are a curse. The world would be better off in a hundred years from now if they could be blotted out; for they are a menace to progress; they are palliatives; they cater to man's appetites and passions; they keep him in ignorance of his best interests; they keep him enslaved to his passions.

Nature can take care of herself; and, as man is a part of nature, he can take care of himself, if obstructions which have grown up about him are removed.

Nature's Plan as Concerns Utilization of Building Material

Birth and death are activities always present in man's body. Every minute cells are born, and every minute cells die.

The process going on is building up and breaking down. This process means that new material must be brought in and made into new cells, and that the old cells must be broken down and removed. To accomplish this, **Two Ferments** are required; namely, unorganized ferment (enzyme) and organized ferment (bacterium). The organized has received attention in a previous chapter.

It is my desire that the readers of this book look upon bacteria as beneficial rather than as enemies to man.

At the very genesis of this process--namely, bringing food to a state of solution, fitting it for absorption--there must be some plan for preparing material for cell building; and there is. The material must be dissolved, and from the time food enters the mouth until it is a living cell it is accompanied at every step

of its progress by refining elements called enzymes. The enzymes--from those in the mouth, stomach, and bowels to those that kiss life and mind into a finished brain cell--are graduated and fitted for their special purposes; and so subtile and varied are they in their work that they are a constant surprise to medical scientists. To show how the learned men of the profession are surprised at the mysterious subtilty of some of the finer ferments, enzymes, I take pleasure in reproducing one of my recent articles from "Philosophy of Health":

Vitamin--What Is It?

Vitamin ("vita" = life + "minum" = small)--small life. We talk much about life; we see where it is, we see what it does, we see it manifest all about us, we know that there is life; yet we cannot see it, we cannot feel it, we cannot analyze it. We cannot live without it. We know that it is, because we see how matter acts under its influence, and how it acts when life is removed from it.

Life is, or it is not, an entity. If it is an entity, it is much too microscopic for man's extended senses (instruments of precision). If it is not an entity, then it must be the "summa summarum" of a physiological synthesis. If it is an entity, then it must be a something that is ommipresent, and at the same time so subtile, subsensorial, and elusive as to sidestep the chemist and all his analytical wiles. Yet it adds the missing link to a synthesis that becomes an animate being.

It is difficult to conceive of life as not present. As in the case of air, light, and electricity, we must assume that it is; or otherwise analytical reasoning becomes void. Nature--the great artificer, the chemist par excellence--and the associational, or social, nature of elements, cause the latter to assemble and unite in just the right proportion to make a compound--a synthesis--attractive for the everpresent life, which at once enters, and the inanimate becomes animate.

Would not life--animal life--be exceedingly precarious if omnipresent life itself were not ever present? Suppose a supply of air, which is a coarse substance compared with life, should have to be gathered, or material for its supply should have to be discovered and purposively supplied--would not life be so precarious that being would scarce secure a hold, and that to remain in being for years, as man does, would be impossible? As it is, man dies for lack of air. The lungs and blood fail to exchange gases, notwithstanding the fact that air is ever present and man's body is submerged in it continually. Let us assume a simile for life: Suppose that a living being were compelled to discover just what foods contained life--vitamin--and he were compelled to provide himself with enough or die, is it thinkable that the world would be populated with beings? Every little while the medical profession discovers something which "God forgot" that is necessary for man's continuance in life! Oh, wonderful man! Wonderful doctor! Wonderful mind!

We must not forget that, in seeking knowledge, a little wisdom should not be despised. The medical blend of knowledge and wisdom is not good. A little more wisdom and a little less knowledge would help some.

Life is not dependent upon procuring a food that has a mysterious property, but upon knowing how to care for the body in such a way that life will flow in and take up its habitation therein.

Iron is needed in our bodies; without it we cannot extract the oxygen from the air. Why do we at times lose the power to appropriate iron from the food consumed? Because assimilation is injured by toxemia, and toxemia is developed by living in a manner to cause intestinal decomposition. The toxin overstimulates and enervates; and enervation causes sluggish elimination. The retention of excretions injures the life of the blood, so that it renews itself badly; then it fails to appropriate the iron from the food intake. And as this is true of iron, so is it true of every other element. At times all elements are refused; namely, minerals in the food, oxygen from the air, and, neither last nor least, life--vitamin--from the living presence.

A physiological synthesis must be made up of just the required elements to attract the absent--which is ever-present--life. Then, when the elements in the synthesis become quantitatively disturbed, this subtile element departs and the synthesis disintegrates.

Vitamin is a new name--a misnomer--to describe an element that may or may not be found in food. It may be refined out of food, as in polished rice and white flour; it may be rendered inert by cooking; and it may be antidoted, as we can prove at any time, by the use of iron, alcohol, tobacco, coffee, tea, narcotic drugs, mineral poisons, toxin from decomposition, and, neither last nor least, by depressing and discouraging thoughts, fear, envy, hate, etc. This element is as old as life--as old as creation--and is known as enzyme. Digestive ferments have been known for many years, but not known in their most subtile forms and obscure developments.

No wonder that the subtiler forms of enzymes are mistaken for life--vitamin; for they are so closely linked to the genesis of being that one appears as necessary as the other, and the action of one may be confused with, or mistaken for, the action of the other.

If there were some way to extract the enzyme from an egg, it would not--it could not--hatch. Of course, we know that the egg must be fertilized, or it cannot take on quickening--the vitamin, the little life, cannot be attracted. The last step, however, in the synthesis of being is fermentation, and coincidently quickening. The most refined, unorganized ferment is the last element before life-vitamin--adds itself to an organized compound of elements, which I call a synthesis of being.

Enzymes range from the coarse solvents--namely, ptyalin, amytopsin, trypsin, steapsin, pepsin, et al.--to those within the blood, and those whose subtilty fits them for cell-building and becoming the all-important key to life in the formation of new beings. It is these bodies--it is one or more of these subtiler enzymes--that have been discovered and named vitamin. How do I know? By analogy. It is unthinkable that life (vitamin) is an entity that can be destroyed, or that can be extracted from vegetable or animal beings, bottled, and given out "ad libitum" to those who have forfeited theirs in riotous living.

The description of the substance said to be vitamin tallies exactly with what we know, and can conceive, of the action of a refined and subtile enzyme.

The description of the substance said to be vitamin discovered by Dr. Funk, misnamed vitamin, and which substance he declares is indispensable to life (how can life be dependent on a little life; how can electricity be dependent on the electric light or any other manifestation of itself?) does not fit any conceivable description of life. Life is as old as food itself-an element as old as creation. It is the breath of life that quickened man. It is the word made flesh--the subtile presence that quickeneth all things.

"The word 'vitamin' has not found a place in the dictionary yet;" and it is scarcely defined and barely understood by its discoverers.

It is said that Dr. Casimir Funk, a Russian chemist now of New York, invented the name to fit "certain mysterious substances in food," which have been demonstrated by a Scandinavian chemist as substances which apparently are not food, yet necessary to its utilization. Isn't this the description of a digestive ferment--an enzyme? Certainly, food cannot become food until acted upon by a ferment.

It is said that Dr. Funk has isolated those substances which he says are "indispensable to life;" and since his announcement "other scientists have added to the meager sum of knowledge."

Digestive ferments have been taken from the hog (pepsin) and from the chicken (ingluvin--pullus gallinaceus). Would it be so very strange if chemists should analyze out of every organized structure (plant or animal) a ferment, or the genesial elements out of which ferments are made? So important an element as ferment must, like life, be present, either in form or potentiality, everywhere.

In the olden time, and up to the very recent present, the perpetual-motion discoverer was abroad in every land, and was always just about ready to demonstrate its discovery to the world. But, alas, the world waited in vain; for no announcement ever came. And now the perpetual-motion explorers are out of business forever--put out by the electric discoverers.

Electricity is a power that is elusive to the chemist, and beyond our senses; yet it can be sent over a wire half as large as the little finger, silently and unobjectively, in such quantities and with such power as to move a train. This has awed the perpetual-motion crank into silence. When we know that electricity is

made up of electrons (units) so small that a pane of glass allows them to pass through its pores as though it were a coarse sieve or not at all present, we can understand how a cyclone of fifty thousand volts can pass through our bodies as an open door, leaving no trace of its coming or its going.

Yet electricity is probably so coarse, compared with the subtilty of life, that there is not much hope of a Russian, or any other chemist, gathering or isolating it. If, however, "these substances," which are "indispensable to life," are what I insist they must be, they are not vitamin, but ferments--enzymes, and are indispensable to life. Yes, indeed; for "this mysterious substance," which they call vitamin, is without doubt ferments, and in the evolution of beingevolution of cells, quickening of fertilized ova--stands next in importance to life.

The human mind is yet so coarse in its thinking that it alludes to the subtile and universal manifestation of life as "mysterious substances," and talks of gathering or isolating these substances. Certainly we are far, far away from its discovery, so long as our imagination and ideals are so coarse.

Dr. C. Houston Goudiss, editor of the "Forecast" magazine, declares: "Not the wisest man living can tell us just what vitamin is. While these substances appear not to be food, they do appear to be essential to the digestion and assimilation of food; for their withdrawal, suppression, or absence, from whatever cause, results in disease and death of the animal or man fed on such food." Dr. Goudiss unwittingly describes exactly the attributes of enzymes. Probably the name "vitamin" confused him. Any "wisest" physician should tell us just what an enzyme is, even if he balks at life.

In a crude way, vitamins--enzymes--have been known for many years. That there is an enzyme constituent in every cell, in every being, animal or vegetable, in animate nature, is as true as reason. Why? Because it is necessary for reproduction. It has been known that scurvy--a disease newly named acidosis--is caused by living on foods deprived of enzymes; and it is as widely known that uncooked vegetables and fruit, taken in abundance, will cure scurvy, or scorbutus, or acidosis, by supplying the ferments--enzymes--necessary to attract life. The secret of the raw-fruit-and-vegetable cure is that scurvy, or scorbutus, or acidosis, means that more food has been taken than can be appropriated by the body, and the body, like a machine, has become choked by waste products and debris to the extent that decomposition exceeds recomposition; and when enzymes fail to maintain asepsis, and toxin gains the ascendency, disease is brought on and death is threatened; for toxin destroys enzymes, and, as the enzymic power weakens, life power weakens, since not enough life can be appropriated out of the living presence to perpetuate the life of the body.

By using succulent fruits and vegetables in scurvy, or acidosis, much distilled water is furnished the body with which to flush out the accumulated putrescence. Fruit and vegetables contain over ninety per cent water. The salts are antiseptic; they antidote the toxins that have been generated by the decomposition resulting from the oversupply of food devoid of vitamin (?)--no, enzymes--which brought on the scurvy. Bread, meat, cakes, pies, puddings, sugar, etc., etc., are mostly food formulas that are artificially prepared and refined to the extent of excluding the enzymes, hence are not in keeping with nature's formulas. Therefore they are not ideal foods--they are short on enzymes; and, when they are eaten, the body is furnished too much nutriment, and not enough enzymes to keep a digestive and assimilative equilibrium. When this style of eating continues, a time comes when the chemistry of the body is perverted by acid fermentation to such a degree that it fails to attract the ever-present life--vitamin--and it must crumble into decay.

Such diseases as pellagra, hook-worm, tuberculosis, scrofula, syphilis, and many others, are directly and indirectly caused by a dietary--foods--that has had its chemistry tampered with. The chief element--namely, enzyme, not vitamin--has gone out of it, allowing decomposition to become established. This far-reaching and not generally known truth can be demonstrated at any time. When a treatment is based upon this truth, syphilis becomes easy to manage.

Those who attempt in any way to explain what vitamin is, do so in something like the following fashion:

> "We have learned that there are vitamins that promote growth, vitamins that prevent scurvy, and vitamins without which the baby will soon become rickety. Some of them are destroyed

by cooking, but cannot be dried out, while others are not appreciably affected either by heat or drying. "--Goudiss.

In the same way a multiplicity of attributes may be credited to electricity. We might say that there are electricities which promote different lights--white, red, green, yellow, etc.; electricities that run trains and cars and motors, kill criminals, etc.; electricities that warm the feet and hands, cook food, iron clothes, etc. Electricity is the same yesterday, today, and forever. It is the motor power for all these manifestations, and a world of others. Then shall we speak of it in a plural sense? Life, according to common understanding, is not plural. It is not quite obvious that there is a different kind of life in different kinds of animals; that the monkey, man, and all other animals and vegetables known to have individual existence, are possessed of different kinds of life.

It is not true, yet it is pertinent to the argument, that it requires a different yeast (bacterium) to raise 'bread, cake, doughnuts, puddings; to cause apples to sour into vinegar, grapes into wine, malt and hops into beer; to cause carbohydrates to ferment in the stomach and bowels, causing acid stomach, rheumatism, etc., or to cause proteids to decompose and develop a toxin that, directly or indirectly, is responsible for all the septic or zymotic diseases. It is as unreasonable to contend that there is a distinct organized ferment (bacterium) for every disease, a distinct unorganized ferment (enzyme) for every tissue that is built, as to declare that there is a different life for every animal and plant, or a vitamin (a little life) for every phase of life.

The tendency apparently is for the educators to compound, complicate, and comminute all knowledge, until it is a wilderness so entangling that there is no show for a John-the-Baptist to come out of it and teach the people how to make the paths of their thinking straight. It appears that everything in life of mental value must be mystified and complicated, or it is not considered worthy of attention.

We are told editorially by the "North American" for September 13, 1917, in commenting on what Drs. Funk and Goudiss have to say on vitamin:

Ten or twenty years hence we will know more about them. Wider knowledge may reveal mistakes in deductions which at present are little more than guesswork. But certain facts long established by usage and now approved by science so firmly uphold Dr. Funk's description of the vitamin as an indispensable attribute of life, that people should know all there is to be known on this subject.

For instance, it long has been known that orange juice is the best preventive of scurvy among babies. It also has been common knowledge--though until lately ignored by science--that the potato not only is a most nourishing food, but that since its introduction into Europe whole countries formerly ravaged by scurvy have been almost free from this distressing ailment.

Now science vindicates the experience of "ignorance" by showing that orange juice and potatoes are notably rich in anti-scurvy vitamins. And in these two instances, heating even to the boiling point does not injure the vitamin content. On the other hand, the vitamins of milk are sensitive to heat. Even the low degree required for pasteurization seems to affect them, while sterilization appears to destroy them entirely.

Beriberi is a disease of the nerves which for many years had wrought widespread ravages in our Farthest East possessions. Early in 1910 a severe outbreak of this malady was speedily and completely checked by the substitution of unpolished rice for the polished product, which constituted the chief food among the sufferers. Subsequent tests on men and animals proved that beriberi not only is caused by a diet consisting chiefly of rice from which the outer coat or pericarp has been removed, but that it can be cured by the substitution of whole unpolished rice, or the administration of the so-called "waste" which results from polishing.

By isolating from these polishings a crystalline base which cured fowls that had developed a disease similar to beriberi after being fed a diet of polished rice, Dr. Funk was led to his discovery--one which yet may rank with Harvey, Pasteur, and Lister.

Subsequent experiments of like nature by other scientists proved the case beyond doubt. Now we know it is the absence of this vitamin from polished rice that causes beriberi. Just how the vitamin in the rice grain affects the human system; just what it does, or where are its fields of operation, we do not know.

That it must play a vital part in the maintenance of health is well evidenced by the fact that pigeons fed on polished rice until paralyzed with beriberi will revive almost instantly when the anti-beriberi vitamin is injected, and in a day's time be fluttering about as though they never had been ill.

> "This almost miraculous transformation can be due only to the presence of the injected vitamin," said Dr. Goudiss; "and the minuteness of the quantities used supports the view that the vitamins are not foods in the usual sense of the term, but have some obscure connection with the production of internal secretions which are essential to assimilation."

He further says:

> "No longer can we regard ourselves as properly fed because our meals show a scientifically correct balance of protein, carbohydrates, fats, and mineral matter; for without that evasive element which in some mysterious manner gives the word to the forces of the body to digest and assimilate these nutrients, we might as well eat sawdust. For a time, it is true, we may get on very well, for the body stores vitamins against the time of need; but these cannot last long, and without a constantly renewed supply, disease and death inevitably await us."

In addition to beriberi, recent investigations have led to the belief that other deficiency diseases are caused by lack of vitamins. Chief among these is pellagra, so alarmingly prevalent in many of our southern states and which, curiously, is found chiefly among those whose diet consists almost wholly of corn meal ground in the modern way, with the germ and hull of the grain removed.

In localities where the old-fashioned "whole-ground" corn meal is used, pellagra is almost unknown. This has led scientists to assume that the outer coat of the corn grain contains a vitamin which will prevent its development, even when corn is the sole article of diet. When used in a mixed diet, as is the case in most instances, the employment of whole-ground corn meal becomes a matter of secondary importance; for the needed vitamins will be supplied by other foods in the menu.

It also has been shown that a diet consisting solely of white wheat bread will produce a disease not unlike pellagra; and here again science is forced to conclude that in wheat, as in corn and rice, the vitamin inhabits the outer coat of the grain. It is not yet known where this vital substance secretes itself in fresh fruits and vegetables, but science is sure of its existence in nearly all such articles of food.

Thus far, the foods found rich in vitamins include raw milk, or milk just brought to a boil; the yolk of egg; meat juice and broths; fresh vegetables and vegetable soups; fresh or cooked fruits and their juices; whole grains, slightly broiled meats, and cod-liver oil.

Those apparently deficient in this element are sterilized, preserved, or cooked milk; white of egg; sterilized meat extracts; dried fruits and vegetables; highly milled grains; soup meat and preserved meats; and bread raised with soda without the addition of sour milk.

We have dwelt on the details of this subject because it concerns a matter no one can afford to ignore. However easy it once may have been for some persons to dismiss the subject of food as relatively unimportant, no such attitude is tenable today. And at present we face food conditions which demand not only the practice of strict economy, but application of every help science can offer.

This newspaper could not consistently omit its utmost in the dissemination of such knowledge. For during the last seven years, with the aid of Mrs. Scott, we have so emphasized the value of a varied diet, and one which includes fruits and green things, that we could not overlook such sanction of our course. In this connection, we wish to quote from a recent editorial from the "Journal of the American Medical Association":

> "The discovery of the vitamin has emphasized the value of those elements of food which,

> although present in minute quantities, exercise a determining influence in the utilization of the ordinary articles of diet. As Garrod says: 'The immense practical importance of these hitherto unknown factors is in the fact that once the missing element -the vitamin-is discovered, a specific remedy for the disease has been found.'
>
> "That the nutritive value of a diet does not depend wholly on its calorific value must be admitted. The importance of flavors, spices, and of the preparation of food so as to arouse the esthetic senses-in other words, the nutritive value of good cooking--has been pointed out by Sternberg, of Berlin, who insists that the science of cookery is not merely the application of chemistry and physics, but rather an application of the physiology of the senses, applied psychology and esthetics. The spices and flavors used by the cook, Sternberg suggests, may be closely allied to the vitamins, if not identical with them. They may stand in the same relation to loss of appetite and health in general that the specific vitamins do to particular diseases."

Thus is the vitamin closely linked to our present needs. The war is forcing us to a food situation which will necessitate particular attention to diet. Its insistence on no waste will compel us to eat foods and parts of food hitherto little used.

Instead of being a deprivation, this may prove an immeasurable benefit. For it may force us to become acquainted with the power of vitamins to protect our bodies against invading hosts of disease which still are unconquered.

It is rather doubtful if the orange-juice cure so "long known" is really understood. If it is not, it may lead to wrong conclusions. The facts are that orange juice in the treatment of babies is not a very old remedy, and as yet not a widely used one. When there is indigestion and poisoning from the decomposition of fats--cream--in young babies and children, orange juice, which is potentially alkaline, antidotes or neutralizes the acid of decomposition; and it is just possible that scalding the juice does not entirely inhibit this action, but it certainly does weaken it. To say that a vitamin in the orange juice did the curing is working the imagination overtime--it is simply assumption If what is claimed for vitamin be true, all one needs to do to prevent decomposition, or prevent stomach and bowel derangement, or cure all types of diseases, is to extract a little vitamin from some favorite food, and use this "mysterious substance" in abundance. Another cure-all! Another way to prevent diseases! What about germs as a cause? And the specific antidotes made from the specific germs? Indeed, when there is so much known of cause, cures, and immunization, is it not strange that there is any sickness at all? The laboratory struggle still goes on in search for specifics that will out-specific all other specifics. Professional asininity is obvious all the time to the discerning.

One of the most necessary things to do for the victims of scurvy, scorbutus, or acidosis is to rest from food for a while; then start the eating on fruit; and then select a proper diet--fresh fruit, vegetables, etc. Those who are very much poisoned on carbohydrates and proteins combined, because of eating to excess, complain that they cannot eat fresh fruit; that it distresses them--which it does, and will continue to do until there is a decided lettingup on overeating and improper mixing.

Regarding rice: Much is made of the rice story. Indeed, that story is worn to a frazzle by every novice in dietetics. It has become a professional platitude. In spite of it, however, polished rice is still eaten, as is white flour. Both are eaten in preference to the less refined grain preparations--and it is perfectly all right for those who supply the necessary enzymes by eating freely of fresh fruit and salads.

It is doubtful if there has been a test made where no food is eaten except rice. Until that is done, no one can tell what a mono-diet of rice will do. I should expect a race of people to go down on such a diet, even if only unpolished rice were eaten; for rice is not an all-around food. Fruit for one meal, rice and fruit for another meal, and meat, fish, cheese, nuts, or beans, with salad, for another meal, will supply all the food and enzymes--vitamin--needed to attract all the life--energy--required.

It takes more than one dietic error to bring man to grief.

There is much to the chemistry of food--far too much to make a cure-all of enzymes, misnamed vitamin; or to make the lack of enzymes--vitamin--the cause of all bodily derangements.

Fermentation is the important process that stands between food and body-building. It is a question of which ferment will be given the right-of-way--unorganized (enzyme) or organized (germs, bacteria).

An ordinary lay mind can understand that the stomach glands must secrete digestive juices, furnish enzyme, or unorganized ferment, or food cannot be brought to a state of solution, fitting it for absorption. A solution is not all that the ferment (enzyme) accomplishes. A property of resistance is imparted to the food pabulum by the enzymes that acts the same as is claimed for vitamin. This is necessary, and for the purpose of resisting the influence of organized ferments (bacteria or microbes), which are everywhere present, ready to "do their bit" in preparing food for elimination which resists enzymic fermentation because of its unfitness as a food, or because the intake is beyond enzymic (digestive) power.

The food that is acted upon by the unorganized ferment (enzyme) attracts life; the "mysterious substance" of Dr. Funk is a subtile enzyme; it is this mysterious element that brings about the fermentation necessary to cause the egg to hatch, the nut and seed to germinate. Ah, it is this element in the cell of living flesh (animal tissue) that enables the animal to live and reproduce itself--that enables the cell, the unit of the body, to produce a successor. And this quickening element, this mysterious enzyme, starts the fermentation that attracts life, It is then that vitamin flows in and being begins.

This mysterious element, enzyme, appears to be subject to the law of summation--of accumulation and dissipation. In the nut and the seed this element lies dormant, and under favorable conditions may remain ages, retaining the power of fermenting and starting the quickening process. After quickening begins, maturation depends upon whether the environment in which the resurrection takes place contains elements of nutrition potentized with enzymes sufficient to attract the vitarnin--life--necessary for cell proliferation.

Individual life is a state that must vary in keeping with the environment. If the nourishment contained in the environment is potentized with enzymes, then vitamin (little life) will be added; for it is the ever-present link, it is the ever-present immanence--the bridge leading from inanimate to animate.

The air must be vital. I do not mean that it must contain oxygen; for all air--that in the mountains and that in the valleys, in the basement, in the cluttered room, or on the wide-open veranda--is of the same composition. But not all air is potentized with life-vitamin. Sewer air does not differ from mountain air in the amount of oxygen and nitrogen which it contains, but it does differ in the amount of vitamin. The mountain air is potentized with vitamin; the sewer air, the air in closed houses, in closed bedrooms, in dark closets, etc., is dead air. Bottled water, stagnant pool water, boiled water, distilled water, are dead waters. Cooked foods are dead foods. That "mysterious substance"--life, vitality, resistance, vitamin--always eludes the chemist. In the laboratory, it is or it is not in the test tube. It cannot be found except by mental analysis--through the power of deduction. Life, energy, vitality, vitamin, is found--it is in the air, the water, the food, the sunshine, or it is not. We must find out by mental deduction. We have learned from observation that air and water are potentized with life (vitamin), or they are not. We know that where these elements have an opportunity to renew themselves from the world's great storehouse, they contain vitality--vitamin; but when they are confined they become poisonous; not from a lack of basic elements, but they become toxic; for life (vitamin) is always supplanted by toxin when life, or vitamin, fails to be forthcoming from the source of its generation.

Life--vitamin--is cumulative and dissipative. We in our daily lives are either building resistance or we are not. If we persist in supplying our lungs with the air that is vitalized--that contains vitamin; if we persist in supplying our bodies with food that is potentized with enzymes (raw fruit and vegetables), and if we supply our minds with mental food that is vitalized with vitamin, we are building power--resistance. It is well to remember that vitamin--life--is not subject to the rules of the laboratory, and is not confined to substances as coarse as that used in laboratory experiments; but it potentizes thought as well as material food for body-building. And it should not be forgotten that all elements which are to enter into the development of being must be potentized with enzyme. Without the enzymic torch to light the way for vitaminic transfusion, animation fails to appear.

Vitamin will never be bottled; hence the medical mind that looks for a cure-all which can be applied with a hypodermic syringe is doomed to disappointment. Modern medical mind has not got away from its ancestral idea of cure. Enzymes may be extracted and used to bring about fermentation, but vitamin--life--will not be attracted, and scurvy, or acidosis, will overtake the victim of laboratory extracted enzymes and such food as malted milk and artificial foods in general.

It is not cure that we need. It is knowledge of how to adjust our bodies so that the ever-present vitamin will flow into us. We must know how to make a vacuum of our bodies that will attract life, energy--vitamin.

Dead thoughts (old theories that have failed) will not be potentized by clothing them with new-fangled notions. A right theory must be based on fundamentals--on eternal verities. If it is, then the false all around us becomes truth. Truth always must have a potentiality of fallacy; and whether we get the truth or the false depends upon our development--what we are developed for or attuned to. Is our mentality potentized with the enzyme of truth? It it is, then the false can be evoked into life. Vitamin will be added; for it is ever present.

There are dead thoughts. There are thoughts that are languishing, because that on which they feed is devoid of the enzyme of truth. And there are live thoughts--thoughts pregnant with vitamin.

If we clothe our bodies in such a way that our skin is supplied with life (vitamin), and that air can get to it, we shall cumulate energy--we shall store our bodies with vitamin. But if we breathe air, drink water, eat food, think thoughts, that are devitamined--devitalized; if we keep vitamin away from the surface of our bodies by improper clothing; if we drink dead water, eat dead food, think dead thoughts, we become devitalized, and toxin takes the place of enzymes; sickness and death take the place of vitamin--life.

Life, as stated above, is cumulative and dissipative. Such diseases as scurvy and all so-called blood diseases, scrofula, syphilis, tuberculosis, et al., are wholly dependent for their continuance on a lack of enzyme--a lack of food that carry enzyme into the body. Hence the body cannot attract vitamin or life. Consequently disease follows. This is demonstrable. When the profession and the people generally give up dernon-worship--give up their belief that what is called bad, disease, devil, evil, has an existence, and are able to see that these supposed entities have no existence per se, but are different phases of health handicapped from a lack of vitalized food, air, water, sunshine, and mind, then truth will flow in, and a proper theory and practice of the healing art will evolve.

The reason why syphilis is so formidable is because the remedies used are allies of the morbid process. When the gentle influences of life-building activities are allowed to develop normally, this supposed-to-be greatest foe to the health of man, which, we are told, taints the human family, will fade like a dream. It matters not if the remedy is called enzyme, vitamin, or life, or if it is called by any other name, or called by no name at all; success does not depend so much on isolating and prescribing "mysterious substances," or administering wonderfully wrought synthetic experiments, such as "606," et al., which are "so indispensable to life," as upon knowing how to help the human body appropriate and accumulate such an amount of enzymes (vitamin-this "mysterious and evasive element") that it may fortify itself against unnecessary decay, which is another name for scurvy, scorbutus, acidosis, scrofula, tuberculosis, syphils, cancer, etc., etc.

Nature is prodigal in furnishing seed--ova and sperm--the major portion of which fall upon stony places and fail to quicken; others spring up, but fail to find a supply of enzymized food; or, as the "North American" editor and his doctors would say, their food fails to carry the vitamin necessary for growth.

Life is a state which oscillates between quickening and decay, between integration and disintegration, between synthesis and analysis, between physiology and pathology. Standing at the head of these two processes are two ferments. At the head of organization is an unorganized ferment, named enzyme; at the head of disorganization is an organized ferment, named bacteria. When the body is dominated by unorganized ferments, growth, renewal of tissue--in a word, metabolism--is poised and normal. When the food supply is short of enzymes--that miracle-working "mysterious substance" which Drs. Funk and Coudiss misname "vitamin"--then the organized ferments gradually gain control; and as the body's stock

of enzymes runs low, diseases of a toxic character--of which scurvy, tuberculosis, cancer, and syphilis are types-spring up.

Drs. Funk and Goudiss use the word "vitamin" where enzyme" can be used more understandingly. Advanced dietitians are beginning to realize that the end of enzymic variety occurs coextensively with cell, tissue, organ, and organisms. All the different digestive secretions are different enzymes. Food, in its travel from the mouth to its ultimate synthesis---cell-development--meets first with the gross enzymes found in the alimentary canal, which disintegrate and bring to solution the food intake. Not only is food prepared for absorption, but it is potentized with life--vitamin. It should be obvious to everyone who has followed the argument that the function of the enzymes is not only to prepare food for absorption, but to prepare the pabulum for the ever-present vitamin, or life, to take up its abode; and as the pabulum becomes more refined at each new enzymic influence, not only is more life added, but the life becomes psychic when cell-development is reached. At every succeeding step, food pabulum meets with a more refined enzyme, until at last it becomes sufficiently vitalized to be born a living cell with mind-potentially. It is the function of enzymes to metamorphose food into living tissue. If the food intake is devitalized--is devoid of enzymes, or Dr. Funk's vitamin--the body's enzymes run out, and then a retrograde metamorphosis begins to appear. The symptoms are a general discomfort--a tired feeling; the bright health glow of the surface of the body gives way to sallowness; the eye shows dullness; the mind is less active; life begins to drag; interest is lost; different organs begin to function badly. From this point, unless the body is served wittingly or unwittingly with enzymes, ill-health will continue to death.

The miraculous transformation in the health of pigeons given the enzymes of the rice is only observed about laboratories. Only the East Indian fakir and his dupes can see trees matured before their eyes, and hills leveled while they wait. There is a lot of credulity or illogical reasoning among many medical high-brows.

It takes a lot of inability to reason to believe that babes can be fed in such a way as to bring on scurvy, or acidosis, and then be suddenly transformed into health by orange juice or an injection of "vitamin." What is that so-called waste--that material which is polished off the rice? A ferment that is to conserve the rice; an enzyme needed by the rice to prevent bacterial fermentation from killing the germ of life when sprouting--when generation is taking place.

No one would think of the gastric secretions as food. Enzyme is not a food; it is a ferment, and its function is to prepare food for absorption and fit it for quickening.

It is refreshing to find a few scientists who are willing to admit that there is something besides protein, carbohydrates, fats, and salts in the process of metabolism. Indeed there is; but it is not vitamin, unless that name is to succeed digestive ferments--enzyme.

In reading the "North American" quotation, kindly substitute the word "enzyme" (digestive ferment) for "vitamin." Mystery will disappear, and the truth win stand out and seem so simple that he who runs may read.

This "vital substance" is made by each organism. Each organism makes enzymes for itself out of the food elements furnished. If all the elements necessary are furnished, and in sufficient quantities, the organism builds itself ideally. If there is a shortage in any, the body will he weakened to just that extent.

For years I have denounced the machine mode of feeding. I have contended that feeding so many calories and so much protein, fat, etc., was fallacious, was a subordinate part of dietetic wisdom, and had nothing whatever to do with dieting the sick. This contention has certainly borne fruit, in that doctors who make diet prescriptions on the quantitative and qualitative plan never cure anyone, and never can.

Good cooking does not consist of flavors, spices, etc., to arouse the esthetic sense, or arouse an unnatural appetite. Good cooking means the simplest cooking possible to retain the normal taste of the articles cooked. A pampered appetite that cannot eat of this simple cooking should be sent to cold storage, and stay there until any natural food tastes well.

The major part of the medical profession is a long way from the Tipperary of a curing understanding of diet.

"Tildenites" have long known how to live, and the present war reform will not change their manner of living.

Just use the word "enzymes" for "vitamin," and mystery disappears.

Therapeutics defined is, in a few words, the science and art of applying remedies to the cure of disease.

"Everybody knows" that there is such a thing as curing disease; hence, when I say that there is no such thing as curing disease, the average individual looks askance and inquires: "If you don't cure anybody, what do you do? What are you teaching?"

There is a therapeutics of doing nothing. For years I have said that it takes more wisdom to do nothing well than to administer all the remedies in Christendom. It takes more knowledge, more experience, more will, more independence, more individuality, to do nothing well, and scientifically, than to apply all the science that has ever been discovered.

Carlyle said:

The profession of healing is a sacred one--the outcome and acme of all priesthoods--divinest conquest of the human intelligence--and will appear one day.

The question is: Did Carlyle build better than he knew? The probabilities are that he believed in some kind of therapeutics, and his highest conception was that there would be a divine remedy, instead of human intelligence, to pilot man out of disease-producing influences.

On the subject of therapeutics--giving something to cure--I am a drug nihilist; I have been accused of drug nihilism for forty years. It has been said that I do not believe in anything; and I am accused of it yet. However, I never have seen anyone who has more beliefs than I have. I have beliefs enough and to spare; and I admit having a lot of unbeliefs. I do not believe in the fixity of states and the unchangeableness of good. I believe in never-changing law and order, and man's ability to adjust himself amicably to nature's requirements.

Whether Carlyle knew what he was talking about I cannot say. But he told one of the biggest truths that have ever been recorded. Now, what did he mean by it? If he meant what is ordinarily understood as sacred, that would indicate that he did not have the right idea of cure--that he did not have the right idea of therapeutics.

Perhaps it would be well for me to say what I mean when I admit that I am a "drug nihilist"--why I talk on therapeutics, and yet do not believe in therapeutics.

All curing is within the body itself. All we can do is to make the sick comfortable by removing obstructions to the normal operations of the body. The tendency of the body is toward health. The tendency of everything on the side of evolution is toward the ideal. The tendency of vegetation is to develop the ideal type; and if it does not develop the ideal, it is because of obstruction. When trees are planted close together, they grow high and very slender, they are not well proportioned, and they always lack vital resistance. A plant that grows ideally must not be obstructed; it must receive the sun's rays, be exercised by the wind, and have enough of suitable nourishment to promote its growth and allow it to develop ideally.

It is the same with the human body. If it has been planted unideally--in a soil that does not represent all the elements--the child cannot grow ideally and cannot represent an ideal human being. Now, the question is: Can a child born in such an environment ever be brought around to an ideal state? To answer this question opens a large field of therapeutics in which I do believe; namely, the adjusting of the individual to the environment, and the environment to the individual, so that he may evolve into as normal or ideal a state as his potentiality will allowhis potentiality is able to assimilate the elements necessary to bring on

ideality.

If man is hampered by being gestated and born in an environment that does not represent all the elements necessary for ideal body-building, and then the mental state of the mother has been one of depression all the way through the gestation period, we have a big job in bringing that child into an ideal state. The question is: Can it be done?

Eugenics is the subject of much talk these days, and a lot of it means nothing. There is too much importance attached to heredity. The possibilities of man making good are as numerous as the rays that radiate from a center of light. This being true, why talk about his being held down by his inheritance? It is his environment that holds him down, more than heredity.

Pausanius was a Greek traveler who lived in the second century. A physician said of him: "He ails nothing." To which he replied: "I use none of your physic." Again the physician said: "Sir, you are an old man." To which Pausanius replied: "That happens because you never were my physician." Long life often means possessing enough sense to avoid all kinds of opportunities to die. Doctors have had to take the jokes of philosophers from right and left; and it is right that they should, for they as often kill as they cure. Why is it that the people are suspicious of the profession today? Why is it that there are more people who do not have the confidence in the profession which they once had?

Because doctors send out a boomerang every little while that strikes back. The most recent is attempting to force state medicine. It shows obvious, even to lay minds, that if regular medicine were all it assumes to be, there would be no other system of healing necessary. To keep the ranks as thin as possible, students must be selected, and entrance to the profession made as impossible as it can be made, so that only young men of leisure and wealth, or of special favor, may enter. This bars many men of strong ideals and inventive imagination and original thought. As the practice of healing requires as much of art as of science, and as long college training kills the art faculties, our present plan of making doctors ends in the construction of a very complicated human machine that has no more independent mental action than the mechanical jumping-jack. This result, however, is exactly as the heads of the profession desire. That is, they think they do; but, being mechanical human machines themselves, they desire the rubber, the elasticity, the fluidity, the adjustability, taken out of students; and they have almost accomplished their desire. The result is that the average medical man is as incapable of making an independent movement as a mechanical toy. A pronounced type of one of these products, engaged in writing health articles, signs his name with an appendage, and often adds the name of his college mother; which, of course, is as it should be, for such a callow olive branch should not get far from his mother's apron string. Raising the educational standard, and making what the schools teach so obscure that students cannot pass examinations, impresses members of collateral professions and sciences with the idea that modern medicine is becoming worthy of all it claims. To make this belief doubly sure, the state and national governments--two automatic entities--lend the power of their influences; all of which influences go far to imperialize medical power; then, when the liberty-loving people feel the autocratic medical power, it turns their former respect into hate. The effort today is to make college professors out of college men who have great learning, but no practical experience. As well undertake to make an expert carpenter without tools. Knowledge wedded to experience builds wisdom.

Franklin said: "God heals; the doctors take the fee." He was not a physician; he was a philosopher. The philosophers know that doctors cannot cure anything--doctors have no curing power. Why is it that people cannot get that idea? If philosophers in all ages have known that truth, maybe I am not far wrong in saying that there is no therapeutics--no curing influence--outside the animal organism. It is preposterous to say that something can be taken internally or put on the outside of the body that will cure.

Optimistic suggestions are good, and may help the sick to health by imparting hope. Anything that makes people hopeful is curative, but the cure is within the individual.

Dryden said:

"The first physicians by debauch were made;

Excess began, and sloths sustained the trade."

Swift said:

"The best doctors are Doctor Diet, Doctor Quiet, and Doctor Merryman."

The immortal Holmes said:

"Folks want their doctors moldy, like their cheese."

The mold need not be from age so much as from lack of use. Holmes was ostracized in 1844 for advocating what the medical fledglings at this writing are discovering in France; namely, that wounds heal when left open--when clean, not medicated!

Heroes, chiefs, gifted men, enthusiasts--the giant minds among tribes and peoples--were named gods, and they were the first physicians. They were recognized as gods; they were worshiped by the simple-minded and those who knew nothing; and the big men administered to them as best they could.

There seems to be a disposition in man to worship anything which he does not understand. That is why individualistic men had, and still have, healing powers. That is why people who think they are enlightened still take drugs. That is why some of our learned medical fledglings, who know how to warble the word "quack" before they can even think, will automatically write a prescription calling for strychnin to be given to a case of infantile paralysis. As well give the remedy to a dead man! Superstition, your other name is modern medicine! Any school of healing, system, creed, faith, pretention, assumption, or declaration, founded on the usual fallacies, and offering cures that do not put those needing them to the trouble of correcting bad habits, proclaimed vehemently enough, can build a following of humanity who will declare their faith in the system.

Every faking system of cure must be accompanied by "sounding brass and tinkling cymbal," and the drawing part of the fakery must be the successful pretentions to charity.

To save the people--for the good of the people--is the strongest card in the hand that is stacked against the people. Nothing can succeed in faking the people that is not run in the name of charity or for the good of the people.

"And though I have the gift of prophecy, and understand all mysteries, and all knowledge; and though I have all faith, so that I could remove mountains, and have not charity, I am nothing." Paul was a doctor of laws, and he understood psychology better than most doctors today.

It matters not what ridiculous cures are offered the stupid, ignorant public, if they are handed out in a capsule of sweet charity, they will be gulped down with avidity and a smile, and the palliation, when there is any, is in the faith generated. Church hospitals are typical shrines; for God blesses the vandalism practiced in them. The bolus--the therapeutic agent--may be determined, but the capsule of charity brings the Balm of Gilead to the hungry soul.

Man is born with a large void in his nature, and that void is aching for sympathy and charity. This void is infinite in capacity, and is capable of assimilating any old junk, if encased or honeyed by sweet charity.

Then, whoever would explore this void with X-ray perception will find in the scrap-pile, hospitals, sanatoria, resorts, shrines, long- and short-haired fakers of all kinds; fakers from the Dives (rich-man) pattern to the Lazarus (ragamuffin) pattern; representatives of "surgical plants" --fake doctors who have vandalized the beautiful human body in the name of charity; blatherskites who cut out parts of the body for nothing, to prove that they are embodiments of charity--who use the cloak of charity to further their surgical exploitations of the human body.

Every curing system on earth, and every cure-all, can be found in this aching void; and there is no hope that it will ever be overloaded. It is well that the capacity is unlimited; for every generation of men will come with its new, elegant, and sublime fakers, with a taking variety of charity.

It is not within the possibility of many men in each generation to be endowed with the perception to recognize the fakers and the faked; hence their endeavors to save the people by imparting a little common-sense will fail to receive enough attention to change the human trend to any great extent.

The hope of a rational system of securing and keeping health will be pushed back, to give place to a therapeutics that can cure without removing cause; and as cause consists largely of bad habits, a remedy that can cure without removing habit will always be popular. The people will always be willing to allow saviors to die for them.

The immediately preceding is a frank statement of the probability that the masses will never be willing to give up bad habits for the promise of health; indeed, most people cannot be made to see that disease is of their own building, and that a correct therapeutics is simply correcting the errors of life. As every child is born. a lump of protoplasm without knowledge, the question is: Will society ever evolve a belief that disease is never anything more than an undesirable state of health, brought on from a maladjustment of man's body to its environments, and that a reasonable amount of care, a knowledge of which is within the mental grasp of all, will make health possible to all who are corrigible and willing to live in a manner necessary to evolve the highest mental and physical efficiency? If this is possible, then children may yet be born with an inherited potentiality for self-control, and ideals that can and will subordinate appetite and passion to a higher development. The present human potentiality at birth is dominated by sensuality, and a morality so perverse as to barter worship of an imaginary Deity for the privilege of indulging in pious types of sensuality.

It is not an evidence of immorality that the masses fake and are faked; no, it simply means that the faker and the faked are still on the unmoral side of life--they are unmoral; they have not evolved into a moral understanding. Much of what we see of human vandalism, as practiced by the medical profession, is not a breach of moral ethics; it is the way the blindly ignorant soul has of finding light. It is the mental urge--the subconscious longing for mental birth.

The worship of gold and position is in keeping with the belief in whatever is up and beyond the understanding. It is the sensual mind's way of seeking light.

The plant, with its urge for light that was potential in the seed, is forced to push its tender shoot around obstructions that its insinuating insistence cannot persuade to part and allow it to proceed more directly to its goal. The clinging, insinuating manner in which the tender shoots of growing plants hug, embrace, and penetrate clods, rocks, and other obstructions, might be described as love and worship--but is it? I think not. It is the plant's way of seeking light. It may have to go a very devious waysometimes backward, then again forward, and from side to side; hugging, embracing, and seemingly evincing much attachment to these associations. But not so. The potential urge for light forces the plant to cling to, and take every advantage of, its environment-not from a love of it. but for self-development--self-protection--self-preservation.

The plant's struggle for light is typical of mind-growth.

We see the undeveloped mind worshipping heroes, chiefs, gifted men, enthusiasts, fanatics, and gods--worshiping position, wealth, influence, and power. Should we not be nearer right if we said that mental urge--the desire to grow--causes mind to cling to all these objects of so-called worship, until it, the mind, develops enough virility to be sufficient unto itself?

Like the plant in its growth, mind must grow around and through obstructions, such as false theories, creeds, and schools--around great men, and gods. It must try the power and might of wealth. The mind must cling to something in its growth upward toward light; and its clinging to the false, in the manner that it does, is nothing more than the survival of the fittest, or its struggle for existence. It is better to cling to the false than not to grow at all. It is this mental urge--this desire to live--that causes mind to tether itself to its environment, seemingly clinging to, its obstruction because of its love for it. But this is not true. Mind is potential in nature, and its urge is toward full development, with truth as its goal. Truth being the goal, mind must grow through or around such obstructions as fixed creeds, great men, and gods. The selfishness of man (it is not selfishness in the vulgar sense; it is a desire to live, to grow; and it dare not let go of one

support until safely annexed to another) causes him to stereotype knowledge, and brand it with his own name, or a name of his choice; and then go to war, if necessary, to prevent change--progress--growth of mind.

What are schools, creeds, state medicine? The disposition of men to fix beliefs so that there will be no progress--no mind-growth. This is the ignorant manner of expression--this is the social understanding; but the truth is that creed is for mind what the rock is for plant; namely, obstruction to growth. But it must cling to it until safely attached to a more substantial support.

The so-called intellectual always impose on the credulous and ignorant. Man must worship something, and it is immensely gratifying to his vanity if he can manage to be the object of worship. The selfishness of man would cause him to stop progress, if in doing so he could become a god; for the word "god" means a finished product. As soon as God is discovered, be he a man, or a deity, one on the outside of the universe, progress ends. As soon as a cure is found, progress stops; and around the little god of cure, or stone of obstruction, every protection is built to immortalize it.

Simple-minded people and the credulous allow themselves to be dominated by those who are selfish. As a result, obnoxious laws and customs are established which prevent progress.

The regular school of medicine is struggling with might and main to saddle on the people its present germ theory, and its corresponding immunization and therapeutics. Which tacitly means: We have arrived at perfection, and it is time to stereotype and ossify.

This is the curse of school, creed, and church. Around and through these obstructions, mind-urge must force its tender shoots. I dispute that it is love or worship that causes mind to cling to heroes, churches, or god. Indeed, they are obstructions to mental growth; but growing mind must cling to them until strong enough to grow independently.

The intellectual have imposed, and always will impose, upon the ignorant and credulous. The medical profession is working largely on the theory that people want to be humbugged; and it is supplying the want.

The priests were the first physicians. Prophets and divines were consulted. Pythagoras, Aristotle, Athenaeos, the early Christian teachers, the mystics of the later centuries, on to the present, not only "instructed in arcane, metaphysics, and general knowledge, but treated disease."

The late Dr. Alexander Wilder declared: "The knowledge anywhere possessed of the art of healing is the measure of the refinement and civilization to which the people have attained." Show me the doctor any family employs, and I will tell you of the intellectual level to which that family has attained. Their beliefs in regard to church, healing, drugs, etc., mark the stratum in intellectual life to which they have attained. This may be a questionable compliment to those who pretend to be intelligent, yet are clinging to childish superstitions.

See people chasing after quacks--chasing after cures that are not cures--willfully helping the physician give a distorted notion about their diseases, so they will not be interfered with in their daily habits! It is obvious to what an intellectual level people have attained when they will take drugs, or are vaccinated, to cure diseases caused by bad habits. When habits are of more importance than health, and when people will struggle in every possible way to secure a healer who will indulge them in their habits, and cure them without requiring them to stop the habits, that cause disease, it is easy to see where they belong intellectually, titles to the contrary notwithstanding.

Man is civilized by social relations. His refinement depends entirely upon the mental attitude of those with whom he associates. Has a man true refinement who will, for the sake of gain, recommend an operation when he is doubtful in his mind as to whether it is necessary--doubtful as to whether any good will come from it? There are a few barbarians who say: "Damn the people! I am not my brother's keeper. We are here to give the people what they want." What kind of civilization is that? And yet we boast of our civilization.

Kindness and charity represent real culture. The only country that boasted largely of its culture before this European war was Germany. Does war represent culture? aaaa

Does the preparedness of a country represent culture? Is that an ideal religion? Is Christendom Christian? Do Christians believe in Christianity? Is Christianity a reliable therapeutic remedy for misanthropy? Does Dr. Christian know how to use Christianity to cure man of his unethical disease?

The art and technique of healing proceed from knowledge, refinement, and culture. The province of intelligence is to investigate and discover the cause and origin of disease. Scientific knowledge and artistic skill are not so much concerned with cure as with the individual himself. It will always be impossible to get rid of the personal equation in formulating a system of healing. So long as systems are formulated with the personal equation of the patient left out, the system must fail. Indeed, the patient must be the doctor, and the present doctors must become teachers. Medicine is an art. Science, when it is used as an art, will help; but when it is taken out of art, science will never give a solution to the problem of cure.

A man may paint a beautiful picture scientifically; he may have planned the picture carefully, laid out the plans beautifully in advance, and prepared formulas for his colors, blendings, light and shade-all correct according to the best formulas. But when the real artist comes along-the one who carries his model in his soul, the creator- he will make a picture of the same subject that will throw the first into the shadow so far that a second look will never be given it. That is the difference between art and science.

Do not jump to the conclusion that I do not believe in science! It is the basis on which we must build; and every man should have as much science as he possibly can get. But if he is going to cut loose from everything else, and have nothing but science, he will make a bungling record.

In a general way, the skilled physician can tell that his patient suffers; but he cannot know anything of the state of emotions, the wants, the longings, the heartaches. The doctor can see the results of appetites and passions, the same as he can see the results of an accident, the cause of which he knows nothing about. There is an element in every disease that the doctor cannot know without the aid of the patient; and there is an element of cure that belongs to the patient, without which the doctor is helpless. It is nonsense to expect cures to be performed on patients whose lives, physical and mental, are not known.

Taking a drop of blood for analysis, or examining the urine, tells but one thing--and that is the state of the blood or the urine; but nothing of how the perverted state was brought about, if it is perverted. A cure must be formulated on the cause, and not on the effect.

Without an understanding of cause, hope for cure must be lost. How can there be anything done toward removing cause without a complete understanding of what cause is?

The divine conquest of the human intellect is made when cause is known. All before that is chaos. Knowledge, religion, ethics, and morality are in a state of chaos until a knowledge of cause comes to set man right. That cause must be known not only scientifically, but artistically as well.

Archaic Medicine

In archaic medicine there was a therapeutics in the form of suggestion. It was in the form of foretelling and divination. There was something in it to help the people. Sick people want someone who can look ahead and give them hope; and hope is one of the important remedies. Suggestive therapeutics is built largely on hope--belief in betterment. We have schools of suggestive therapeutics, and there are many who practice it. They teach people how to suggest themselves out of a belief in sickness. The cure comes from within the individual; and if it happens to be that the individual needs a mental therapeutics, suggestion helps him think a little differently--helps the patient develop a more health-building belief.

In archaic medicine the serpent on the staff is the symbol of medical art. Egypt, Greece, Germany, South America, and North America employ it.

The asp on the crown of Queen Isis was a sign of the physician.

The fire serpent on a sign-post was the sign of an Assyrian physician.

In Mexico and Brazil the rattlesnake is the sign of the profession.

The serpent signifies occult life-principles and power to divine--preternatural power. The seraph on the staff set up by Moses possessed the power to save those about to die. When they were sick they had the belief that, if they could look upon the seraph, they would get well. They were sick in their minds, the same then as now. Fifty per cent of all sickness is mental.

When a person gets sick, the mind gets busy at once. Nearly all people are afraid of tuberculosis. When they have a cough or a pain in the chest, they go to doctors to find out if there is anything wrong with their lungs.

Places of learning were built in cemeteries in the valley of the River Nile.

Herodotus declared that the Babylonians had no physicians. They used the public parks. The invalids would congregate in the parks, and the people passing along were expected to talk with the sick people and ask how they felt. If they themselves or any of their family had had a similar ailment, they would tell the sick person how they got well. It was the duty of the well people to converse with the sick and help them get well according to the methods they had used. This plan, under wise guidance, could become a more perfect system of cure than any of today.

It is not very different in this day. We can always find someone who thinks he is capable of prescribing for all who are not well, notwithstanding, perhaps, the leading physicians of the community are prescribing for them. Such laymen know very well that their prescription is better than the treatment received from the physician. The layman does not realize that all the experience he has had is with himself, while the experienced physician has watched hundreds and should know much more. It shows that people are natural-born healers, all of them.

It was the same in the days of Jesus. The sick came to the road where he was expected to go by, and they expected him to heal them. That kind of healing has come down through the ages.

This method of healing the sick was not confined to Assyria and Palestine; it was in vogue even in Egypt, along with priestcraft and secular physicians.

Placing the sick in the public thoroughfares is alluded to by many of the older historical writers.

Fast-days were one of the therapeutic remedies of the Euphrates countries.

Mysterious rites, incantations, formulas, the secret word, images, symbols, sacred texts, have all served their purpose in exorcising the evil spirits that caused disease.

All the therapeutics, ancient and modern, above referred to, rests largely on the belief that cures must come from without. This is a belief that will bar the profession and the people from reliable health knowledge, so long as it prevails.

Causes must be discovered and removed. A cause is something--in influence--that always acts; not an influence that acts part of the time, and part of the time it does not.

Germs, as a cause, act sometimes, and sometimes they do not.

Germs always act under a given circumstance; namely, when the body is enervated--when resistance is lost. Then, to prevent germ action, the proper thing to do is to keep the standard of health above the point where germs thrive.

What must be the therapeutic agents? Correct eating, correct care of the body, correct sanitation, and a sane, well-balanced mind.

A knowledge that will help man to enjoy health, evolve the greatest efficiency, and save him from driveling senility or early death, is procurable today.

None but the misinformed will go about seeking cures. Cures, like salvation, spring from within, not from without.

Knowledge is the only reliable therapeutic agent.

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B. PATHOGENY

Instead of microbes being the cause of disease, they are at most only capable of joining with the culture media to develop an affection--certainly not a disease. As cause, bacteria must be classed with the elements and other influences in man's environment which are good or bad for him, depending on his health--resistance.

Efficient cause is anything powerful enough to produce primary disease. There are chemical causes--poisoning--and animal toxins. The poison that can prostrate and kill man must be able to overcome his normal resistance. Nothing belonging to man's normal habitat can break down his normal resistance; hence the idea that germs unaided cause disease is a delusion which the medical world must outgrow, as likewise the idea that serum can antidote germ influence; for germs have no influence except as they join other auxiliary influences and break down resistance.

C. PATHOLOGICAL PHYSIOLOGY

This should not be recognized as differing from physiology. Biology is the same whether the process be normal or abnormal. Law is the same now and forever. Biological laws are the same in health and disease. If a given disease-producing influence is experienced, disease will be established; remove the influence, and the laws, which are always the same, continue to act ideally, and health will return. Death itself is the only way to prevent the ideal working-out of physiological law.

It should be illuminating to those who think of disease and health as distinct entities to be assured that they are states, not entities, and that both are produced by the same laws; that it is within the power of man so to present his body to the laws that the state following will be health, not disease.

Correcting disease must have a limit. Where a disease has been running on until enervation is profound, or until the integrity of a vital organ is far spent, coming back to the normal may be impossible.

A patient complains of pain in the chest. On examination, congestion is found. Congestion not being a disease, on further examination a heart derangement is discovered. The pulmonary congestion is due to heart insufficiency. As there are no organic diseases proper (all organic derangements are reflex or secondary), a cause for the heart disease must be found. There may be a history of an infectious disease suffered years before--typhoid fever, rheumatism, or any of the contagious diseases. In regular medicine the primary cause--say, typhoid fever--is gone. The cause, then, is gone; so treatment is given to the heart, notwithstanding the heart lesion is not considered primary. Heart stimulants are given, which revive the organ for a time; but soon it must give out, for the treatment is stimulation, and the cause of its derangements is stimulation. In the first place, it was overworked by fever, infection, and drugs which left it impaired; then wrong eating and other habits, practiced after recovery from the disease that brought on the cardiopathy (heart weakness), prevented the organ from returning to the normal, which it would have done if it had been left for a few months or years to regain its normal tone.

In making a diagnosis, no consideration is given to daily life by the average physician. Because a patient suffered with syphilis twenty to thirty years ago, and today he has lost his faculty of speech, he must be suffering from syphilis. The intervening years of bad habits count for nothing. If symptoms of tabes dorsalis (locomotor ataxia) present, the best doctors doctor syphilis, even if tests fail to affirm their diagnosis. The past twenty to forty years of sensuality count for nothing; the whole trouble is due to a specific germ that has been hibernating in the tissues of the body.

Indeed, if correct living habits are practiced, no disease can remain in the body for any length of time. The body has the power to renew and purify itself, when given an opportunity; and all the opportunity needed is to receive sane care. There can be no hope of a thorough house-cleaning so long as the organism is taxed beyond a reasonable limit by an oversupply of food, by stimulants, by sensual indulgence, and, neither last nor least, by drugs that cause sclerosis.

Morbific cause is often beyond the reach of our remedies, because we are looking beyond the daily and hourly cause or causes for a cause that will vanish as soon as its support is gone.

In the matter of nutrition, many good and intelligent physicians often treat for the removal of an effect of malnutrition rather than for malnutrition--mistaking the effect for cause. Indeed, nearly all the work done by average physicians is on this order.

D. PATHOLOGICAL ANATOMY

A lesion of any structure when healed leaves a scar. Scar tissue is more liable to undergo degeneration than normal tissue, not because it carries a potentiality of the old disease, but because scar tissue is not nourished so well as other tissue and breaks down much more easily.

An inflammation of the urethra that extend to ulceration will leave scar tissue when cured, it matters not whether the inflammation is specific, or brought on by self-abuse (onanism), or from irritation caused by urine strongly acid from chronic toxin poisoning.

The scar tissue reduces the caliber of the urethra. This partial obstruction prevents self-cleaning. All tubes, ducts, and canals that are partially closed--strictured--fail to evacuate and cleanse themselves thoroughly. Hence, behind the strictured point, irritation and inflamation develop--a catarrhal inflammation which gradually lessens the caliber and finally develops complete obstruction. If the trouble is of the eustachian tube, noises in the head, ringing in the ears, and deafness follow; if of the urethra, slow and difficult urination from obstruction of the urethra and bladder irritation follows, and, as a result, lost coordination is liable to result from reflex irritation. In esophageal, stomach, or bowel obstructions, ulcerations and cancer are liable to follow, with all the evils accompanying partial to complete obstruction.

Primarily there must be a chronic state of toxin poisoning and pronounced diathesis before local inflammations of mucous membranes can take on chronic irritation, inflammation, ulceration, cancer, or syphilis . If a chronic state of toxin poisoning is not developed and maintained by bad habits of life, accidental irritations and nflammations will pass away from lack of support-from a lack of daily fuel supply. The truth of this can be proved at any time by noticing how quickly and well inflammations heal in those who are free from dyscrasia. and intestinal putrefaction. And another proof may be worked out-namely, correct the chronic toxin poisoning, and a stop will be put to all silent, subacute, inflammatory hyperplasia.

I have found no better definition for disease than the following: Disease is the morbid process considered in its entire evolution, from its initial cause to its final consequence; affecton is a morbid process considered in its actual manifestations, apart from its cause.

The so-called diseases, such as heart diseases, rheumatism, typhoid fever, pneumonia--in fact, every disease named in medical nomenclature--are in reality only affections. Real disease is perverted nutrition, caused by toxins generated within or without the organism. It is this chronic state of toxin poisoning that breaks down resistance and allows affections to develop. Such affections as cold --catching cold in the winter time, hay fever in the summer time, and asthma in both winter and summer--are affections resting on a base of diathesis sensitized by toxemia. The more pronounced the diathesis, the less the natural resistance, hence the harder to overcome the disease, which is chronic toxin poisoning.

All affections, commonly called diseases, are "hors de combat without a culture-medium-=a body prepared by chronic toxin poisoning--in which to develop.

E. SYMPTOMATOLOGY

1. The Patient

As it is the physician's business to cure the sick (at least, that is what nearly all laymen, and perhaps ninetynine and nine-tenths per cent of the profession, believe), those who are uncomfortable or in pain place themselves under the care of a physician to be made well, and when the pain is gone a cure is supposed to have been wrought.

The patient presents symptoms, some of which are subjective and a part of which are objective. The subjective symptoms are those about which the patient knows, while the objective symptoms are the changes of the exterior and interior about which the physician knows.

The subjective symptoms are those that have developed in the consciousness of the patient. They may have come on rapidly, or they may have come on very slowly.

The history of disease is that of a coming-on and a going off of discomfort; and on the revolutions--the cycles--made by diseases rests the reputation of all systems of palliation. The patients feel bad, and the doctors of high and low degree, representing schools whose scientific data--theories of cause and cure--are poles apart, and whose therapeutics range from conceit to the fanciful and on to the grotesque, gather around their victims and administer their "dope;" when, behold! as if by the touch of the lamp of Aladdin, the victims are blessed by the remedies, in spite of the fact that these are as opposite in their specific actions as it is possible for them to be. Yet the sufferers are "cured"! Of course, it matters not if the patients are sick again in a week, or a month, or a year, with the selfsame disease--another fanciful "cure" is made, which again our doctors and patients celebrate in the usual way, by telling in scientific terms just how it came about, even the wisest among them being ignorant of the fact that the natural progress of all disease is rhythmical or cyclical--better and worse--until the organism is broken down, and then the patient is better and worse, but never well, until death gives full relief.

It is the history which the patient recites to the physician; and it is the physician's business to weigh, analyze, and criticize what the patient tells him, and, by a physical examination, to determine just what the derangement of body is.

It should be borne in mind that the diagnosis of the exact derangement--discovering just what organ is affected, and determining whether the disease is functional or organic innocent (benign) or malignant--is very far from discovering the primary and insidious cause, without which discovery the treatment must be palliative. There is no cure short of removing the primary or initiative cause. If the initiative cause has passed away, then the secondary cause, which is doing primary work, must be discovered and removed.

The patient may be making his first call upon the doctor. He may be having his first pain or discomfort, or he may have had many attacks of sickness and pain.

The discomfort that caused the patient to seek relief may be a link in a chain of morbid derangements leading back to childhood, or even infancy--not on the order of heredity, for nothing is inherited except a predisposition to be sick in a given way; but if the tendency ever becomes a realization, habits that pervert nutrition must be practiced long enough to break down resistance and start the morbid tendencies to work.

It is necessary to get all the history of the life of the patient, and, when possible, the family history, age, sex, habits, occupation, temperament, beliefs, environments, mode and manner of the care of the body.

It is necessary to know all about the life which the patient is living, and all about the life which he has lived, if he has changed his style recently. It is not only necessary to know the physical habits of the patient, but his mental habits as well; and, in addition, the physician must have the confidence of the patient and know his secret life. The physician must enter into the relationship of "father confessor" with every important case that calls upon him. If he has not the personality to secure this confidence, and draw out the secrets that are hidden in the occult chamber of the individual's soul, he is not possessed of those qualities of character which make for healing. The doctor must have sympathy--not, however, without firmness and sternness, when necessary. The quality of selfishness in a doctor must be covered by a very large coating of politic politeness, or he will not draw patients, and certainly will not be a physician at any time. If his selfishness is pronounced, it is liable to be subconsciously interpreted by the patient, and this knowledge kills influence.

Lost self-confidence, self-respect, and self-control are the psychical elements with which the patient contends in chronic diseases, and which make management of a cure impossible for the selfish, vain, and unsympathetic doctor; for only the sympathetic can draw confessions--and confession is necessary to cure.

It is well, this early, to disabuse the mind of any reader of the idea which he may have that a successful curing system is, or can be, based on a set of cut-and-dried formulas. Indeed not; every case is different and a law unto itself. The only thing that is fixed and unchangeable is the natural laws within and without the patient. It is our attitude before the law that determines health or disease. If our actions agree with the law of our being, or the environment, all is well.

Health results from an agreeable adjustment of the body and mind to natural law and order; and impaired health--a lowered health standard, called disease--comes from disagreeable adjustment of the body and mind to natural law and order.

Diagnosis is determining the symptoms and learning just what is the cause of the morbid process, and its effect on the body.

I practiced medicine in the orthodox manner for twenty-five years. A number of those years were spent in determining just how much my treatment had to do with the recovery of my patients, and how much it did not. Little by little my drug superstition sloughed off. Not rapidly, but little by little, I learned that the physician is a woefully deluded man.

In the first place, it is most unscientific, not to say senseless, for medical colleges to teach clinical medicine, using as subjects men and women broken down in mind and body from years of bad habits, and to use, as a teaching force, medical men who do not consider the influences of the daily habits of mind and body as factors in producing disease. As proof of the folly of such teaching I cite the growth and prosperity of Christian Science, which has proved such a haven of rest for millions that have escaped the barbarous practice of "scientific" doctors who were struggling in a medical way to medicate, vaccinate, inoculate, extirpate, serumize, immunize and demonize patients, but succeeded only in teaching all a large sick habit. Christian Science has always builded better than it knew; but this is one of nature's compensating acts. The regular profession builds in an inferior way with what it knows. Selfishness, snobbishness, and bigotry have blinded the eyes and dulled the understanding of medical schools, as ignorant conceit and religious superstition have blinded the eyes and understanding of Christian Science.

Each system is standing in its own light, and prefers to be wrong rather than to give up its selfish advantages. The medical schools teach without any adequate means of finding out what the habits have been and what part habits play in the evolution of disease. Of course, habits are talked and written about; but, so far as applying the knowledge in the healing of disease is concerned, the subject is a dead letter; it does not enter into consideration, except in the most casual and perfunctory way.

There is but one way to learn of the amount of influence exerted by physical and mental habits--what part they play in a given case--and that is by inducing the patient to give them up, while the physician stands by, keeping hands off, watching nature eliminate and readjust. If the doctor cannot be satisfied to do nothing, except watch nature clean house and see to it that the work is not obstructed by the patient's bad habits or by his medical superstitions, he can never cultivate a dependable working knowledge of etiology; and without such knowledge he must remain in a mentally chaotic state concerning cause, effect, and cure.

Our present scientific teaching leads us through a "fool's paradise" of examinations, using instruments of precision to palpate, auscultate, and percuss; chemically analyze the secretions and excretions; microscopically examine the secretions, excretions, and every fluid and solid of the body; bacteriologically examine the entire body--the exudates, the transudates, and the expectorates; aspirate from every secret chamber of the body, analyze the fluid in every way possible, and then spend weeks in bacterial culture; X-ray every suspicious location, and radiograph the same. After all this examination, the diagnosis is "hung up", and the patient is sent away on suspended judgment, to return again in a few weeks or months to go through the same ordeal. This may be somewhat overdrawn, but certainly not in a few aggravated cases of mania in diagnosis.

What are the real causes of the bodily derangements which send professional gentlemen and their diagnostic specialists and experts through this "fool's paradise" looking for something that is not found in this glorious Eden? What is that elusive something that evades the microscope, stethoscope, test-tube,

analyst, X-ray, and every other instrument of precision, and every analytical, synthetical, deductive, inductive, and seductive diagnostic procedure?

It is life--a state that is commonly referred to as health. It is not an entity--a something to see, hear, taste, smell, or feel.

Health is the meter by which life is measured. When health is below a certain standard, we think disease; we lose the thought that impaired life--the state we call disease--is a lowered health standard, and that there is no such thing as disease.

The primary entities with which the physicians have to do are man and his environment. These are both good and adapted to each other, or they could not exist together. Man did not evolve until his environment evolved him. I assume that, inasmuch as nature never stultifies herself, man and his habitat are suited to each other and are potentially ideal, and that, if the unideal evolves, it is because of a maladjustment which is easy of readjustment.

I further assume that it is the doctor's duty, if he would be a physician, to throw his whole power of intellect into the study of why an environment that produces man also destroys him--why benign and life-imparting influences become malignant and life-destroying influences; and I invite any medical man to try successfully to refute my declaration that there is not one influence in man's environment which is not for his good, if he (man) is properly adjusted to it.

What should etiology be? Learning all about the influence of everything that affects man's body and mind. In this study we find that everything necessary to life, liberty, and the pursuit of happiness may be enjoyed to excess, and that, when it is, it enervates--lowers the standard of health; which means that functioning is impaired and self-poisoning takes place by retention of excretions. When this state is brought about, man loses his normal adjustment and every environmental influence has an exaggerated effect upon him.

If he has lowered his resistance from overeating, overwork, worry, fear, overindulgence in any of his physical or mental pleasures, every influence to which he was once normally adjusted affects him uncomfortably. If he undertakes to eat as formerly, he suffers from indigestion; if he works or undertakes to indulge himself in previously enjoyed habits, he is made uncomfortable and to suffer. One to three cigars distress him, whereas once a dozen could be smoked without any apparent subjective symptoms. The hopelessness of this situation lies in his remembrance that he once could smoke, drink, and otherwise indulge his sensual nature without discomfort, and in his belief that if he can find a doctor to "cut out" his disease, or cure it by some scientific means, he may return to his old flesh-pots. He knows very well that he could once indulge; he is quite sure he may again, if a cure can be found; and on this fool's errand he can find doctors and healers galore to accompany him. We have "perhaps the largest surgical plants in the world" just for the purpose of cutting out disease, so that the victims will not be put to the inconvenience of cutting out their bad habits.

The enervated man cannot indulge himself with any of his former sensual pleasures without being thrown into a state of discomfort. He and the medical expert go rummaging through the dump-pile of primary, secondary, and tertiary symptoms--a few of which are: impaired blood, functional and organic changes in various organs of the body, deranged secretions and excretions, etc.--hoping to find cause. Certainly a fool's errand, when, if they would reflect, they should notice that after every enjoyment the sick man is made worse, and after every disappointment in gratifying appetite and passion he is made better.

In this connection it may be well to give a few of the bulletin reports of the scientific activities of the doctors in their treatment of one of the world's most distinguished patients, showing how innocent the profession is of the grotesqueness of its scientific conceits:

> "The queen is sinking. She is unable to take nourishment. Her medical attendants declare that she can last but a few hours." At the expiration of twelve to twentyfour hours: "The queen has rallied, and is able to take nourishment. The doctors declare that there is a chance for her

recovery, barring complications."

What complication or complications could spring up? What causes complications? In this case the complications were obvious enough to any mind not under the spell of medical science.

Complications usually come from the treatment and nursing.

> "The queen is sinking. The rally of this morning was followed by a sinking spell, and she is again unable to take nourishment. Heart tonics given hypodermically keep what little life there is from ebbing away. Only the superhuman skill of the doctors prevents death from claiming the great woman as its bride."

"Verity, every man at his best state is altogether vanity. Selah." Superhuman conceit killed the good woman before her time.

> "During the night the doctors watched at the bedside of the distinguished patient, watching with bated breath the ebb and flow of the declining energies. Once or twice the family was aroused to view the grand queen and mother of the greatest empire on earth, while there was still a little life left in her body. All efforts at keeping life in the aged queen was abandoned at midnight." Next morning: "Most extraordinary, the unexpected happened! The queen rallied, and at this cabling is taking nourishment. The doctors fear, however, on account of the queen's great age and the weakness of her heart, that the rally will only be temporary. Sir John Blatherskite, an eminent heart specialist, was called in consultation, and he favors strychnin for the heart. This heart tonic will be given in place of digitalis, which has served long and well."

If we of the profession could see how childlike and silly much of our boasted science is, we could then see how like grandstand acting are

The queen did die--not, however, until these disgusting medical bulletins were repeated often enough to have put the whole world "wise" to the stupidity of medical science as practiced, and the shallowness of medical thinking, if the world had been capable of cutting loose from precedent and doing a little bit of independent thinking.

The profession is so used to looking to the unusual, the mysterious, the occult; to finding a cause for disease, instead of recognizing the fact that there is no disease per se--only a normal, supra-normal, or infra-normal state of health, and that these different states are brought about by different degrees of environmental stimulation.

All that can be discovered by examination, be it superficial or scientifically elaborate, is the effects of influences or causes which have passed out of existence, or which are still existent, or which have caused secondary causes before passing out. Scientific medicine spends its force on effects; the real causes are left undiscovered.

For example: A subinvoluted uterus, or a misplaced uterus, may be crowded by intra-abdominal pressure, causing a misplacement and perversion of circulation. The return circulation may be sufficiently impeded to cause a passive congestion and an enlarged hyperplastic state to develop; and the larger the growth, and the more constriction and impeding of the circulation, the larger the tumor (fibroid--for that is the character of this morbid differentiation), until restricted by the pelvic walls. This resistance to growth restricts the size and hardens the tissues. If, however, the tumor drags the uterus into the abdominal cavity, it will then, being freed from restraint, take on new and more rapid growth, sometimes filling this cavity equally to the size attained at full-termed pregnancy.

In this case the primary cause may be a catarrhal inflammation at an old placental site; or a catarrhal inflammation of the mucous membrane of the virgin uterus, due to exposure during menstruation, may take on hyperplastic growth, causing an enlargement of one side of the walls of the uterus. This causes a flexion, and a flexion always impedes the circulation, and a fibroid growth follows. All growths are the result of impeded circulation. When the circulation becomes so mechanically obstructed as to bar the

entrance of oxygen and an exit of waste matter, degeneration takes place--malignancy carries off the patient. The cure must be restoration of the return circulation by removing all pressure that causes misplacement.

2. Appearance of Patient

The patient's appearance will tell whether or not he is able to meet the requirements of existence. He looks able to carry on his work--his particular occupation- or he does not. If he does not, he will give the appearance of being sick with either acute or chronic disease.

At the bedside the patient may look robust, sick, collapsed, bluish or cyanosed, thin, fat, with thick and short neck, or long and slender; he is on his back with legs extended, or with the legs drawn up; or on the side with legs drawn up against the abdomen.

The patient may be unable to give a history or describe his symptoms.

Decubitus (Lying Down).--The manner of lying is significant. On the back means exhaustion. This is the position when a patient has lost consciousness.

In a faint or anemia of the brain, the head drops; in congestion of the brain, the head must be supported on several pillows; in asthma of the lungs, bronchi, or caused by the heart, the patient must have much pillow support.

In heart disease the patient lies upon the right side. A normal person can lie on either side equally well.

When heart disease is advancing to the fatal state, the position is sitting, with head and shoulders supported by pillows.

Pain in the abdomen will cause the sufferer to press upon it, or lie on a pillow. Pressure gives some relief. When the pain is intense there will be twisting and writhing.

In peritonitis, appendicitis, cystitis, gallstones, cancer of the stomach and bowels, the tendency is to draw the legs on the abdomen. In peritonitis, the patient will usually be on the back, with legs drawn up.

In gastric ulcer, when suffering with pain, if the ulcer is in the front wall of the stomach, the patient will lie on his back; if the posterior wall is the location of the ulcer, the patient's position will be lying on the abdomen; or upon the right or left side, if the disease is of the right or left side. These positions relieve pressure on the ulcer.

In tubercular meningitis, the child lies on the side, with legs strongly drawn up against the thighs.

Facial Expressions.--Disease as expressed in the face and posture.

Facies cardiac (heart): An anxious expression seen in the early stages of chronic valvular disease.

A purple or bluish appearance of the face, especially about the eyes, temples, and ears, with veins showing on the nose and sometimes on the cheeks, intensified by lying down: Caused by high blood pressure and an approaching dangerously plethoric state of the body.

Hepatic face: An earthy appearance; yellow tinge, jaundice.

Hippocratic face: Indicating rapid approach of death--pinched nose; hollow temples; eyes sunken; ears leaden and cold; lips relaxed; skin livid, and if the skin is pinched it returns slowly to the plane from which it was pinched or drawn.

Ovarian face: Features emaciated and sunken; anxious expression; forehead furrowed; eyes hollowed; nostrils open and sharply drawn; lips full and compressed; angles of mouth drawn and wrinkled, puckered but protruding"fish mouth."

The stupid face is that of typhoid.

Gastric face in children: A white line around the mouth, extending up by the side of the nose, shows irritation from improper feeding. Add to this sign pungent breath and vomiting, and the child has gastritis.

Gastric face in adults: Chronic irritation of the stomach in adults is indicated by a dragging-down of the comers of the mouth. Add to this drooling or driveling of saliva, and the indication is of starch poisoning; and if there is a broad, pallid tongue, the evidence is strong for overeating on starch.

Hysteria is marked by staring and an ecstatic expression.

Epilepsy is marked by a stupid face after an attack.

Protruding eyes and expressionless face in Graves' disease.

They lypermaniac has sadness written in his face. In general paralysis the countenance is composed and satisfied. The enebriate has trembling bps and a wandering expression.

The child with enlarged tonsils and adenoid growths has a stupid expression; the mouth is open, the lips hanging; the nose is expressionless.

The red nose, enlarged veins, bluish lips, cyanosed cheeks, and puffiness of face of the drinking man are called the mitral face. Where the aorta is diseased there is intense pallor. In Bright's disease the face is swollen and white.

The signs of croup are well known, but the type of disease is not so easily told. There are coughing and suffocating when a foreign body is in the air-passage.

Expiratory disturbance is marked by flushed face, puffed and bluish; the eyes are suffused, and the veins stand out.

In marasmus the features are drawn, the furrows deepened, the neck hollow; emaciation is marked, and, when profound, the whole appearance is that of the monkey.

The consumptive appearance is that of emaciation; protruding, flushed cheeks; pinched nose, with flaring nostrils; short, quick, jerky breathing; halting speech, and more or less suppressed voice.

When the face looks smaller--shrunken--and the nose is thin, long, and drawn, the bones prominent, the skin pale and covered with cold sweat, and, when drawn or pinched, the fold remains for some time, this is the facies of peritonitis, intestinal obstruction, renal and hepatic colic.

Fainting: The heart stops; the patient turns pale and falls motionless, but there is no distortion of the face; breathing is suspended.

Apoplexy: The patient is motionless and lies on the back; all animation is suspended; only breathing and pulse continue; the breathing is noisy, and gradually grows more stertorous. If the patient does not react and improve, the breathing and heart action gradually decline, the skin becomes drawn, the nose thinner and longer, the eyes dull, partially closed, glassy. The breathing stops, starts and continues, until it finally ends with a slight bodily convulsive movement.

Physical appearance must be noted--all deviations from the normal mean something.

Deformities, such as rickets, shorten the stature and cause the head to appear too large; the spine is incurved, the pelvis is deformed, the limbs are curved, the ribs project forward.

When the muscles become atrophied they cause general deformity.

Alterations of the heart or lungs cause deformities of the chest.

The bowels are often too large and distended from gas, fat, or ascites; in fevers, from tympanitis and inflammations.

Enlargement of the liver or spleen causes a large abdomen in the upper region; in the lower abdomen, enlargement may come from tumors, distended bladder, or a gravid uterus.

A large swelling at the base of the great toe, with the toe pointing outward, indicates a bunion. This deformity usually means that there is a slight rheumatism. Deformity of the third joint of the fingers--nodes of Heberden--means arthritis deformans. The nodes of Bouchard on the second joints of the fingers indicate dilation of the stomach--a disturbed nutrition from overeating of the carbohydrate foods. Joint distortions indicate gout, rheumatism, or injury; not infrequently they mean all of these. Frequently injury is complicated by rheumatism.

Hippocratic fingers (clubbing of finger-tips, with incurving nails) indicate heart or lung disease--scrofulous diathesis.

Skin.--A straw-yellow hue is found in cancer cachexia.

Paleness may be from anemia, dysemia, leukemia, amyloid degeneration, or Bright's disease.

Articular rheumatism is marked by paleness, and profuse sweats with strong acid odor.

Anger, fear, and jealousy cause paleness. The cause is vascular spasm. Fainting causes pallor.

Plethoric people are too red in color. A florid complexion means the sanguinous temperament and does not mean too much blood.

Unconsciousness may be from syncope (fainting). The face is pale; either no pulse or very light; the breathing very low and quiet. There are no signs of distress; the face is usually composed.

Cerebral Derangements.--If unconsciousness is preceded by spasm, the cause may be kidney disease--uremic coma. Symptoms may be headache, and flushed face with veins standing out. This means congestion of the brain.

A diagnosis--a decision as to the character of a disease and its cause--requires a close examination into the social life of the patient; the family history; the history of previous disease, and the diseases of the family as far back as possible; the history of the present disease; the history of family habits as well as the habits of the patient. It is necessary to know all about the personal habits of the patient, secret as well as open. The eating habits must be known--even to knowing exactly what is eaten at each meal daily. The sex life must be known--the early abuses, as well as those coming later in life.

A diagnosis, so far as determining that a certain organ is affected--for example, that the kidneys are diseased, that the patient has diabetes or Bright's disease--is far from conveying to the physician's mind an idea as to the true cause of the disease. It is true that the physician sees in his mind's eye hepatic insufficiency, or a failure in the dehydration of glucose in the walls of the intestines. But as to what has caused the malnutrition, in what way the patient has brought on his enervation, and what are his habits, the physician knows nothing from the test-tube, which only tells him that there is sugar or albumin in the urine. The diagnosis, so far as naming the diseases is concerned, may be correct; but no information is conveyed to the mind of the physician as to the primary cause of these diseases. Even when germs or parasites are given as cause, this manner of diagnosis throws no light on the question of why germs and parasites do not cause disease in all whom they infest.

Analysis of symptoms, examination of all secretions and excretions, and palpation and auscultation of all organs, amount to a scientific examination of effects; but a positive diagnosis throws no light on cause. Causes must be found and associated with effects before a curing knowledge can be possessed.

Diagnosis may be very correct, so far as effects are concerned; but cause of effects must be known.

It is necessary to know a healthy man. What are the signs of health?

The eye and the skin are clear. The outlines are normal. Those whose lines are obscured by fat are not healthy. Women who weigh over two pounds to the inch in stature are too heavy. Men who weigh more than two and a half pounds to the inch of stature are too heavy and are diseased.

Women and men who weigh much less or much more than the standards named are diseased. By diseased I mean that they give down early; they have not the resistance they should have; they age rapidly; and come to a premature grave.

A healthy body will desire only normal, natural, and simple foods.

Normal health is rare indeed. This being true, is it so very strange that so few live to one hundred or one hundred and twenty years of age-the normal lifetime of a human being?

A Normal Person--Hunger

A feeling of contentment after eating, and no discomfort.

A desire for fresh uncooked fruits, vegetables, and little, if any, seasoning, or thirst for water. Hunger is always moderate.

Urine amber, clear, and with a pleasant bouquet. Heat and acids have no effect on it. Passed with comfort.

Bowel movements should be brown, molded, but not hard; not offensive, and regular.

Skin should be soft, warm, moist rather than dry, and smooth. No disagreeable odors.

Hair is full, long, and possessed of sheen.

Lungs do their work without discomfort and through the nose.

Sleep is long, quiet, and refreshing.

Work and play are pleasurable.

When trouble comes, when disappointments and losses come, they are soon brushed aside and poise is regained with a resumption of interest in life.

Is not envious, jealous, spiteful, nor given to irritability or temper.

Mind is bright, alert and quick to learn. All attention.

Is honest, truthful, generous, kind, forgiving, economical, and philanthropic.

When sick, recovers more quickly because optimistic, and submits more gracefully to the chastening rod of correction; endeavors to get the benefit of the misfortune by reflecting on the cause, and endeavors to avoid a repetition by correcting the life.

An Abnormal Person-Appetite

A desire for more; dissatisfaction and a feeling of discomfort; gas and belching; acid stomach.

A desire for highly seasoned foods, alcoholics, tobacco coffee, and tea. Appetite is always driving; much thirst.

Urine cloudy, full of sediment, bloody, dark, odorless or rank of odor. Passed too often and with discomfort.

Bowel movements are green, gray, yellow, or white, and form into scybala (lumps). Or they are watery, bloody, wormy, and offensive to smell.

Skin is moist to wet; hands and feet cold and clammy. Always wet under the arm. Disagreeable odors from the perspiration under arms and feet.

Hair is thin, lusterless, and dry.

Lungs show asthma, cough, expectoration.

Sleep is fitful, restless, dreaming, and leaves tired on waking up.

Work is disagreeable and tiresome; no pleasure taken in recreation.

Worry, worry, worry, without much excuse. No interest in life. When trouble comes, the life is devoted to worrying.

Is very irritable, spiteful, revengeful, jealous, envious, quick to lose temper.

Mind is dull, slow, and learns with difficulty. No power of attention. Inclined to sleep, yet insomnia at night.

Is dishonest, deceitful, stingy, selfish, unkind, wasteful of other people's property, even when selfish and miserly with his own.

Recovers slowly because mental attitude is that of irritability and impatience. The abnormal person does not learn from experience. Everybody is to blame for his misfortunes, except himself. He is incorrigible.

A very good standard for health is the ideally beautiful--beautiful in body and mind.

Those who would know a sick man should study art. The artistic represents health, both of body and of mind. Then, to know the sick, contrast them with the normal--the ideal.

Post-mortems tell nothing except how terribly the body may be abused before it dies. Yet the dead organs can tell no tale; they cannot stand up and accuse their traducers, nor tell the manner of abuse.

The modern, popular idea of beauty and health is that the body should be incumbered with fat. Stock shows furnish a type of beauty that fits the modern sensual conception of what beauty consists of. Sensuality dominates everything in modern life. Even medical science, in catering to modem sensualism, has won the everlasting gratitude of Bacchanalians and gluttons, by offering the germ as the cause of disease, and tacitly freeing them from all restraint and giving them license to do as they like. Of course, this will be disputed, but I back my statement by referring to the patients themselves.

3. Pain

The evidence of pain. The patient complains of pain, and directs to its location by placing his hand on the part, or as near to the part as he can.

How much pain has the patient? He may be sensitive, imaginative, and inclined to exaggerate; or he may be frightened. On the other hand, he may be reticent and fail to tell the truth about his suffering. Again, he may be too ignorant to give a clear account of himself.

These are a few ways of learning of pain:

(a) Facial expression and bodily movements;

(b) As described by a friend or nurse;

(c) Results, such as weakness and emaciation from long suffering;

(d) Arterial pressure.

When a patient's face is contorted and his body writhes, doubles up, or stiffens, we have good evidence; yet he may be malingering (acting). However, the experienced physician will not be fooled long. It may take a little watching when the patient thinks he is alone. If he really suffers, he will suffer alone as well as when someone is near.

Many are sorry for themselves and make more complaint than necessary; others complain to secure sympathy. The real physician will discriminate, while the doctor is never anything but an amateur. The former cures his patient by imparting assurance; the latter adds to the disease by first discouraging and then operating.

When a patient who looks well declares he has been suffering for months, and he has not lost weight, and there are no objective signs, such as impaired circulation and heart action, and no tumor at the point where the pain is said to be located, it is safe to treat him as a malingerer or a self-deluded individual.

If nervous, imaginative, and self-deluded patients, describing their suffering as "awful ... .. fearful," "I liked to died last night," "I thought I was a goner," etc., are examined for patellar reflex, this movement will be found greatly exaggerated. This proves that they are very sensitive to pain, and should be questioned regarding eating; and it will be found that they eat much starch, and use coffee and other stimulants. Many will be found to have toxin poisoning.

Women bear pain--prolonged pain--better than men. The reason for this is that they are more self-controlled than men. Man is more self-indulged, hence less able to stand pain.

Types of Pain.--There are many kinds of pain; namely: boring, tearing, lancinating; a feeling of pressure, of heat, of cold, of hunger; a feeling of all-goneness, fullness, emptiness.

Colic is distinctive. It is rhythmic--the patient does not suffer all the time. It begins gradually, and increases to a climax; then subsides, to repeat again. Such pains are characteristic of canals: the intestinal, urethra, ureters, uriniferous tubules, bile-duct, eustachian tube, uterus, and fallopian tubes. An inflammation of these tubes and canals is accompanied by rhythmical pain.

Throbbing Pain: Pain that rhythms with the heart and pulse is caused by hyperemia. Headache and toothache are types. Any inflammation that is accompanied with enough swelling will have a rhythmic pain.

Precordial Oppression: This is a feeling of constriction. Angina pectoris is a type of this pain. This pain is of the heart. Affections of the pleura or lungs give no such pain. Asthma is a feeling of suffocation. It differs from oppression in the fact that it is difficult to draw air into the lungs, whereas in heart oppression there is no difficulty in getting air into the lungs, but it appears difficult to extract the oxygen, and the patient feels that he will die of suffocation.

Reflex Pain: When reflex pain is from angina in the lungs or abdomen, resembling indigestion, rheumatism, neuralgia, or neurosis, it may be relieved by rest, but not with the usual palliatives.

Shooting pains are usually neuralgic.

Relationship of Pain to Other Facts Connected with Disease.--Time of recurrence: If regular in time-say, every day or every other day-the cause may be malaria. Pains that are worse of a morning and wear off during the day are nervous headaches and joint inflammations. Pains accompanied with fever and infections usually grow worse toward evening. Fever always runs higher in the evening.

The position of the body: If the legs are drawn up against the abdomen, the pain may be in the bladder, the uterus, the bowels, the gall bladder, or may be due to pyloric disease, ulceration, or cancer of the stomach.

Inflammations of the organs in the abdomen and pelvis are made worse by standing or walking. Lying

down relieves.

When the bowels are distended with gas, or there is an accumulation of fat in the abdomen, such derangements as misplacements of the womb, piles, pelvic tumors, and cystitus (inflammation of the bladder) are all made worse by being on the feet.

The pains peculiar to chronic joint diseases and muscular rheumatism are made worse by staying in bed.

Pain produced by taking food indicates gastralgia, gastritis, ulcer, cancer, obstruction of the pyloris, gallstones, etc.

Enteritis, obstruction, and appendicitis are made much worse by eating. A few sips of milk will start peristalsis, and when obstruction or appendicitis exists, the patient will be thrown into great distress. Pain that is not made worse by eating is not caused by obstruction.

Pain that is frequently mistaken for appendicitis is caused by colitis, constipation, proctitis, ovaritis, neuralgia of the spermatic cord, strictures of the urethra, and gallstone or gall bladder disease.

Relief from drinking or taking food indicates gastric irritation caused by taking fluids too hot, eating too rapidly, overeating, the use of coffee, tea, tobacco, alcoholics, eating between meals, or gum chewing.

Damp weather, by chilling the surface of the body, causes those who are rheumatic to have pain and stiffness of different parts of the body.

Those who foretell storms and changes in the weather are human barometers, made so by a state of acidosis of the body. They have been using a preponderance of foods belonging to the acid producing class, and cooked foods which have had their enzymes killed by heat. Those who suffer headaches--even migraine sufferers--are made worse by meteorologic changes.

Headaches that occur on bright, sunny days, or when the earth is covered by snow, or on train or water trips, are probably due to eye strain.

Sea- and train-sickness is caused from abuse to the stomach by overeating, eye strain, or reflex irritation. Gas in the bowels, pressing on the ovaries, will cause sick stomach. Any neurosis is liable to be aggravated by train or sea voyages. Anything that enervates such subjects will cause them to be bad travelers.

Vomiting that relieves does not indicate that the stomach is diseased, any more than a cough that relieves indicates that the lungs are diseased.

The effort at vomiting shocks and produces reaction, which relieves pain in any part of the body. Pain produced by gas pressure, gallstone, or pain in the kidneys, womb, ovaries, spermatic cord, and testes, is relieved by vomiting. Heat and cold relieve pain. The patient must decide. Heat is more logical.

The sick habit has become a reality in these piping times of great medical discoveries. The habit of thinking sickness, talking sickness, acting sickness, and being coddled and operated upon, has developed an army of people who have become expert in complaining.

The sick habit and the drug habit are products of the medical profession. One of the principal causes is that the doctor must live, and it is to his bread-and-butter interest that every patient applying to him be very sick, or in imminent danger of dying unless operated upon at once.

The average professional calamity howl set up when a patient calls on "the best physician" in the community is quite enough to terrify, shock, and draw the patient's attention to himself and set up a morbid introspection. Once started, the introspection habit builds mountains out of mole hills; and surgical science has developed to such a state of perfection that it can extirpate every symptom of disease, except the disease itself, which is a large sick habit.

Pain Explained.--Every part of the body is supplied with nerves. Nerves, when pressed upon, give out a sensation of discomfort, and discomfort warns that something abnormal is taking place. The worm squirms away from it; the animal runs away from it, as did man in his early development. Man in his ratiocinative state is supposed to reason on the cause, and to remove it; but no, he runs to a mysterious individual, who administers a mysterious remedy, or cuts out an effect; and all concerned are satisfied, and the cause continues.

Nothing but reason, however, will direct man out of the way of harm and help him to understand cause.

When man reasons, he must know that there are two general types of causes for pain--namely, extrinsic and intrinsic. The outside causes, when understood, may be disposed of. The inside causes must be understood from inductive and deductive reasoning.

For example, when we learn that no one will develop angina pectoris who does not use tobacco, coffee, or tea, then man will know how to avoid such an affliction. When man learns that overindulgence in eating meat, or animal proteids, will slowly but surely set up a general lymphangitis and favor the development of catarrhal diseases, from nasal catarrh to tuberculosis and syphilis, he will know how to avoid such diseases. When those suffering from stone in the kidneys, gall bladder, or urinary bladder learn that these diseases follow the neglect of eating eliminating foods, and refusing to eat mineralized foods and drink mineralized water, man can avoid these painful diseases, and become his own physician.

Inflammations in the different organs create pain, heaviness, and fullness in the organs; pain, if the inflammation involves the surface; a dull, full, and heavy feeling, when the disease is of the body of the organ.

A persistent pain at or near the umbilicus is an indication of obstruction, partial or complete, somewhere in the intestine.

Radiation pain may start from an indigestion which causes gas; the gas presses upon an ovary, and the pain in the ovary causes vomiting. The nerve impulse starts in the ovary, goes to the spine, and from this center is sent to the stomach, producing vomiting. The eye strain on a railroad or sea voyage causes vomiting.

Any theory that all pains must be radiated from the spine, or from organs to the spine and from the spine elsewhere, must be limited. The truth is that pain must be taken care of in the storehouses of the nervous system--the ganglia, which are the inhibitors and dissipators of pain, as the lymphatic glands are the repositories and suppressors of toxins.

If it were not for the ganglia, which act as storage batteries for the distribution of surplus energy, the body would be killed from shock, which, under the system of storage batteries, is absorbed and the body is saved the shock.

When a locality of the body is under the continuous stress of irritation, pain must be felt in quite remote parts, because of the transmission, storage, and radiation.

When the batteries of the body become charged to full capacity, radiation or elimination takes place.

Headache results from this overflow. Its elimination causes pain.

The elimination of surplus energy is marked by pains of all kinds, and fevers. Colds and fevers are the unloading of pent-up energy.

Nerves accompany arteries. When much energy is conveyed over nerves, arterial spasms are experienced. Continual overstimulation of the arterial system ends in arteriosclerosis.

If the current of irritation is caused by envy, jealousy, or anger; or from the toxins of alcohol, tobacco, coffee, tea; or from daily decomposition of food in the intestine, with absorption of the toxins or acids or sepsin; or if the shocks come from lascivious thoughts, onanism, or excessive venery, the continual

overstimulation of the arterial system must end in hardening of the arteries, loss of coordination or tabes dorsalis, apoplexy, paralysis, etc.

It is well to remember that pain it not always located at the site of injury or lesion.

When a nerve is compressed, pain is not always found at the point of compression, nor at the nerve's termination. Epilepsy and convulsions generally have a peripheral origin. To be exact, most cases of epilepsy primarily originate in intestinal indigestion, with toxin poisoning; then one or more organs become affected, these affections transmitting their irritations to the central nervous system.

Affections of the spinal cord may manifest at any point other than at the cord. Infantile paralysis is a spinal affection. Its syndrome is impaired nutrition from food devoid of unorganized ferments and basic elements, and the consequent enervation. Resistance is so impaired that extraordinary thermic changes, or depressing physical changes, cause a giving-down of the nervous system, favoring central lesions--cerebral spinal, and meningeal inflammations. The gastric, darting, and girdle pains of locomotor ataxia are peripheral symptoms of a central lesion, and the lesion is caused by toxins.

Headaches are seldom symptoms of head lesions.

Causes of Headache: Anemia, fatigue, hunger, bad air, alcohol, morphine, lead, blood pressure, arteriosclerosis. The headache of old people frequently comes from hardening of the arteries. If examination is made, however, there will usually be found a kidney lesion; but even that and blood pressure belong to the syndrome of arteriosclerosis. Headaches come often from indigestion, constipation, eyestrain, beginning of fevers, brain tumor, and syphilis. A common headache is known as rheumatic headache. It is characterized by spots of "induration," or sensitive spots. This is without doubt the coffee and tea headache, and can be cured by stopping the use of these table beverages.

Refrigeration is said to cause this headache, but coffee and tea make their victims susceptible to cold.

Rachialgia (pain in the back), at the beginning of fevers, smallpox, and the backache complained of by most women are of no value with reference to the location of a lesion. Constipation and uterine disorders often cause much backache.

A common cause of coldness--a feeling of chilliness that cannot be gotten rid of by the heaviest clothing and warmest rooms--is intestinal indigestion; in which case clothing and hot houses are only fuel added to the fire--or, rather, cold added to the chilliness.

I have often told patients suffering in this way that if they would eat more--much more--and put on a half dozen more suits of underclothing, they would stand a good chance of freezing to death.

Neurasthenics usually complain of heat when their hands and feet are cold.

Those who have paralysis agitans are usually too warm.

A pain at any point in the body may be the aura of epilepsy.

A very sensitive state of the abdominal wall, without gas distention, or with a moderate amount of gas present in the bowels, indicates a neurosis. The real derangement may be intestinal indigestion and catarrh of the uterus,

When deep pressure in the abdomen causes no more discomfort than a light touch, the patient is of a nervous type, and should not be subjected to an operation just to relieve her of the notion that she needs an operation.

Hysteria is a hypersensitive state. The hysterical zones are at the top of the head, in the dorsal spine, at the nipple in man, and under the left mammary gland of woman; in the ovarian region, the spermatic cord and testes, and in the patella. It is not uncommon for the knee to be treated for rheumatism, when the disease is of the ovary.

Many men and women are being operated upon today, in our leading "surgical plants," because of pain in the various hysterical zones.

4. Examination of the Patient

In examining a patient, the family history should be obtained; for this gives a clue to predisposing causes and family habits which lead to specific derangements. Then the patient's personal life and habits, mental and physical, must be reveiwed. This information, with analysis of the objective and subjective symptoms, leads to a knowledge of what the patient's illness is; for diseases are the result of broken health laws.

If the patient has pain, this directs to the part of the body affected. It must be determined if the pain is local or sympathetic.

A patient may be sick at the stomach, and be vomiting; yet the real derangement or cause may be of the brain or uterus. If the stomach is treated, the treatment must fail.

Spinal disease may manifest in the joints of the feet and legs. If the physician foolishly treats the pain in the legs for rheumatism, he must fail to benefit his patient. I have met with a case wherein a boy had been treated for rheumatism of the left knee, when his disease was preputial.

Palpitation of the heart comes from stomach derangement oftener than from other causes.

Pulmonary tuberculosis often presents symptoms of heart derangement; and mitral stenosis will cause much coughing, and even hemorrhage of the lungs, which symptoms are secondary to the heart derangement.

(a) Organs of Special Sense

Only the general symptoms are of importance in eye derangements. The special belong to ophthalmology. Photophobia (dread of light) may be due to hysteria, a brain lesion, or an inflammatory disease of the eye.

Ulceration of the cornea is often an index to the state of the blood--often indicates heavy meat-eating, with consequent toxins in the blood.

Dropping of the upper eyelid may mean paralysis of the third pair.

Protrusion of eyeballs, with heart symptoms, indicates exophthalmic goiter. If but one eye protrudes, it indicates a tumor behind the eye.

Long vision, with lost accommodation of light, means ataxia or paralysis. This is the Argyll-Robertson sign. A bright spot before the eyes (scotoma), with loss of power to contract the pupil before a light, may indicate optic neuritis or tabes. If no other symptoms of tabes can be found, it is an eye lesion.

If a person, deaf in one ear, can hear a watch tick, or a tuning fork, placed on top of his head, equally well with both ears, the disease is not central.

When taste and smell are diminished, it is probably due to toxin poisoning, including tobacco, alcohol, coffee, and tea.

A headache is rare indeed that will not get well after the patient corrects his eating and other habits.

A crisis of tears differentiates a hysterical from an epileptic paroxysm.

Purulent ophthalmia is often an indication of gonorrheal infection.

Halos of light, or scintillations passing from a light, indicate indigestion in children.

There are many eye lesions that will pass away when all stimulants are given up. Toxin poisoning must be overcome by eating in keeping with the digestive power. Venereal abuse brings on enervation of the eye and brain, and, unless corrected, no cure can be made. Adopting glasses for many eye defects caused by excesses in sensuality is the height of nonsense.

When noises disturb and prevent concentration, in those who are trained to concentrate or give attention, the nerves are on edge, and the cause is overstimulation--overeating, coffee, tea, tobacco, alcoholics, excessive venery.

If, by applying the ear or stethoscope to the patient's ear, the physician can hear a crackling sound when the patient swallows with his nose and mouth closed, it indicates that the tympanum is intact.

Taste and smell are often much impaired by catarrh.

It can be said that all the special senses are more or less impaired by a style of eating that builds toxin poisoning.

(b) Vasomotor

Sudden redness of the cheeks indicates meningeal inflammation.

The well-known cheek flush of tuberculosis should not be confounded with nervous flush.

Red cheeks of teething children will be accompanied with other signs of teething.

Red cheeks and a white line around the mouth and nose indicate irritation of the stomach; in children, gastric fever, if there is vomiting. These symptoms may precede the eruptive fevers.

Cold, blanched feet and hands indicate vasomotor constriction and have intestinal putrefaction as their cause. When this condition becomes pronounced, it is called syncope of the limbs. The patient may have "dead finger"--a finger or fingers without feeling--and there may develop points of gangrene; or there may be the opposite state--venous congestion or cyanosis, such as occurs in asphyxia--oxygen starvation. The source of toxin poisoning must be discovered and removed, or this state cannot be overcome.

Acute vasomotor disturbances cause hyperemia of the breasts in women. It is too common to amputate the mammary glands, the surgeon diagnosing fluxions as cancer. The careful physician will find an accompanying uterine disease, which, if cured, will do away with the periodical hyperemia of the breasts.

In severe and advanced stages these hyperemic hemorrhages take place in the skin, mucous membrane of the bowels, urethra, ureters--bloody tears, bleeding from nose, lungs, or kidneys. There may be organic diseases, but hysteria should be suspected. Too often the physician is willing to believe the worst--that the disease is cancer.

Dry mouth may be caused by fear, anger, or fever. Salivation (flow of saliva) may mean mercury poisoning, nervousness, neuralgia, cancer, or may be the forerunner of epilepsy.

Sweating is suppressed in neuritis, neuralgia, and brain disease.

Increased urination may be due to polyuria, diabetes, excessive drinking, nervousness, indigestion, hysteria. Fear, anger, and suppression from kidney disease may cut down the amount far below the normal.

In tabes dorsalis there may be hypersecretion of digestive fluids. Hysteria should be suspected. The neurasthenic is inclined to have exaggerations and suppressions of all the secretions and excretions.

(c) Heart

The normal apex beat is a little below and to the right of the nipple. Lying on either side may change the

location slightly either way, A strong impulse should be inquired into; for the reason should be known. The apex beat may be displaced down, or to the right or left. The apex beat must vary in its location. In women the breast development prevents the nipple from being a landmark. In fullness there may be enlargement, and there may be effusion.

By palpating, any undue dullness can be discovered. Pressure over the heart that causes pain indicates either myocarditis or pericarditis. This should not be confounded with intercostal neuralgia or rheumatism, which is strictly local, on or between the ribs.

Percussion.--In examining the heart, there are two zones--namely, a superficial, which corresponds to a lung-dull sound, and means that portion of the heart covered by the lung; and a heart-dull sound, which is triangular- shaped and flat. The lung-dullness is bounded by a line extending along the left border of the sternum, at the lower border of the second rib, and extending by an imaginary curved line reaching the apex of the heart. Then draw a second line from the border of the second rib to meet the end of the imaginary line at the apex, curving it to the left somewhat. The two lines leading downward from the second rib may be called the right and left arms of an irregular triangle; the point where they meet at the top may be called the apex of the triangle; and the line connecting the right and left arms at the apex of the heart may be called the base of the triangle. The flat or heart-dull sound begins at the level of the fourth rib and terminates at the apex of the heart.

The flatness (heart-dullness) of the base of the triangle may be confounded with liver-dullness; but the physician will follow the outline of the liver and make his deductions as to liver and heart sounds.

It is to be understood that the area of dullness and flatness may vary in health, and the variation must be greater in disease.

The principal modifications are:

First, in hypertrophy of the left ventricle, the apex is pushed downward and outward. The flatness is slightly above the nipple.

Second, in hypertrophy of the right ventricle, the apex is pushed outward, and the flatness is slightly above the nipple and to the right of the sternum.

Pericardial Effusion.--If the accumulation is slight, the flatness extends below the apex beat. When the effusion is great, the flatness extends over much more of the chest wall.

Auscultation.--The most important mode of exploration of the chest is by auscultation. It requires a good ear to be educated into reading symptoms by sound.

Location of Sounds.--The aortic orifice is in the right second intercostal space. The pulmonary orifice is in the left third intercostal space. The mitral orifice is at the apex beat. The tricuspid orifice is at the xiphoid appendix.

The Normal Heart Sounds.--There are two sounds: The systolic, or first, sound is caused by contraction of the ventricles. Then there might be a short silence, followed by the diastolic, or second, sound, which is caused by the closing of the semilunar valves on the arteries. These sounds may be represented graphically as follows: The first sound (venticular) may be represented by the following figure: "u" . Then there is a brief silence, followed by a second sound, which is diastolic and longer, and may be represented by -- Then silence, and the sounds are repeated.

The attention must be educated to distinguish slight variations in these sounds. Many normal hearts must be examined to become familiar with the normal sounds. The first deviation from normal may be said to be that of emphasis on the sounds--they are more pronounced. To get the sound, have someone with a normal heart exercise vigorously for a few minutes; then, if the ear is placed to the heart, the sounds will be louder and faster. When this occurs without exercise, it must be caused by stimulation. The stimulation may be from fear or some other emotions, or from the use of stimulating foods or drugs.

An increase of the second sound may be heard at the pulmonary orifice (left third intercostal space), indicating nothing more than a disturbed circulation in the lungs.

A weakened sound may be caused by an accumulation of fat in the thorax, and it may be due to weakness of the heart. If so, it is the first sound that grows dull and finally disappears. This symptom is not so significant as a weakening of the second sound.

When there is an effusion in the pericardium, the heart sounds are muffled and sometimes extinguished.

Disturbed Rhythm.--There are two types of rhythms described by some authors; namely, intermittent rhythm and arrhythmia (irregular, lack of rhythm). Intermittent rhythm is where the pulse beat is suspended, or misses a beat occasionally. These missed strokes are usually followed by a more pronounced systol (contraction). The cause is enervation from stimulation. Perhaps, if there is one class of stimulants, more than another, inclined to produce this state of the heart, it is the coffee-and-roll or toast habit. It means a preponderance of food of acid potentiality.

Arrhythmia is marked by irregularity in the succession of pulses. Then there is a type presenting a prolongation of one of the heart beats or of one of the silent periods. Arrhythmia is also marked by cardiac bigeminate (double), and trigeminous (treble); which means the production of two or three beats, one after another, followed by a natural pause. Then there is the alternating pulse--one strong beat followed by a weak beat; then there are two short strong strokes followed by two weak strokes. The weak ones are not perceptible at the wrist.

There is the fetal rhythm, in which the two beats become similar, and the frequency is augmented so as to convey to the ear the sound given out by the heart of the unborn child.

The fetal rhythm is of unfavorable prognostic significance. lt develops in some cases of arteriosclerosis. Murmur of recall is a modified second sound which is divided into two short sounds. This occurs in a disturbed pulmonary circulation, which modifies the action of the valves, and is found in mitral stenosis.

Galloping murmur is found in two places. One place is at the left heart, a little above the apex beat, and means myocarditis or rheumatism of the heart. A second location, less frequent, is found in the right heart; this can be heard at the end of the sternum, and accompanies gastric and hepatic derangements, especially gallstone.

A murmur that accompanies normal heart sounds is of less gravity than one that replaces them.

Friction murmurs mean friction of the pericardium. They sound like the creaking of leather.

A blowing murmur is a sound like that of bellows. When accompanying the first heart sound, it is called systolic blowing; when with the second sound, it is called diastolic blowing; mesosystolic, when it occurs in the silence between the regular sounds of the heart; presystolic, when occurring before systole; in this case it may be called auricular systolic.

Heart murmurs that disappear on holding the breath are cardio-pulmonary, not endocardial.

Murmurs accompanying the radial pulsations are systolic; those that precede the pulse are presystolic; those following are mesosystolic. The diastolic murmurs accompany the second sound and are more quiet.

During the systole the ventricles contract. If the murmur is at one of the auriculo-ventricular orifices, it indicates that the blood flows backward from ventricle to auricle. This means insufficiency or incompetency of the auriculoventricular valves. When the sound is at the arterial orifices, it means stenosis of the aortic.

When the murmur is diastolic, it Corresponds with the second sound, and means that the blood flows back- ward from the arteries to the ventricle. This is aortic insufficiency. The rolling murmur heard at the apex means stricture or stenosis of the auriculo-ventricular orifice, usually the mitral.

Reduplication of sounds indicates that valve action is not simultaneous and that there is heart strain present, or high arterial tension, as in stenosis or kidney diseases.

Mitral insufficiency often gives out a whistling, musical piping sound. Aortic insufficiency is a mild, soft, and blowing sound. Mitral stenosis is a rolling sound.

When the murmur is heard outward or inward from the apex, or at the left border of the heart, it may be said that it is functional; when in the aortic area to the right border of the sternum, it is organic. Murmurs along the left border of the sternum are organic.

Before it is safe to say that a given murmur is organic, an apex murmur must be heard in the axilla and in the back, and basic murmurs must be heard through the vessels originating from the affected orifice or along the sternum. When aortic incompetency is suspected, the stethoscope may be applied to the femoral artery, and in these subjects to the abdominal aorta.

Ile following are graphic sounds of the heart:

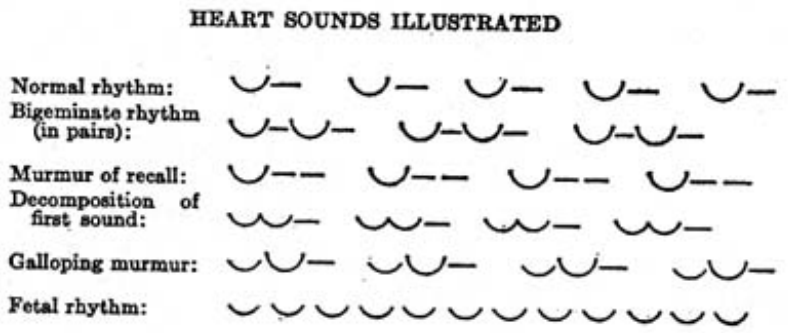


TABLE OF HEART SOUNDS, LOCATION, AND SIGNIFICANCE

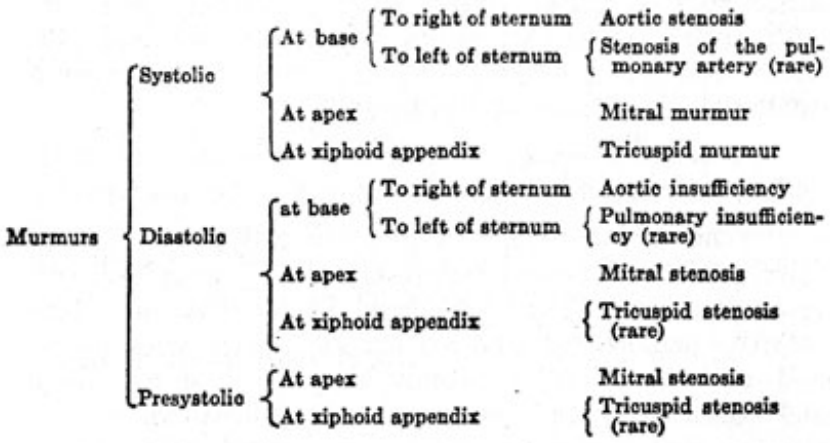
First Sound	Short Silence	Second Sound	Long Silence
Ventricular systole. Heard at apex--apex beat. Felt at radial pulse. Systolic blowing murmer heard at this point.	Mesosystolic. Blowing murmur.	Closure of the semilunar valves between heart and arteries.	Diastole, or auricular systole. Presystolic murmur.

At the first sound, the ventricles close (systole). If there is a murmur at one of the auriculo-ventricular orifices, it is because blood flows back to the auricle. This means insufficient closure of one of the valves.

When the murmur is heard at one of the arterial orifices, it indicates that the blood does not flow through so easily as it should. This means a diminution of caliber. Stenosis is the cause.

Diastolic murmur coincides with the second sound, and means that the blood regurgitates or flows back from the arteries to the ventricles. This means aortic insufficiency--occasionally pulmonary insufficiency. This murmur is heard at the apex and has a peculiar character--namely, a rolling, rather than a blowing or purring, sound. It means stricture of one of the auriculo-ventricular orifices, more often the mitral. Presystolic murmur means the same.

The following table describes the location of the murmurs:



Mitral insufficiency is often a whistling, musical, or piping sound.

Aortic insufficiency is mild, soft, and blowing.

Mitral stenosis is like a rolling sound.

Congenital malformation is marked by a systolic, forcible, vibrating murmur, heard at times in the center of the chest, not accompanied by purring, and heard best over the fourth dorsal vertebra.

Mitral murmur should be looked for in the left axilla; also behind, under the angle of the scapula.

Murmurs of the pulmonary orifice are conducted toward the left clavicle; they stop before reaching the bone.

Aortic murmurs extend toward the right clavicle, and often reach beyond even in the neck.

The diastolic murmur of the aorta passes along the sternum to its end, the xiphoid appendix. The murmur is a soft, blowing sound. There is accompanying this murmur a jerking pulse--a throbbing or dancing pulse.

To sum up: In a weak heart, when both sides are affected, there is observed venous stasis, with functional disturbance of lungs, liver, kidneys, stomach, and brain, with their various symptoms: dyspepsia, dyspnea, local pain, vertigo, palpitation, etc.; with, as termination, dilation and collapse of the heart.

A valvular defect is important as regards accommodation, whereas a dilation has a very serious importance.

Venous stasis from dilation presents cyanosis, turgid veins, with and without pulsation of the jugular and other veins, cardiac asthma, hyperemia of the liver and lungs, catarrh, hemorrhage and edema of the dependent parts and cavities. Cardiac asthma may be due to swelling and stiffness of lung substance from congestion.

Heart weakness may be due to muscular or valvular insufficiency, or both. It may be primary or secondary to other derangements which obstruct the circulation. The liver and kidneys must receive attention.

Congenital Heart Defects.--Potency of the foramen ovale, ductus arteriosus, defects of the ventricular system, and lesions of the pulmonary orifice. Prematurity is the usual cause of these defects.

Symptoms: Cyanosis (blue child-not always present), dyspnea, cough, convulsions, edema, and restlessness.

(d) Respiratory Apparatus

The larynx must be examined with special instruments. The bronchi and lungs present pain in the side, chest cough, difficult breathing, and expectoration. Difficult breathing and dyspnea may be due to either lung or heart affection. It may be reflex; if so, any of the organs may cause it.

Cough may be lung cough, or it may be reflex.

Respiration and pulse normally have a ratio of about one to five.

Cheyne-Stokes respiration belongs to cerebral or meningeal lesions, At first it is rapid and superficial, and gradually becomes more profound. This is followed by a diminution, with a final arrest; then a short period, followed by short, shallow breathing, gradually becoming faster, with a repetition of the former sounds.

Diabetic coma is characterized by abrupt and deep inspiration, followed by a pause; then a quick expiration, and a pause. These types of breathing are due to medullary derangement-possibly toxin poisoning.

Rales are of three types:

Dry or sonorous rales are called rattling when they have a grave pitch; sibilant when acute. They indicate bronchial inflammation or catarrh.

Crepitant rale is like rubbing a lock of hair between the thumb and finger close to the ear. It means pneumonia.

Moist rale has a bubbling sound. When high, it indicates tuberculosis, when of fine bubbles, capillary involvement.

A blowing sound, when heard between the shoulders, indicates bronchitis. It is tubal when it has a slightly metallic or whistling character. The pleuritic murmur has the sound of "i" spoken in a whisper through the closed fist as an ear trumpet. The sound will be modified in keeping with the amount of effusion.

In empyema (pus in the pleura) the percussion dullness will be flat like the liver sound. If the patient will count "one, two, three," while the ear is placed on the chest, the sound conveyed will be far distant-removed; whereas the voice will come to the ear when there is no accumulation.

Egophony.--While the patient is speaking, if the voice comes to the ear with a tremulous murmur, this is called egophony, and is indicative of pleurisy or splenopneumonia.

(e) Digestive Apparatus

The teeth should be inspected--the entire mouth, lips. tongue, and throat. Many stomach derangements are cured by keeping the mouth and teeth clean. Pyorrhea begins with neglect of cleanliness, and starch and sugar poisoning. Scurvy and mercury are leading causes.

"In diabetes the second lower molars are affected, and their alteration serves as guide to diagnosis."

Premature loss of teeth indicates failing nutrition from wrong eating (too much starch and sugar, and not enough raw fruit and vegetables).

The tongue is somewhat of an index, but altogether too much is made of it, as likewise of the temperature of the body, by most physicians.

A broad, pallid, thick tongue indicates too much starch eating. A long, pointed tongue denotes irritation of nerve centers. A small tongue indicates insufficient nourishment. A red tongue, with enlarged papillae ("strawberry tongue"), means great irritation of the stomach. This is the scarlet fever tongue.

Ulcerations on the tongue often mean injuries from teeth. Continual tongue irritation and ulceration should be investigated by a dentist; if not corrected, nocturnal epilepsy should be suspected.

The throat, when abnormally red, indicates irritation of the stomach, tobacco or alcohol poisoning. The throat is an index of the stomach. Treatment of the throat is very far-fetched. The throat will not go wrong unless the stomach or bowels go wrong--no, not even the tonsils. Tonsillitis is symptomatic of wrong eating--wrong combinations.

Many derangements start with an angina; but I insist that all diseases--yes, the eruptive and so-called contagious diseases--get their infective agent in gastro-intestinal putrefaction, and that without this cause they can have no existence. Hence, to cure any and all of these diseases, correct the generation of toxins. To do so is not only curative, but preventive. All so-called contagious diseases are autogenerated. This truth may require years to become popular--be accepted by the profession--but it will come.

Stomach derangements are brought on by abuse at the table. Heartburn means overeating, or too much starch or sugar eating, or all three causes.

A fullness after eating means overeating, or wrong combinations, or too rapid eating, or too much fluid with meals.

Flatulency.--Gas means overeating, or waterlogging with too much fluid intake. Navy beans, peas, sweet potatoes, apples, and other foods cause gas. Apples and other fresh fruits cause gas in those who are starch-poisoned. The habit is built by much water drinking between meals. Constipation is built by gas distention and too large fluid intake, forcing the kidneys to do the eliminating for the bowels. The present universal habit of water drinking to overcome constipation is another medical fallacy.

The tired feeling of a morning means food poisoning--toxemia. The physician should know the influence of food taken in excess, the influence of wrong combinations, and the influence of all mental and physical habits; then he can prescribe intelligently.

Vomiting.--In case of indigestion the vomitus is usually acid. It is alkaline in cases of catarrh and cholera.

Vomiting may be watery, alimentary, bilious, fecal. hemorrhagic, or purulent.

Aqueous vomiting is often viscid and soapy because of the presence of mucous. It is seen in alcoholic gastritis, ulcer, cancer, sick stomach, and cholera.

Alimentary vomiting is of food recently swallowed. Bilious vomiting shows the bile in the ejected matter.

Fecal vomiting is of the contents of the bowels, and means obstruction.

Blood vomiting may be hemorrhage of the stomach. If bright red, it means ulcer; when dark and like coffee grounds, it indicates cancer.

False membranes, and long casts of mucous, are sometimes passed. These indicate muco-entero-colitis.

White, jointed, tapelike appearances may be tapeworms. If found, watch should be kept for a few weeks. If there is really a tapeworm, portions of it will pass almost weekly.

Stomach

Deformities are often produced by corsets. The organs are pushed down; then there is compression from the liver being forced against it. Indeed, the stomach may be pushed in all directions by corset pressure, causing difficult breathing, palpitation, etc. A high stomach means hearty eating; a pendulous abdomen means debility and visceroptosis (falling or prolapsus of the viscera). Medium enlargement in the upper part indicates enlargement or dilation; and dilation means overeating, fermentation, and gas distention.

Depression at the pit of the stomach, when the patient is turned on the side, indicates inanition--great weakness. A bulging at this point means distention of the stomach. Flattening below the navel, with protrusion below, means visceroptosis.

Palpation discovers sensitiveness. A general sensitiveness to touch, without fever, indicate a general toxin infection from gastro-intestinal decomposition of food. In these cases there are usually constipation, colitis, catarrh of the womb, piles, etc.

To palpate the abdomen successfully, the patient should lie on the back, with legs flexed on thighs and thighs flexed to a right angle to the abdomen. The hands of the examiner must be warm; otherwise contractions will occur.

The sloshing sound or clapotage (a sound like that obtained by shaking a bladder half filled with water) should not be heard six hours after eating. When it is, it indicates dilation, ptosis, slow digestion, cancer of the stomach, etc.

Pyloric thickening, or cancer of the pylorus, is felt as a hard lump or tumor at the right of, and two or three inches above, the navel. If this lump is found, and there is vomiting, every two or three days, of ingesta (previously eaten food) that were eaten, one, two, or three days before. and there is clapotage six or more hours after eating, and this sound can be elicited at all times, except immediately after lavages, or until heavy vomiting takes place in advanced cases, the ejecta will present blood of a grumous character. This symptom, with cachexia, means cancer. All cases can be cured by lavage and restricted diet before this stage is reached. Surgery will not cure after this stage, and it is not necessary before. If performed, it will handicap and inconvenience the patient for the remainder of his life. These cases are non-cancerous at the start, and, if properly treated, should recover.

No case should be pronounced cancer until everything has been done that can be. The surgeon is an advocate of his calling, and will declare that surgery is the only cure. Indeed, it is never a cure, except when it fortunately removes a cause.

The stomach should be washed out daily, and the patient properly dieted. If attended to carefully, many cases pronounced cancer can be saved.

A dilated transverse colon may give out the peculiar clapotage sound; but there is always more tympanitis with the colonic affection, and the sound is farther below and at the points marked by the ascending and descending colon.

A tumorous state of the pylorus and the great curve of the stomach--the left of the stomach--can usually be palpated, while it is more difficult to discover tumifactions of the cardia or esophageal orifice.

Intestine

Many mistakes are made in examining the intestine. Constipation with accumulation is often diagnosed as floating kidney (a very rare affection), appendiceal abscess, ovarian enlargement, uterus tumor, pregnancy, tumor or cancer of the intestine. It is true that such mistakes are ridiculous and do not occur often with skilled diagnosticians, but first class professional men do make these mistakes often enough to cause laymen to seek confirmation of a diagnosis before submitting to an operation. It is not proper to seek confirmation by calling upon a physician selected by the physician in charge; for he will pick one who will agree with him. Either call a physician, and do not allow him to know that a diagnosis has been made, or call a rival of the one making the diagnosis. At all costs, try to eliminate the subterfuges of medical ethics, which means all things to doctors, even if it spells ruin to patients.

Professional ethics is a medical Potter's Field where the mistakes of doctors are interred without publicity. Consultation is where two or more professional men gather together to enjoy a private smoke and to discuss the mistakes of Moses or anyone else who haplessly is not present.

A painful point in the intestine may be caused by inflammation, impaction, gas, tumor, or cancer.

If inflammation, there will be mucous with the stools, and an accumulation of fecal matter will cause pain from pressure, and gas will cause pain from distention. A pain at McBerney's point indicates inflammation, gas, or constipation. Colitic pain is peri-umbilical, or in the right or left iliac fossa. In dysentery the pain is in the left flank and extends to the anus.

Fecal Matter.--When dry and covered with mucous, it indicates constipation and colitis. When of rank odor (putrid-smelling), it means overeating of animal proteids. When sulphureted in odor, it may be due to sulphur or sulphate of magnesia taken to relieve sluggish bowels.

The consistency may be hard, soft, liquid, mucoid, or bloody. If watery and mucoid, it indicates diarrhea and catarrhal inflammation of the mucous membrane.

When the stools are small, and largely mucous, with much bearing-down pain, the disease is probably flux or dysentery.

When the stools are of peculiar form--small and round, ribbon-like or pencil-like--there may be stricture.

Dark color may be from food or drugs; green, from spinach or other vegetables; or, in infants on milk, it means acidity and indigestion from overfeeding. Green, mucoid stools, studded with white curds, indicate overfeeding. and unless a fast is given, followed with a cutting-down in quantity, the child may be very sick.

Light color, if not from an exclusive milk diet, means lack of bile secretion and sluggish liver.

Blood in the stools may be from piles, ulcer, or cancer. When red, it indicates that it comes from the lower bowels. A local examination should discover whether the bleeding is of the nature of piles or local fissure, ulcer or polypus.

Black blood from the bowels must be considered in connection with other symptoms. Give the patient the benefit of the doubt as to the disease being malignant.

Bismuth may color the stools dark for some time after its administration has ceased.

Typhoid discharge, when the patient is fed, is yellowish and nauseous in odor.

Whitish stools indicate fat; fatty stools indicate that the pancreatic juice is unable to emulsify, or that the juices are cut off.

Sand or gravel in stools indicates that stones in the gall bladder have disintegrated and passed out--a natural form of elimination.

Abdominal Pain and What It Signifies.--Sudden abdominal pain diffused, or in the umbilical region, will in a few hours become localized in the region of the affected organ. Deadening drugs should not be given, for they will mask the affection and obscure diagnosis, Sudden abdominal pain, with vomiting, is indicative of peritonitis. The cause may be volvulus, invagination, internal or external hernia, extension of septicemia, rupture of ectopic pregnancy, or rupture of an abscess into the peritoneum. The abscess may be typhlitic, perityphlitic, appendicular, tubal, pelvic, subperitoneal, cellulitis, perforations of ulcers, ulceration caused by biliary or renal calculus, etc. An operation at once, with drainage, should save most cases. Delay means death. Unfortunately, advantage is taken of this truth to urge people with intestinal indigestion, gas pains, uterine and other pains, to have an operation at once.

Absolute quiet, frequent copious enemas, and abstinence from food, is a safe "watchful waiting." To use cathartics is unnecessary under all circumstances, but to give them where any of these symptoms exist is positively criminal ignorance.

In peritonitis the pulse is of more value than the temperature. The pulse is rapid and small (120 to 150); the temperature may be normal, subnormal, or high; the breathing is costal and rapid (30 to 40); the urine is usually highly charged with indican. Collapse threatens early. The face is anxious, the skin cold, and

the mind clear. Often the intoxication is so great that the patient talks and acts as if there were little the matter. This, however, depends on the cause. Puerperal cases are liable to act in this way. I have seen cases dying; yet they were hopeful and believed in an early recovery. When the organ involved in causation is the liver, pessimism is present.

Pain that precedes or follows bowel movement indicates rectal disease, hemorrhoids, fissure, ulceration, cancer.

If pain recurs with menstruation, the reproductive organs should be examined.

Sudden pain experienced for the first time should be analyzed carefully. If the same character of pain has been experienced before, time may be taken, if necessary, to find the cause. If pain follows exertion, it may be from hernia, rupture of tubal pregnancy, rupture of peritoneal adhesions with hemorrhage, volvulus, rupture of cystic tumor, or twist of tumor on its pedicle. Pain following trauma may be from rupture of the bladder, stomach, intestines, or other viscera.

Pregnancy, with threatening abortion, may be the cause of pain. Horseback, or rough riding, of any kind, followed with pain, is suggestive of calculus. Repeated abdominal pain due to painful peristalsis in the uterine, fallopian, biliary, ureteral, urethral, intestinal, spermatic, and other ducts, is not often recognized. If it could be, many mistakes would be overcome.

I have seen neuralgia of the spermatic vessels diagnosed appendicitis, and, after the appendix was removed, the pain that came back was diagnosed adhesions. It is no uncommon thing to have the appendix removed, then the right ovary, then operations for adhesions, then operation on the gall bladder, because of genital affections; namely, spermatorrhea, ovarian irritation, endometritis with stenosis of the neck of the womb (a very common cause of abdominal pain in nulliparous women), or urethral tenesmus.

There are many gall bladder operations because of painful peristalsis caused by gastro-intestinal indigestion, and irritation and inflammation of the viscera. After hernial operations, pain may continue because of adhesive bands. I know of one death caused by obstruction from adhesions at the internal ring of partial hernia.

Women of menstrual age should be examined for affections of the genito-reproductive organs.

Sudden abdominal pain in anemic young women should cause the physician to suspect perforating ulcer of the stomach or duodenum. In children, abdominal pain usually means gastro-intestinal derangement, such as gastritis, enteritis, twist, invagination, colitis, appendicitis.

In those past middle life, particularly in old age, cancer is the common cause of abdominal pain

The character of pain should be noticed. In perforation the character of the pain is the same in all viscera.

In invagination the pain is paroxysmal and periodic, due to peristalsis. Strangulation is generally intense and periodic, due to peristalsis; later there is aching and dragging. In appendicitis the pain comes on suddenly, and is intense in fulminating cases. There is a type which comes on slowly, and is easily controlled by fasting and quiet. A sharp, lancinating pain, continuous in character, is possibly due to perforation. A continuous, agonizing pain spells diffuse peritonitis, and means death unless immediately relieved by operation and drainage.

Pain caused by obstructed peristalsis is periodic, and will subside if no food or drink be given. In appendicitis the patient will remain comfortable, but in obstruction from a twist or invagination, discomfort and pain will not leave, the pulse will run high, and the face becomes anxious.

When a stone is passing, the pain will be periodic. When it comes on, it will be excruciating. Between agonies (which means between the rhythms of peristalsis) there remains a feeling of soreness--a tolerable aching, which, contrasted with the greater pain, is insignificant, but which would in time become intolerable, if full relief could not be found.

Pain from stone lodged in any canal--appendix, enteron (intestine), colon, biliary, pelvis of the kidney, ureter, urethra, etc.--is very excruciating, and food increases the pain,

Gastric ulcer is inclined to give out pain when chilled with cold drinks or ice cream. When it is fully developed, pain may be caused by the ingestion of solid foods.

In coming to conclusions regarding an affection, pain is a guide; hence it should never be suppressed by drugs, nor ignored or disputed.

Pain on palpation may be caused from radiation; hence the hands of the physician should be warm, and the temperature of the room should be warm. It should not be forgotten that the personality of a physician may be such as to cause pain. Such surgeons find much excuse for operating.

Facial expression, position of body, tension of muscles, all may manifest pain.

On account of the number of organs and the complexity of the nerve supply, the great variety of functions, etc., the abdomen sends out the greatest variety of pains.

The gastric crisis of locomotor ataxia presents paroxysmal vomitings and severe gastric pain, lasting several hours or several days, which may recur after days or weeks. Other symptoms of tabes dorsalis will clear up the diagnosis, and save a foolish and unnecessary operation for some abdominal affection which happens to fit the particular insanity of the surgeon called. If there were not such senseless operations performed, I should not make such disagreeable statements.

Nephritic crisis (kidney crisis) is caused by a dislocated kidney. The nerves and blood vessels are twisted more or less, and the ureter is flexed. This axial rotation may cause serious strangulation. Where the right kidney is misplaced, the symptoms are nausea, vomiting, pain in the back and thigh; excessive or defective secretion in the bowels, causing indigestion and similar disorders in the renal secretions.

Gas in the bowels frequently causes pain. The gas produces the pain by stretching the peritoneal covering.

Pain at a given point does not always signify that the cause of the pain is located in that region. Absence of pain in regions is often significant,

Pain at the navel is not diagnostic; yet it often signifies appendicular, fallopian-tube, or invagination affections, cancer of the stomach, etc.

If, when pressing the abdominal wall, there is one spot that gives out pain or discomfort, and no other point is sensitive, it is reasonable to believe that the disease is located. When the whole abdomen is sensitive, the pulse is quick, and there is an anxious expression of the face, the disease is peritonitis. If the patient is bright and all attention, and the symptoms appear within a week after confinement, the disease is puerperal peritonitis. When there is no fever, and the pulse does not vary very far from the normal, yet the patient complains at every touch. and the bowels are disturbed with gas, the case is that of trauma, or stretching of the peritoneal sheet, which is made sensitive by toxin poisoning from gastro-intestinal decomposition. This is an affection that is turned aside by a class of physicians as hysteria. Because the patient complains of pressure on one part as much as on another, the doctor decides that there is nothing the matter--just hysteria. Another class will diagnose the case according to the delusion that happens to possess them at the time of examination. It may be fibroid tumor (such cases are liable to have a fibroid); and, of course, the tumor is the cause, and it must be removed. If the doctor's delusion runs to the appendix, gall bladder, floating kidney, enteroptosis, displacement or prolapsus of the womb, etc., etc., the operation selected will be in keeping with his delusion. Is this statement of mine a delusion? I wish it were. These delusions are created and propagated at medical societies. Two or three leading men force their delusions on the rank and file. Medical societies should be suppressed; for they are a menace to society. For a few months after the A. M. A. meetings there is an epidemic of operations, ninety to ninety-five per cent of which are inexcusable, except for the delusions inoculated at the last meeting of the association. Of course, this statement will be pooh-poohed by those whom it fits; but if proof of insanity is desired, surely the inmates of an insane asylum should not be consulted regarding their delusion.

An accumulation of fluid in the abdomen will, on palpation, show flatness at the most dependent point, and resonance at the highest points; whereas an ovarian tumor will show the reverse. In a vaginal examination, with a finger on the vaginal roof and the hand upon the abdomen, the transmitted movements will be felt if there is a tumor; if dropsy, there will be no sensation transmitted. Advanced pregnancy should not be mistaken for tumor or dropsy; yet this mistake has been made by "first class" surgeons.

Arterial pulsations in the epigastric (stomach) region are seldom due to aneurism. To keep from making such an awkward mistake, patients with tension and severe throbbing of the abdominal aorta should be examined daily, and kept on a fast for a few days. If the condition is high blood pressure, the throbbing will soon pass away, and will not return unless overeating or improper eating be indulged in, or sensuality in some form be practiced. The symptom is often found in habitual coffee drinkers.

Obscurity of Abdominal Symptoms.--Reflex pains often get physicians into trouble. Operations on the abdomen have been performed by wise physicians for reflex pains in pneumonia; the symptoms being pain, tenderness, gas distention, temperature, frequent respiration, but lacking the pulse of peritonitis. Extensive intercostal neuralgia may be mistaken for abdominal affection; also for lung disease. The intercostal nerves end in the abdominal wall.

Abscess in the wall of the abdomen may be mistaken for peritoneal disease. More than forty years ago a case of abscess of the abdominal wall came into my hands, after several good physicians had named the disease peritonitis and given an unfavorable prognosis.

Volvulus (Twist in the Bowels).--This is a rare obstruction, constituting about one-fortieth of an intestinal obstructions. Men are said to have this affection oftener than women. The cause is probably an extra-wide mesentery. Invagination is probably made possible from the same cause.

Volvulus symptoms are tympanitis; great peristatic pain; inability to have an action from the bowels after the segment below the obstruction is emptied with enemas.

At first the pain is periodic. It gradually increases and becomes more constant. If no food is given from the start, pain will not be so marked. Vomiting will be a more or less constant symptom. Symptoms must vary to agree with the temperament and excitability of the patient.

The disease is so rare that a diagnosis will be made after an operation. Any case presenting symptoms of obstruction with symptoms of profound prostration--giving the appearance of being on the verge of collapse--should be opened up, and whatever is found should be righted as quickly as possible. Such cases do not stand the shock of prolonged operations well.

Robinson declared that the chief etiology of volvulus sigmoid (this furnishes about sixty per cent of the locations) is elongated sigmoid, possessing a narrow foot, accompanied by inflammation caused by vigorous action of the left psoas muscle, which injures the sigmoid, inducing migration of germs or their products through the coats of the bowels, inciting plastic peritonitis. Adhesions follow, favoring the development of this mechanical obstruction. The cause back of all causes is intestinal decomposition, with infection by toxins. Man pays and pays for lack of control in eating--for food drunkenness.

Volvulus occurs in subjects over forty years of age. Marked tympanitis, or meteorism, or gas distention, is first located in the left iliac fossa. This may be remembered as a small, but not dependable, diagnostic point.

Liver

Hypertrophy of the Liver.--A fullness is observed under the ribs on the right side. Tumefaction of the spleen co-exists. When it does, there is tumefaction of the upper half of the abdomen. This is especially noticeable when the patient stands. The liver is more developed in children than in adults.

To determine the amount of enlargement, place the patient on his back with legs flexed, and begin the palpation and percussion on the lower abdomen, gradually going up toward the ribs. In enlargement the

dull, flat sound will be found anywhere below the ribs, depending upon the amount of enlargement. Under normal conditions the flat sound begins two fingers' breadth below the nipple, and terminates at the costal border (border of the ribs).

The liver is prolapsed when the flatness is below the points mentioned.

The border of the upper line of the liver is on a line drawn from the right border of the sternum at the level of the sixth costal cartilage. It then follows the sixth rib to the right mammary line, and reaches the seventh rib on the axillary line, the ninth on the scapular line, and ends, at the spine, at the eleventh rib. Strong percussion is needed above to bring out the dullness, but light percussion is sufficient below.

Normally the lower limit of the liver may be confounded with kidney flatness at the axillary or the scapular line. The liver extends from the eleventh rib, following the costal border midway between the ensiform cartilage and the umbilicus, and terminates in the left side at the level of the apex of the heart. Liver flatness is diminished when there is emphysema of the lungs, gas distention of the stomach or bowels, or distention from ascitic effusion.

Atrophy of the liver occurs in cirrhosis and yellow atrophy.

General hypertrophy occurs in alcoholism, and the enlargements occasioned by liver and heart derangement brought on from excessive eating of starch and sweets,

(f) Urinary Apparatus

Lumbar pain is an accompaniment of all derangements of the pelvic viscera. The lay mind associates backache with kidney disease; but backache may mean rheumatism, constipation, piles, fissure, prolapsus of the womb, endometritis or endocervicitis, enlarged prostate, stricture of the urethra, etc. Too much attention is given to lumbar pain or backache in connection with kidney affections. Indeed, severe kidney disease may be developed without much discomfort in the back.

In nervous diseases, pain in the bladder is felt in urinating, especially at the expulsion of the last few drops. In urethral irritation it is the first urine that causes discomfort. Hysterical women are very prone to have urethral irritation. Hysterio-cysto-neurotics are usually subjected to so many operations that they are ruined, but never cured.

In this connection I wish to chronicle an observation that I have made: In all cases of tabes dorsalis I have found granular inflammation and great sensitiveness of the urethral mucous membrane, and almost invariably stricture. I have made a practice of using the olive-tipped sound and rubbing away the granulations, and at the same time dilating any stricture that may be present. I have found this treatment a valuable adjunct to the general treatment.

Of all influences leading to the development of tabes, venery stands first. Hence a successful treatment of tabes dorsalis must keep in view the need of remedying the sexual neurosis.

In locomotor ataxia, and in some cases of arteriosclerosis, desire for urinating is lost. The subject must use his reason and attend to this function at stated interval. The urine is sometimes voided without consciousness, and unless the subject sees it pass he will not know it.

Frequent desire to urinate may be wholly due to nervousness; or it may be due to stricture, granular inflammation of the urethra, irritation and inflammation of the bladder, gravel or stone in the bladder, polyuria (hypersecretion of urine) due to drinking overmuch, or eating sloppy foods--soups.

In urethral stricture the stream is often divided, the length and volume of the stream is diminished, and a few drops will be passed after leaving the urinal. This is also true of prostatic enlargement. When the urine stops suddenly, it indicates stone in the bladder. Pain at the end of the penis is another sign of stone in the bladder.

Retention of urine is where the urine is held in the bladder without power to empty it. This demands

catheterization. Partial retention is the habit of carrying residual urine--a small or large amount may be retained after all is passed that can be passed. This in time causes a filthy bladder, and consequently bladder disease. Catheterization and washing out the bladder with tepid water will give great relief. Enlarged prostate, stone, and partial paralysis are the causes of this affection.

Anuria is suppression of secretion, and the bladder is found empty.

Examination of Urine (see tests in medical dictionary).--Urine varies in quantity. When below 1,200 grams (38 ounces), oliguria (scanty urine) is said to exist; when above 1,500 grams (46 ounces), polyuria exists.

It is necessary to note the amount of urine voided in twenty-four hours. Make a note of the time of urinating, and throw the first urine away. Then save all voided, including that which is passed at the close of the last hour in twenty-four. If there are about thirty-eight to forty ounces, with no symptoms of kidney derangement, such as sugar or albumin, all is well.

Note the color, transparency, consistency, odor, filaments (threadlike appearances), substances in suspension, sediments, and always the reaction and density.

When the urine is turbid, its cause must be known. This condition is due to the presence in it of mucous, pus, uric acid, urates, phosphates, etc. Mucous precipitates by adding acid; pus forms a curdle by adding ammonia. Uric acid and urates are dissolved by heat; phosphates become soluble by adding acetic acid.

The cause for change in color should be determined. A reddish or brown appearance is caused by the presence of blood. However, certain drugs cause this appearance (coal-tar remedies in certain subjects). The microscope reveals the red corpuscles. Hemoglobinuria, requires the spectroscope; also urobilinuria. An intense color indicates bile pigment. (See test table in medical dictionary.)

The most important tests are for albumin and sugar. A simple test for laymen to determine the presence of albumin is to boil urine in a test tube, or a spoon if a tube cannot be procured. If the urine becomes milky or cloudy, add a few drops of lemon juice. If the urine clears up at once, there is no albumin. When suspicious of albumin, the patient should consult his physician and have the urine thoroughly examined.

Normal urine has a peculiar, well-known odor. When urine gives out an ammoniacal odor (smells of ammonia), it indicates bladder derangement, retention of urine, or possibly it may come from eating raw vegetables. Fecal odor indicates a vesico-rectal fistula--an opening from the bladder into the bowels.

In diabetes the urine, like the breath, may have a sharp, pungent, metallic, or ether smell. This odor is an unfavorable prognostic sign. It indicates a threatening diacetemic coma (diacetic acid in the blood). When this odor is present, the urine should be tested with ferric chloride, which gives off a burgundy-red color.

In dyspeptic coma, related to diaceturia (diabetes), diacetic poisoning, the principal symptoms are: a sharp epigastric plain (stomach pain); an increasing wandering or beclouded state of the mind, which gradually terminates in coma; then comes the final state, which is marked by a characteristic breathing, described by Kussmaul as follows: "The breathing is divided into four stages; namely, a brisk inspiration, a pause, a brisk expiration, and a pause," This syndrome (aggregate symptoms) is liable to be precipitated by anything that will produce fatigue. A journey is liable to precipitate the symptoms. I have noted that diabetic subjects, on coming to Denver from low altitudes, are liable to do themselves harm through their desire for sight-seeing--they are inclined to walk overmuch and overdo in many ways.

Before the ending referred to develops, there may be detected a peculiar odor of the breath and urine; namely, a strong ether odor, in some cases very pungent. This odor from the breath of diabetics is not characteristic; for I have met with it in children suffering an attack of gastritis, also in fasting to overcome various morbid affections. This peculiar breath develops in those suffering great anger, and from other excessive emotions.

It is said this odor is caused by the development of acetone in the blood. Rheumatism--the arthritis-deformans type--is especially marked by the development of acetone (vinegar) in the blood.

It is thought that diabetes is more probably caused by the development in the blood of a ptomain. I have found that gastro-intestinal decomposition is invariably a precursor of diabetes. When digestion is reduced by dietetic abuse, and the nerve energy is broken because of enervating habits, power to digest the carbohydrate foods is lost, when they are ingested, acetous fermentation must take place. Just what syndrome is set up will depend upon the physical state and the personality of the patient. A diabetes may develop; some form of rheumatism may be the manifestation; insanity or crime may be the ultimate result of the morbid process.

Where this state of the blood or urine is suspected, the following test should be made: Place urine in a test tube. Allow a drop or two of perchloride of iron to trickle down one side of the test tube. The iron, being heavier than the urine, falls to the bottom of the tube. If there is sugar present--if there is ethyl-diacetic acid present--the perchlorid turns the urine brownish. This coloring is not characteristic, for the same color can be obtained if the patient has taken antipyrin. The use of the drug should be suspended until the sugar test is made, and then the drug should be abandoned by those who would like to get well. Anything that depresses the body will prevent recovery.

Turpentine, onions, and asparagus impart a disagreeable odor to normal urine.

The consistency of urine varies. Sometimes it is thick, and viscid. It may froth easily. This should lead to examination for albumin. If a spot of urine on the clothes attracts flies, sugar should be suspected--which, of course, suggests diabetes.

The color of urine varies. It may be very light-colored in diabetes, inflammation of the kidneys (interstitial nephritis), nervous polyuria, and at crises--which latter means at the time when symptoms of disease decline.

The color is deep when disease is intense; for the excretions are scanty. The urine then is a reddish or brown color, due to bile. When the urine is very red, blood should be suspected. If in women, menstrual discharge may account for it. If the blood is from the urethra, it will pass when not voiding urine. When from the kidneys, the blood is more uniformly mixed with the urine. Carbolic acid imparts to urine a blackish-brown color; rhubarb, logwood, and senna color the urine red; santonin gives it a greenish yellow appearance.

Chyluria.--Instead of urine being clear, it becomes turbid when containing chyle (emulsified fat) or pus.

An excessive flow of urine--a temporary polyuria--may be caused by eating freely of vegetables, soup, fruit, and salads. Besides, there may be a slight urethral and bladder irritation, produced by the excessive alkaline intake. Coffee and oranges, or other fresh fruit eaten for breakfast, exclusive of other food, will often cause an excessive flow of urine. Watermelon causes an extra secretion of urine, and should not be eaten by those of a constipated habit, because it diverts fluid elimination by the kidneys. Any foods inclined to stimulate the kidneys to extra action should not be eaten by those with an established constipation habit. Thirst should be endured; for it is a demand for fluid in the gastro-intestinal canal, and unless supplied by drinking or using an excess of fluid furnishing foods, the eliminatng organs will yield to severe demand (thirst), and the necessary amount of fluid to supply the thirst will be forthcoming from the blood for normal secretion, and excretion will be established by the bowels; which means that the vicarious work of the kidneys will be given up when elimination by the bowels has been reestablished.

Scanty secretion of urine--anuria--may be caused by diarrhea or obesity. In the former case the bowels have taken up vicarious work for the kidneys. In the latter case the tissues of the body take the place of a lavatory. In unmasked language, the victim of this physical state urinates into his own tissues.

One of the very necessary states of the body for maintaining health is the proper disposition of water in the system. When constipation exists as an established habit, swilling the stomach with water fails of accomplishing the desired end--causing the bowels to act. On the contrary, it waterlogs digestion, causing fermentation, diluting the enzymes, and flushing them out of the body by way of the kidneys, leaving the bowels as dry as Sahara.

Bladder.--When the bladder is distended, a hand laid over it will feet a globular swelling, which gives out a dull sound on percussion.

(g) Genital Organs

Sex power should be examined into. At the beginning of nervous diseases the power is often increased, but it diminishes as the disease advances. Anaphrodisia is viewed as unfavorable in diabetes, Abuse of this function hastens old age and old-age diseases. A natural lack of this power indicates inefficiency, lack of ambition, and low resistance.

Masculinity is necessary to accomplish work. Sex neurosis must not be mistaken for power. Lasciviousness means mental weakness and lack of discipline. Drunkenness cannot be said to be thirst or a desire for water.

Empire-builders and great men are those who use their power for self- and world-building and not for self- and world-destruction.

Disease from sexual abuse brings on paranoia sexualis or primary monomania--a delusional insanity confined to the sex subject. 'Those in this state are given over to physical and mental abandonment, to satyriasis (excessive venereal desire). In women the disease is named nymphomania (excessive or furious desire); other names are hysterio-mania and furor uterinus. As the name implies, there is an affection of the womb and ovaries, bringing on the sex excitement.

The mental state of the sex neurotic is beyond the influence of moral suasion. Physical and mental training may overcome the disease. Local diseases must be corrected. Urethral irritations, inflammations, and strictures must be overcome; uterine irritations, hyperemia, inflammations, enlargements, and ovarian affections must be corrected. Constipation should be attended to first, and morbid appetities must be corrected. Candy, cake, and ice cream eating is injurious. The mental state must receive special attention; for all derangements of a sex nature are more mental than physical.

Lasciviousness is a bad mental habit which is easily. enough overcome before the habit is fully formed. But like all bad habits, it requires all the power, and in man; cases more than the power, which the sex neurotics have, to throw off the disease.

Self-abuse appears to be universal; but the better class abandon the disgusting habit early in life. The harm comes from lost self-respect and the curtailment of efficiency. Men are handicapped in every race in life. The silver-tongued orator barters brain power for sex pleasure, and forty-five years of age finds him no more interesting than he was at twenty-five. Man, to be interesting, must continue to grow as long as he lives. Only the sensualist retires and is satisfied with half-achievements.

When the sex power is utilized in self-development, man never ceases to grow mentally. This is the reward of self-control. All men who have made history have done things-have actually lifted themselves by their own mental boot-straps. They have been strongly sexed, and have not dissipated their energies lasciviously.

Women who allow themselves to develop lasciviousness lose their color early. They become nervous, irritable, and shrewish. Old age comes too soon. They may attract by giving their personal appearance much attention; but their aura sexualis attracts satyrs who are lust-drunk, rather than those who are looking for loyal friends. A nymphomaniac--a woman whose psychology is pronouncedly hysterio-maniacal--cannot find satisfaction in the love of one man. As a rule, there is one for whom she would lay down her life, but loyality is not in her make-up. Promiscuity is one of the features of monomania sexualis. Voluptuaries, if ever cured, must eat properly, take the proper care of the skin, and be very busy in a work that will occupy every hour. lf such people have one idle hour, it will be spent in disloyalty to self, friends, and family in unlicensed liberties.

A man may have but one bad habit, and that habit in time will ruin him. There is but one safe life to live for man or woman--namely: be busy, cleanly, and constantly on guard in resisting the formation of bad habits; for everyone who builds bad habits in time is mastered by them.

Fortunate, indeed, is the one who is mastered by good habits.

Children should be examined for tight prepuce. Circumcision is seldom necessary. Simple dilation with dressing forceps is sufficient. Then, if there is adhesion, the foreskin may be rubbed or pushed back.

Little girls often are troubled with leucorrhea. The cause is acid poisoning. The acid comes from gastrointestinal fermentation. The treatment is cleanliness and proper diet.

In examining adult males, scars on the penis point to soft chancre. The hard chancre does not leave a mark, unless it has been subjected to severe cauterization, which is unnecessary in either form of chancre.

Eruptions, eczema, herpes, syphilitic papules, etc., are often found. Too often herpes will be treated for syphilis by someone who is either ignorant or knavish. The greatest harm to the victim of such treatment is the developing of syphilitic mania--syphilophobia.

Varicocele (enlarged veins in the scrotum) is known by the sensation of a bag of worms. Surgery for this derangement is malpractice, the same as operating to remove varicose veins of the legs. Venereal abuse, self-abuse, lasciviousness, are the causes, along with digestive abuse. Eating in a way to generate toxin poisoning is a live second to venereal abuse. The cure must be the correcting of bad habits of mind, body, and eating. All cases can be cured, if properly treated early.

Hernia is easily diagnosed. There is a history of a small tumor that comes on standing and coughing, and goes away on lying down.

Enlarged prostate may be discovered by introducing a finger into the rectum. About three inches, or from two to four inches, anterior, a round, hard, tumor-like body will be felt. This is the prostate gland. Much injury is done this organ by massaging it--a treatment that is quite a fad among a certain class of medical men. This treatment is often as far-fetched as giving digitalis or strychnin for an already jaded heart, or morphine for a restlessness brought on from oxygen starvation in pneumonia, or for precordial oppression when the heart is enervated, or for headache due to hyperemia of the brain. There is a difference in the results, however. The drugs used in such haphazard fashion often cause death, while the massage cultivates an enlargement of the prostate; or perhaps I should say that the massage becomes an ally of venery, coffee, tea, alcoholics, tobacco, sugar, meat, and starch in hastening a senile tendency.

Manipulating the prostate is one of hundreds of nonsensical professional inanities. The average human being is inexcusably gullible toward the title-decorated profession; and the professions, being made up of the same common clay, do not hesitate to park their wants on a common so succulent.

The mass of humanity--the high, the low, the rich, the poor--nearly all are educated to stand for useless professional service amounts to--are superfluous and have in palliating or extirpating symptoms or effects (affections)--and this is what ninety per cent of present-day professional service amount to--are superfluous and have no excuse, except that the people are unwittingly educated into an officious impertinence which would be criminal if the acts were not covered by the ethics of social custom--which is only another name for the dogmatism of convention.

There is but one other as tragical parallel in civilized life, and that is war. The ethics of war allows those connected with it to commit crimes so impossible and atrocious that hell weeps at their enormity.

Custom is a refuge for inhumanity; and in the matter of healing, the sins committed in the name of professional science, charity, humanity, and skill--expert service--are equaled only by our present World War.

Such a small affair as massaging the prostate gland is professional impertinence practiced by those who look enviously on those intrusted with larger impertinences, such as removing the appendix or ovaries, operating on the gall bladder, and all other internal organs, with no more excuse for the crime than that professional ethics and human gullibility permit it.

Impotency may be a symptom of nerve-center derangement, excessive venery, auto-suggestion, or

mental worry.

Priapism is a sex neurosis brought on from abuse of the grand passion, eating overstimulating foods, and "going the pace" until the body is desperately enervated. It is a sign of sex exhaustion.

Only the olive-tipped sounds are fit for diagnosing and successfully treating stricture.

The examination of women should begin with an inquiry into the function of menstruation--its regularity, if painful, quantity, etc. Painful menstruation may be due to inflammation of the mucous membrane--catarrh--flexions, versions, ovarian engorgements. The primary cause of all uterine and ovarian derangements in young or single women is infection of the pelvic lymphatics from intestinal putrefaction. Correcting the dietary, mode of living, and care of the body will soon correct the worst forms of pelvic affections of single women. In married women--especially those who were married suffering from pelvic-lymphatic infection--all sorts of evils will follow confinements. In the first place, labor will be longer and more painful than it should be; injuries will not heal kindly; slight septic infections will be experienced, which will cause a perversion of the milk, followed by sick children; and mothers Will be left with enlarged wombs, with an impetus in the line for building uterine or ovarian tumors, and, in time, with chronic toxin poisoning and some form of cancer.

Uterine hemorrhages in virgin women may be due to ovarian and uterine engorgement, brought on from lymphatic infection, lascivious habits, idleness, reading of trashy literature, and picture show suggestions,

Hemorrhage in married women is due to three causes, aside from puerperal hemorrhage; namely miscarriage or abortion, submucous fibroid, or cancer.

Leucorrhea.--A slight discharge before and after menstruation does not mean anything except an acidity from overeating or eating improperly--eating candy or too much sweets.

A thin, catarrhal, albuminous discharge, greenish, yellowish, or white, means catarrh.

A muco-purulent and copious discharge is indicative of venereal disease. A fetid odor may mean an incomplete abortion, or cancer.

Abortion Habit.--It is generally thought that repeated abortions are due to syphilis. I have not found this true. I have found that there are temperaments that establish habits very easily. Such people, when they meet with one miscarriage, are liable to have others follow. Correcting life and habits will cure.

Enlargement of the lymphatic glands in the groin (adenopathy) often indicates an ulcer or chancre in the vulva. Where there is enlargement of these glands, and they feel like bird- and buckshot under the skin, this condition indicates toxin infection from putrefaction in the bowels. This is true of men as well as women. An infection with syphilis under these conditions is favorable, with the usual treatment, for developing a very formidable type of disease. These glands enlarge in cancer of the womb or rectum.

Inflammation and suppuration of the glands of Bartholin, situated on either side of the lower part of the vagina, indicate gonorrheal infection. Unless such cases are treated carefully, systemic infection may spread, break down the health, and cause death.

(h) The Nervous System

The facies (appearance) of paralysis is quite pronounced, and understandable to those acquainted with the various expressions.

Paralysis and its deformities are many. Any part of the nervous system may be involved. The muscles and organs to which the nerves are distributed must become atrophied, and the opposing muscles are rendered rigid and spasmodic. The intellect must be affected, and the countenance becomes an index.

Action or motility must be observed.

Motion--voluntary motion--is lost. The amount of paralysis must be in keeping with the amount of lost power.

Monoplegia is where one limb is paralyzed. **Hemiplegia** is where one arm and one leg are involved. Where the face of one side and the limb of the opposite side are involved the name of **crossed** or **alternate paralysis** is given.

When the two upper or two lower limbs (which is rare) are affected, the name of **paraplegia** is given. Where the paralysis is confined to less than one limb, or to a part of the extensor, or part of the contractor, muscles of one limb, the paralysis is named **partial paralysis.**

Where the limb is entirely paralyzed, it is readily recognized; for it is devoid of all motion and cannot defend itself at all. When raised, it falls as dead, if allowed, if burned, it cannot get away from the torture.

Where the paralysis is of a muscle or two, the auxiliary and opposing muscles undertake to do vicarious work. Where this condition is pronounced, deformity must develop; for the muscles which are doing extra work are unduly developed, and those which are paralyzed go into a state of atrophy. The two extremes in a limb cause the limb to be deformed. If the strengthened muscles are extensors, the limb is forcibly extended, and vice versa.

A paralyzed side of the face is smooth. This contrasts very greatly with the opposite side, which is overdrawn and contracted because of losing the counterpoising effect of the paralyzed opposite side.

If the patient attempts to whistle, spit, or put out the tongue, the movements mark the change that has taken place. The movements lack uniformity.

The orbicularis palpebrarum (the muscle that closes the eyelids) is paralyzed when the cause is peripheral (external); but when the lesion is central, this muscle is left intact. When this muscle is paralyzed, the eye remains open, and the dust settling in it is a source of much annoyance as well as discomfort.

Where muscles are relaxed, the paralysis is said to be flabby; the opposite is contracture.

Where there is contracture or rigidity of muscles, the upper extremity hugs the side, while the lower extremity extends. The arms stick to the side; the forearm is bent at a right angle; the hand is flexed and pronated (palm down). The toes of the extended leg are flexed toward the sole.

Contractures may be hysterical or functional; but often they are due to organic change, caused by an inflammatory state brought on from toxin poisoning or a traumatism (injury). Atrophy of the brain, spinal cord, or membranes accompanies or causes paralysis. All permanent lesions end in contracture. The reason for this, as stated before, is overdevelopment of opposing muscles and atrophy of the paralyzed muscles. A time comes, however, when there will be a wasting of even the muscles not paralyzed, because they become so contracted that they have no other movement than that of contraction. The effect is that of inactivity, nutrition fails and the whole limb withers.

Much of this sort of deformity follows infantile paralysis. The disease is central. Where the paralysis is of vital organs, the children die. Where the paralysis is of one extremity, complete, there will be no contractures, hence no deformity. Where the paralysis is partial of one limb, or partial in two limbs, there must be contractures, hence deformities.

Much unnecessary financial burden is placed on the parents of paralyzed children. In many instances the burden is too great, when the end is, or should be, known to the medical adviser. The end of all treatment must be contracture, which means deformity. Possibly the cutting of tendons to correct a very inconvenient or unsightly deformity may be advisable; but if the object is a cure, or holding out a hope of cure, it is cruel to parents to give hope where there is none to be given.

All lesions sooner or later end in contracture, and mean degeneration. Of brain diseases it may be well to mention: inflammation, hydrocephalus, tumors, hemorrhages, traumatism (injury), degeneration,

medullary diseases (diseases of the white substance of the brain), myelitis, sclerosis, tabes, and meningitis; for the latter disease has contractures among its symptoms. Indeed, it is reasonable to believe that infantile paralysis is cerebro-spinal meningitis.

Gait.--Where the contracture is not too great to prevent locomotion, the following symptoms appear: In flabby hemiplegia, or hysteria, the leg drags (helcopode). The sole of the foot drags or sweeps the ground; or the movement may be circular (helicopode), and the foot comes to the ground on the toes.

In flabby paraplegia the step is short, the legs are apart, and each limb is alternately dragged without clearing the ground. The hips incline and rotate while walking.

Paraplegia with contracture is marked by short and slow steps. It is difficult to lift the foot, and only the toes touch the ground. There is a tendency for the feet to cross each other; the knees touch, and the thighs are held close together. The body reels as in balancing. This gait is called "cross-legged progression."

In paralysis agitans there is the added feature of an irresistible propulsion, which gives the patient the appearance of falling forward. Those unacquainted with the gait will have a feeling that the patient is putting on, or otherwise he surely must fall; yet such patients will walk for blocks, pitching forward as though they must fall.

"Steppage" is the gait of tabes dorsalis. Paralysis of the extensor muscles, especially of the anterior and external muscles, of the leg allows the toes to drop. This necessitates the lifting of the leg high (a stringhalt lift), so as to swing the foot which hangs, and the toes strike the ground first.

There is a pseudo-tabes of alcoholic, lead, and other toxin poisoning. Its gait is different from that of locomotor ataxia. The latter gait is not from paralysis; there is lost power for coordination (directing movements). When such patients close their eyes, or undertake to walk in a dark room, they cannot take a step.

It requires a close observer to detect the early symptoms. In the early stages the patient is awkward in turning back abruptly or standing on one foot.

Combined sclerosis--namely, posterior and anterior lateral hardening of the cord-is known by spasmodic rigidity of the extremities and a tabes--spasmodic gait--an exaggerated tabes gait.

There is another incoordinate gait of mixed tabes dorsalis--namely, that of the drunk man--in which the patient straggles and strays from a straight course. He sways and staggers, regains his equilibrium, to again lose it and then reestablish it, etc. In this case the patient holds his arms extended in the manner of balancing. This gait should not be confounded with chorea.

Convulsions.--Convulsions are readily recognized. The symptoms are characterized by a series of abrupt, involuntary contractions, which at times last long enough to keep the affected part in a set position for a while. These are named tonic convulsions. At other times the contractures follow each other rapidly--an intermittent contraction. These are called clonic convulsions.

Convulsions are general or local. In children, convulsions are common as a result of toxin poisoning. The earliest cause of convulsions in childhood occurs in the first month, and sometimes the first week, of life--namely, septic poisoning. The mother receives a laceration, or a bruising, which sloughs off, allowing absorption of more or less septic material. The only symptoms experienced by the mother are a slow getting-up, a slight fever, pallor (septicemia), and slowness in returning to normal. The septic state may be due to imperfect womb drainage. Rarely septic poisoning may be produced by a putrescent cord resting on an excoriated surface at the umbilicus. The convulsions from septic poisoning range from a slight one or more, to seizures repeated every twenty to thirty minutes for days.

Several years ago I was called to see a child, two weeks old, who, I was told, had been convulsing for eleven days. I watched it for an hour, and it had four during the hour. The spasms were short, not lasting more than two minutes. Recovery followed by proscribing the mother's milk. Another case comes to mind. This child, a bright boy a week old, had severe convulsions for twenty-four hours, which put his mentality

in statu quo. He lived an idiot, and died at twenty-two. Now I am told that his mother is dying of cancer of the womb, twenty-five years after the birth of that boy--undoubtedly due to lack of proper attention to the injury received at the birth of that child. This woman was a Christian Scientist at the birth of her child, and is yet, so far as I know. Nature moves on ideally or not, as she must; faith, backed by intelligence, ends well, but, when backed by fanaticism, it ends in disaster and ruin.

Convulsions in children, coming from irritation in the bowels from fermentation, and toxic poisoning from decomposition, are of daily occurrence. Convulsions starting in this way come and go. The child may outgrow them--whatever that means; but the epilepsy of after-life takes its origin in childhood convulsions.

Jacksonian epilepsy is a partial or sympathetic convulsion confined to one-half of the body. The herniplegic type, which belongs to the epileptic type, involves progressively the two limbs of one side. This type of convulsion is not accompained by loss of consciousness at first or in the beginning of the seizure. The patients watch their own paroxysms. This form of epilepsy indicates a lesion of the brain on the opposite side.

There are abrupt, involuntary contractions of one or several muscles of the face. The cause is neuralgia; and the neuralgia is caused by toxin--coffee, tea, tobacco, alcoholics, or gastro-intestinal decomposition.

Trembling or Tremors.--A motor disturbance. There are three varieties: (1) rapid rhythm-eight to twelve per second; (2) that having from five to five and a half to seven and a half per second; (3) slow, having four to five to the second.

One variety stops during voluntary movements (paralysis agitans); the other begins with the movements and grows more violent as the end approaches (multiple sclerosis). Then there is a type confined to one limb--the hemiplegic type.

Chorea belongs to children's diseases. It is an indication of bad care--lack of poise. Rest and correcting the manner of living, is the proper treatment.

F. NOSOLOGY

Nosology is naming and classifying disease; but as there is but one disease--namely, **Toxin Poisoning**--the names given to the organs affected are really nothing more than naming and classifying affections. Real disease may be likened to a string or cord on which affections are strung as beads. Break the cord, and the beads are lost--correct the toxin base, and affections must scatter. (See "Crises.")

II. Diagnosis

Diagnosis is a mystifying subject, because, unless great care is used, affections will be mistaken for primary disease, and treated as such until the organ takes on such pathologic changes as to become organically changed. For example, irritation of the stomach, kept up long enough, ends in cancer.

Inasmuch as mistakes of this kind are being made all the time, and not alone by mediocre professional men, too much caution on this subject cannot be preached.

When tumors are removed without even a thought of their cause, it is time to get busy on cause.

When gallstones are removed, when the appendix and ovaries are removed, without a thought being given to the cause of the derangements, we think of lack of etiological efficiency in high places.

Bacteriology is to blame for a great deal of shiftless laziness on the part of average physicians.

There are several orders of phenomena to be noticed in every disease; namely, direct cause, and reactory effects. A morbific cause starts up a physical or mental derangement; then follow organic affections. For example: Excessive eating brings on indigestion; indigestion causes gas distention of stomach and bowels. The pressure from gas on the diaphragm causes thoracic symptoms, such as dyspnea, oppression, heart

palpitation; eructating gas causes irritation of the throat. In time a sensitive throat and catarrh, enlarged tonsils, adenoids, and all the diseases peculiar to the mucous membrane of the nose and throat, will in turn be added.

The gas distention kept up by heavy eating causes distention in the lower bowels causes displacement of the stomach and bowels, and constipation. Constipation causes colitis, typhlitis, appendicitis, and inflammation of the lymphatic glands from absorption of putrefaction. Gas distension in the lower bowels causes displacement of the pelvic organs, interfering with the pelvic circulation, causing prolapsus, tumors, etc. The bladder also suffers from pressure; and in males this pressure produces irritation of the neck of the bladder and prostatic enlargement. The rectum becomes involved; piles, proctitis, and prolapsus develop. While these and many minor and obscure affections are in process of development, the nervous system is being affected; enervation is established to such a degree that resistance to disease-producing influences is lost; the environmental influences, which once were passed unnoticed, affect profoundly. Digestion and assimilation are profoundly affected. At this stage, germs become a complicating cause. This is the stage in this vicious pathological circle where tuberculosis and glandular involvement show up. In all this morbid circle, germ influence is an after-consideration; for in about a year and a half after tuberculosis has started in the lungs, germs are discovered, and it is said that the germs are not found earlier except in cases that progress rapidly. Man, like an apple, resists decay until resistance is lowered. Germ decay follows a bruise to the apple. In man, germ influence follows enervation.

Epidemic, infectious, and contagious influences get their work in after mankind's resistance is lowered by a thousand-and-one influences that break down resistancethat enervate.

The graphic picture of affections following the single cause--namely, overeating--must vary in keeping with the peculiarities of the patient. This vicious circle may be established in a child or adult who looks well to the unprofessional eye. Yet he is inflammable, so to speak, and only waits for the fulminant, which may be a germ of diphtheria, scarlet fever, measles, or some other external morbific agent.

After enervation, the affection follows the cause--overeating; then germ or contagious and infectious influences become secondary causes.

When a pathological chain of causes and reactions, as described above, is once started, it is obvious how very impossible it would be to fit a satisfactory nomenclature to it. Nomenclature forces too much attention to names, and so-called diseases are nothing more than affections set up by morbid sympathies. A nomenclature has, however, been evolved, and it is safe to declare that, instead of its being a benefit to the profession, it is a hindrance to right thinking; for it is almost impossible to find two expert physicians who will agree on a diagnosis.

Much to the disgrace of the profession, it is generally known that, if a score of physicians are consulted, the patient, when through with his last counselor, will have from ten to twenty different opinions.

Why is this? No doubt there are many reasons that could be given of an irrelevant nature; but only one reason is necessary, and that one is that all these different diagnoses are right and they are all wrong.

The rhinologist finds adenoids and bony growths in the nose. His diagnosis is right! The throat specialist finds catarrh, enlarged tonsils, and follicular inflammation. He is right! The heart specialist finds an overworked heart; if the disease has been running on long enough, he will find a heart lesion. He is right! The stomach and bowel specialist finds ptosis of the stomach and transverse colon, retarded digestion, and retention of food in the stomach. He is right! The gynecologist finds inflammations, prolapsus, fibroid tumor, maybe an ovarian cyst. He is right! The abdominal surgeon finds appendicitis, ovaritis, tumors, misplacements, etc. He is right! The genitourinary specialist discovers an enlarged prostate, and a foul bladder from retained urine. He is right! The kidney specialist finds albumin or sugar in the urine, and his diagnosis is Bright's disease or diabetes, He is right! The syphilophobiac finds a positive Wassermann test, and his diagnosis is syphilis; and he is right!

All other specialists find something relating to their specialty; and they are all right, and, as stated

before, they are all wrong. Their failure in curing the case is proof positive that they are all wrong. Of course, more or less palliation is given, but no cures need be expected; for all these so-called diseases are affections--sympathetic derangements--and, to get rid of them permanently, the cause must be removed. Such patients are better after taking the prescriptions of one doctor, and worse after taking the advice of another; but the ebbing and flowing, or the oscillating between better and worse, is the legitimate and characteristic progress of toxemia or intoxication, and the getting better or getting worse after taking a given treatment is simply coincidental. In this fool's paradise some doctors are made famous and others are ruined. It is largely a game of chance, except when social favoritism loads the dice. (Read in this connection chapter on "Crises.")

III. Prognosis

To foretell the evolution of diseases without a comprehension of real cause is attended with delusions--mental mirages.

There is such a thing as classifying experiences based upon the habits and customs of society, disease-building though they be, enabling those who become expert in the science to diagnose and render aid, without the priests of the system having even a conception of what a change of habits and customs would do for their theories built on the sands of error.

For illustration: Physicians who are adjusted to a clientele that uses alcoholics, tobacco, coffee, and tea would be professionally lost in a society of abstainers. A science of palliation based on debauchery will ill fit one based on normal habits or sobriety.

Cause of disease can never be discovered in those who are abnormal from debauchery. Health, and what it takes to maintain it, is the only way to find a correct diagnosis and prognosis. When cause is found and removed, therapeutics is superfluous. (See chapter on "Therapeutics.")

IV. Therapeutics

Therapeutics is that branch of medical science which considers the application of remedies as a means of cure.

The drug idea is to relieve and cure. In the very nature of man, the drug-and-relief idea is bad; but if man is one thing more than another, he is a habit-forming animal, and if his habits are bad and work for his destruction, he will accept relief rather than stop his habit, which is a natural cure--if to stop a disease-producing habit can ever be considered in the sense of a remedy or cure.

Drugs, or anything that will relieve without removing cause, is a questionable good, and certainly an outrage and a crime where the remedy blinds the physician as well as the patient to the need of searching for cause and removing the same.

To illustrate: Today 1 received a letter from a gentleman who wrote me concerning his wife. He declared that for the past twelve years his wife, fifty years of age, had enjoyed very good health, with the exception of occasional slight indispositions, which were quickly cured by ----- a drugless physician. He then so graphically described symptoms which had made their appearance within the past month that it left no doubt that his wife was far advanced with cancer of the womb. Should such tragedies happen? Never! They are the fruits of a fallacious system's understanding of the cause of disease. A physician who was not in bondage to a creed-bound etiology would have discovered this woman's perverted nutrition in time to save her.

There is no excuse today for systems of healing which ignore the truth that there can be no cure without righting errors of nutrition, and there can be no errors of nutrition the causes for which cannot be found in the mental and physical habits of the patient, and the patient's attitude toward his or her environment; for be it known that we attract what we have.

To relieve a pain with drugs, by manipulations, by ignoring, by suggestion--in a few words, to relieve in any way without knowledge of the true cause--is a crime against the patient, against society, against

morality, against ratiocination, and tends to bind man hand and foot below his possibilities.

Discomfort and pain are educators. If man could not find palliation, he would be forced to seek the cause of his discomfort and remove it; and, in doing so, he would discover himself and his God--which is the object of being. Know thyself!

First of all, man seeks thrills and shocks, after he has dulled his sensations on the commonplace--after abusing his privileges. When he takes to the toboggan because the travel on the plain has grown monotonous, his pace will soon force him to seek relief. It is at this stage of man's career that he flounders in reliefs.

What is a saloon? A place to secure relief from discomfort. What is a cigar store? A place to find a new sensation--relief from discomfort. What are midnight lunches? Means of finding relief from discomfort. What are bawdy-houses? Homes for lost souls seeking relief from discomfort. What are doctor shops and drug stores? Places for seeking relief from discomfort and pain. The same is true of hospitals and sanitariums, resorts of all kinds, including globe-trotting, sight-seeing, etc., etc. And, neither last nor least, what are churches? Places for those who are uncomfortable in mind and body--palliation.

After a glimpse at a few of man's institutions for seeking relief from suffering, it is well to think over the question of whether all this restless seeking after relief is necessary. Yes, anything that is, is necessary, and will remain until something better can take its place, The relief which man seeks is in keeping with his development, and his development must be held down to the horizon of his sensations.

Those who are looking for a better plan to secure mind, heart, and body ease would do well to read this first volume over and over; it should be found a rational way out of discomfort. It is not a doctor, a healer, a drug, a formula a diet chart, some peculiar exercise or bath, that man needs. He needs to know what causes his discomfort; and then he can become his own physician, as soon as he proves the truths of the book in his own life. When man learns to know how and why he fell, he can lift himself up.

The day for healers and saviors should be past. Teach man to be his own healer and savior--then civilization can reorganize on a rational basis. So long as it is man's duty to save the world, the world will not be saved; but when man learns to save himself, without any intermediary, then the world is saved.

We need no therapeutics--no remedy; we need knowledge of life. Instead of the professions being a good, they are a curse. The world would be better off in a hundred years from now if they could be blotted out; for they are a menace to progress; they are palliatives; they cater to man's appetites and passions; they keep him in ignorance of his best interests; they keep him enslaved to his passions.

Nature can take care of herself; and, as man is a part of nature, he can take care of himself, if obstructions which have grown up about him are removed.

Nature's Plan as Concerns Utilization of Building Material

Birth and death are activities always present in man's body. Every minute cells are born, and every minute cells die.

The process going on is building up and breaking down. This process means that new material must be brought in and made into new cells, and that the old cells must be broken down and removed. To accomplish this, **Two Ferments** are required; namely, unorganized ferment (enzyme) and organized ferment (bacterium). The organized has received attention in a previous chapter.

It is my desire that the readers of this book look upon bacteria as beneficial rather than as enemies to man.

At the very genesis of this process--namely, bringing food to a state of solution, fitting it for absorption--there must be some plan for preparing material for cell building; and there is. The material must be dissolved, and from the time food enters the mouth until it is a living cell it is accompanied at every step

of its progress by refining elements called enzymes. The enzymes--from those in the mouth, stomach, and bowels to those that kiss life and mind into a finished brain cell--are graduated and fitted for their special purposes; and so subtile and varied are they in their work that they are a constant surprise to medical scientists. To show how the learned men of the profession are surprised at the mysterious subtilty of some of the finer ferments, enzymes, I take pleasure in reproducing one of my recent articles from "Philosophy of Health":

Vitamin--What Is It?

Vitamin ("vita" = life + "minum" = small)--small life. We talk much about life; we see where it is, we see what it does, we see it manifest all about us, we know that there is life; yet we cannot see it, we cannot feel it, we cannot analyze it. We cannot live without it. We know that it is, because we see how matter acts under its influence, and how it acts when life is removed from it.

Life is, or it is not, an entity. If it is an entity, it is much too microscopic for man's extended senses (instruments of precision). If it is not an entity, then it must be the "summa summarum" of a physiological synthesis. If it is an entity, then it must be a something that is ommipresent, and at the same time so subtile, subsensorial, and elusive as to sidestep the chemist and all his analytical wiles. Yet it adds the missing link to a synthesis that becomes an animate being.

It is difficult to conceive of life as not present. As in the case of air, light, and electricity, we must assume that it is; or otherwise analytical reasoning becomes void. Nature--the great artificer, the chemist par excellence--and the associational, or social, nature of elements, cause the latter to assemble and unite in just the right proportion to make a compound--a synthesis--attractive for the everpresent life, which at once enters, and the inanimate becomes animate.

Would not life--animal life--be exceedingly precarious if omnipresent life itself were not ever present? Suppose a supply of air, which is a coarse substance compared with life, should have to be gathered, or material for its supply should have to be discovered and purposively supplied--would not life be so precarious that being would scarce secure a hold, and that to remain in being for years, as man does, would be impossible? As it is, man dies for lack of air. The lungs and blood fail to exchange gases, notwithstanding the fact that air is ever present and man's body is submerged in it continually. Let us assume a simile for life: Suppose that a living being were compelled to discover just what foods contained life--vitamin--and he were compelled to provide himself with enough or die, is it thinkable that the world would be populated with beings? Every little while the medical profession discovers something which "God forgot" that is necessary for man's continuance in life! Oh, wonderful man! Wonderful doctor! Wonderful mind!

We must not forget that, in seeking knowledge, a little wisdom should not be despised. The medical blend of knowledge and wisdom is not good. A little more wisdom and a little less knowledge would help some.

Life is not dependent upon procuring a food that has a mysterious property, but upon knowing how to care for the body in such a way that life will flow in and take up its habitation therein.

Iron is needed in our bodies; without it we cannot extract the oxygen from the air. Why do we at times lose the power to appropriate iron from the food consumed? Because assimilation is injured by toxemia, and toxemia is developed by living in a manner to cause intestinal decomposition. The toxin overstimulates and enervates; and enervation causes sluggish elimination. The retention of excretions injures the life of the blood, so that it renews itself badly; then it fails to appropriate the iron from the food intake. And as this is true of iron, so is it true of every other element. At times all elements are refused; namely, minerals in the food, oxygen from the air, and, neither last nor least, life--vitamin--from the living presence.

A physiological synthesis must be made up of just the required elements to attract the absent--which is ever-present--life. Then, when the elements in the synthesis become quantitatively disturbed, this subtile element departs and the synthesis disintegrates.

Vitamin is a new name--a misnomer--to describe an element that may or may not be found in food. It may be refined out of food, as in polished rice and white flour; it may be rendered inert by cooking; and it may be antidoted, as we can prove at any time, by the use of iron, alcohol, tobacco, coffee, tea, narcotic drugs, mineral poisons, toxin from decomposition, and, neither last nor least, by depressing and discouraging thoughts, fear, envy, hate, etc. This element is as old as life--as old as creation--and is known as enzyme. Digestive ferments have been known for many years, but not known in their most subtile forms and obscure developments.

No wonder that the subtiler forms of enzymes are mistaken for life--vitamin; for they are so closely linked to the genesis of being that one appears as necessary as the other, and the action of one may be confused with, or mistaken for, the action of the other.

If there were some way to extract the enzyme from an egg, it would not--it could not--hatch. Of course, we know that the egg must be fertilized, or it cannot take on quickening--the vitamin, the little life, cannot be attracted. The last step, however, in the synthesis of being is fermentation, and coincidently quickening. The most refined, unorganized ferment is the last element before life-vitamin--adds itself to an organized compound of elements, which I call a synthesis of being.

Enzymes range from the coarse solvents--namely, ptyalin, amytopsin, trypsin, steapsin, pepsin, et al.--to those within the blood, and those whose subtilty fits them for cell-building and becoming the all-important key to life in the formation of new beings. It is these bodies--it is one or more of these subtiler enzymes--that have been discovered and named vitamin. How do I know? By analogy. It is unthinkable that life (vitamin) is an entity that can be destroyed, or that can be extracted from vegetable or animal beings, bottled, and given out "ad libitum" to those who have forfeited theirs in riotous living.

The description of the substance said to be vitamin tallies exactly with what we know, and can conceive, of the action of a refined and subtile enzyme.

The description of the substance said to be vitamin discovered by Dr. Funk, misnamed vitamin, and which substance he declares is indispensable to life (how can life be dependent on a little life; how can electricity be dependent on the electric light or any other manifestation of itself?) does not fit any conceivable description of life. Life is as old as food itself-an element as old as creation. It is the breath of life that quickened man. It is the word made flesh--the subtile presence that quickeneth all things.

"The word 'vitamin' has not found a place in the dictionary yet;" and it is scarcely defined and barely understood by its discoverers.

It is said that Dr. Casimir Funk, a Russian chemist now of New York, invented the name to fit "certain mysterious substances in food," which have been demonstrated by a Scandinavian chemist as substances which apparently are not food, yet necessary to its utilization. Isn't this the description of a digestive ferment--an enzyme? Certainly, food cannot become food until acted upon by a ferment.

It is said that Dr. Funk has isolated those substances which he says are "indispensable to life;" and since his announcement "other scientists have added to the meager sum of knowledge."

Digestive ferments have been taken from the hog (pepsin) and from the chicken (ingluvin--pullus gallinaceus). Would it be so very strange if chemists should analyze out of every organized structure (plant or animal) a ferment, or the genesial elements out of which ferments are made? So important an element as ferment must, like life, be present, either in form or potentiality, everywhere.

In the olden time, and up to the very recent present, the perpetual-motion discoverer was abroad in every land, and was always just about ready to demonstrate its discovery to the world. But, alas, the world waited in vain; for no announcement ever came. And now the perpetual-motion explorers are out of business forever--put out by the electric discoverers.

Electricity is a power that is elusive to the chemist, and beyond our senses; yet it can be sent over a wire half as large as the little finger, silently and unobjectively, in such quantities and with such power as to move a train. This has awed the perpetual-motion crank into silence. When we know that electricity is

made up of electrons (units) so small that a pane of glass allows them to pass through its pores as though it were a coarse sieve or not at all present, we can understand how a cyclone of fifty thousand volts can pass through our bodies as an open door, leaving no trace of its coming or its going.

Yet electricity is probably so coarse, compared with the subtilty of life, that there is not much hope of a Russian, or any other chemist, gathering or isolating it. If, however, "these substances," which are "indispensable to life," are what I insist they must be, they are not vitamin, but ferments--enzymes, and are indispensable to life. Yes, indeed; for "this mysterious substance," which they call vitamin, is without doubt ferments, and in the evolution of beingevolution of cells, quickening of fertilized ova--stands next in importance to life.

The human mind is yet so coarse in its thinking that it alludes to the subtile and universal manifestation of life as "mysterious substances," and talks of gathering or isolating these substances. Certainly we are far, far away from its discovery, so long as our imagination and ideals are so coarse.

Dr. C. Houston Goudiss, editor of the "Forecast" magazine, declares: "Not the wisest man living can tell us just what vitamin is. While these substances appear not to be food, they do appear to be essential to the digestion and assimilation of food; for their withdrawal, suppression, or absence, from whatever cause, results in disease and death of the animal or man fed on such food." Dr. Goudiss unwittingly describes exactly the attributes of enzymes. Probably the name "vitamin" confused him. Any "wisest" physician should tell us just what an enzyme is, even if he balks at life.

In a crude way, vitamins--enzymes--have been known for many years. That there is an enzyme constituent in every cell, in every being, animal or vegetable, in animate nature, is as true as reason. Why? Because it is necessary for reproduction. It has been known that scurvy--a disease newly named acidosis--is caused by living on foods deprived of enzymes; and it is as widely known that uncooked vegetables and fruit, taken in abundance, will cure scurvy, or scorbutus, or acidosis, by supplying the ferments--enzymes--necessary to attract life. The secret of the raw-fruit-and-vegetable cure is that scurvy, or scorbutus, or acidosis, means that more food has been taken than can be appropriated by the body, and the body, like a machine, has become choked by waste products and debris to the extent that decomposition exceeds recomposition; and when enzymes fail to maintain asepsis, and toxin gains the ascendency, disease is brought on and death is threatened; for toxin destroys enzymes, and, as the enzymic power weakens, life power weakens, since not enough life can be appropriated out of the living presence to perpetuate the life of the body.

By using succulent fruits and vegetables in scurvy, or acidosis, much distilled water is furnished the body with which to flush out the accumulated putrescence. Fruit and vegetables contain over ninety per cent water. The salts are antiseptic; they antidote the toxins that have been generated by the decomposition resulting from the oversupply of food devoid of vitamin (?)--no, enzymes--which brought on the scurvy. Bread, meat, cakes, pies, puddings, sugar, etc., etc., are mostly food formulas that are artificially prepared and refined to the extent of excluding the enzymes, hence are not in keeping with nature's formulas. Therefore they are not ideal foods--they are short on enzymes; and, when they are eaten, the body is furnished too much nutriment, and not enough enzymes to keep a digestive and assimilative equilibrium. When this style of eating continues, a time comes when the chemistry of the body is perverted by acid fermentation to such a degree that it fails to attract the ever-present life--vitamin--and it must crumble into decay.

Such diseases as pellagra, hook-worm, tuberculosis, scrofula, syphilis, and many others, are directly and indirectly caused by a dietary--foods--that has had its chemistry tampered with. The chief element--namely, enzyme, not vitamin--has gone out of it, allowing decomposition to become established. This far-reaching and not generally known truth can be demonstrated at any time. When a treatment is based upon this truth, syphilis becomes easy to manage.

Those who attempt in any way to explain what vitamin is, do so in something like the following fashion:

> "We have learned that there are vitamins that promote growth, vitamins that prevent scurvy, and vitamins without which the baby will soon become rickety. Some of them are destroyed

by cooking, but cannot be dried out, while others are not appreciably affected either by heat or drying. "--Goudiss.

In the same way a multiplicity of attributes may be credited to electricity. We might say that there are electricities which promote different lights--white, red, green, yellow, etc.; electricities that run trains and cars and motors, kill criminals, etc.; electricities that warm the feet and hands, cook food, iron clothes, etc. Electricity is the same yesterday, today, and forever. It is the motor power for all these manifestations, and a world of others. Then shall we speak of it in a plural sense? Life, according to common understanding, is not plural. It is not quite obvious that there is a different kind of life in different kinds of animals; that the monkey, man, and all other animals and vegetables known to have individual existence, are possessed of different kinds of life.

It is not true, yet it is pertinent to the argument, that it requires a different yeast (bacterium) to raise 'bread, cake, doughnuts, puddings; to cause apples to sour into vinegar, grapes into wine, malt and hops into beer; to cause carbohydrates to ferment in the stomach and bowels, causing acid stomach, rheumatism, etc., or to cause proteids to decompose and develop a toxin that, directly or indirectly, is responsible for all the septic or zymotic diseases. It is as unreasonable to contend that there is a distinct organized ferment (bacterium) for every disease, a distinct unorganized ferment (enzyme) for every tissue that is built, as to declare that there is a different life for every animal and plant, or a vitamin (a little life) for every phase of life.

The tendency apparently is for the educators to compound, complicate, and comminute all knowledge, until it is a wilderness so entangling that there is no show for a John-the-Baptist to come out of it and teach the people how to make the paths of their thinking straight. It appears that everything in life of mental value must be mystified and complicated, or it is not considered worthy of attention.

We are told editorially by the "North American" for September 13, 1917, in commenting on what Drs. Funk and Goudiss have to say on vitamin:

Ten or twenty years hence we will know more about them. Wider knowledge may reveal mistakes in deductions which at present are little more than guesswork. But certain facts long established by usage and now approved by science so firmly uphold Dr. Funk's description of the vitamin as an indispensable attribute of life, that people should know all there is to be known on this subject.

For instance, it long has been known that orange juice is the best preventive of scurvy among babies. It also has been common knowledge--though until lately ignored by science--that the potato not only is a most nourishing food, but that since its introduction into Europe whole countries formerly ravaged by scurvy have been almost free from this distressing ailment.

Now science vindicates the experience of "ignorance" by showing that orange juice and potatoes are notably rich in anti-scurvy vitamins. And in these two instances, heating even to the boiling point does not injure the vitamin content. On the other hand, the vitamins of milk are sensitive to heat. Even the low degree required for pasteurization seems to affect them, while sterilization appears to destroy them entirely.

Beriberi is a disease of the nerves which for many years had wrought widespread ravages in our Farthest East possessions. Early in 1910 a severe outbreak of this malady was speedily and completely checked by the substitution of unpolished rice for the polished product, which constituted the chief food among the sufferers. Subsequent tests on men and animals proved that beriberi not only is caused by a diet consisting chiefly of rice from which the outer coat or pericarp has been removed, but that it can be cured by the substitution of whole unpolished rice, or the administration of the so-called "waste" which results from polishing.

By isolating from these polishings a crystalline base which cured fowls that had developed a disease similar to beriberi after being fed a diet of polished rice, Dr. Funk was led to his discovery--one which yet may rank with Harvey, Pasteur, and Lister.

Subsequent experiments of like nature by other scientists proved the case beyond doubt. Now we know it is the absence of this vitamin from polished rice that causes beriberi. Just how the vitamin in the rice grain affects the human system; just what it does, or where are its fields of operation, we do not know.

That it must play a vital part in the maintenance of health is well evidenced by the fact that pigeons fed on polished rice until paralyzed with beriberi will revive almost instantly when the anti-beriberi vitamin is injected, and in a day's time be fluttering about as though they never had been ill.

> "This almost miraculous transformation can be due only to the presence of the injected vitamin," said Dr. Goudiss; "and the minuteness of the quantities used supports the view that the vitamins are not foods in the usual sense of the term, but have some obscure connection with the production of internal secretions which are essential to assimilation."

He further says:

> "No longer can we regard ourselves as properly fed because our meals show a scientifically correct balance of protein, carbohydrates, fats, and mineral matter; for without that evasive element which in some mysterious manner gives the word to the forces of the body to digest and assimilate these nutrients, we might as well eat sawdust. For a time, it is true, we may get on very well, for the body stores vitamins against the time of need; but these cannot last long, and without a constantly renewed supply, disease and death inevitably await us."

In addition to beriberi, recent investigations have led to the belief that other deficiency diseases are caused by lack of vitamins. Chief among these is pellagra, so alarmingly prevalent in many of our southern states and which, curiously, is found chiefly among those whose diet consists almost wholly of corn meal ground in the modern way, with the germ and hull of the grain removed.

In localities where the old-fashioned "whole-ground" corn meal is used, pellagra is almost unknown. This has led scientists to assume that the outer coat of the corn grain contains a vitamin which will prevent its development, even when corn is the sole article of diet. When used in a mixed diet, as is the case in most instances, the employment of whole-ground corn meal becomes a matter of secondary importance; for the needed vitamins will be supplied by other foods in the menu.

It also has been shown that a diet consisting solely of white wheat bread will produce a disease not unlike pellagra; and here again science is forced to conclude that in wheat, as in corn and rice, the vitamin inhabits the outer coat of the grain. It is not yet known where this vital substance secretes itself in fresh fruits and vegetables, but science is sure of its existence in nearly all such articles of food.

Thus far, the foods found rich in vitamins include raw milk, or milk just brought to a boil; the yolk of egg; meat juice and broths; fresh vegetables and vegetable soups; fresh or cooked fruits and their juices; whole grains, slightly broiled meats, and cod-liver oil.

Those apparently deficient in this element are sterilized, preserved, or cooked milk; white of egg; sterilized meat extracts; dried fruits and vegetables; highly milled grains; soup meat and preserved meats; and bread raised with soda without the addition of sour milk.

We have dwelt on the details of this subject because it concerns a matter no one can afford to ignore. However easy it once may have been for some persons to dismiss the subject of food as relatively unimportant, no such attitude is tenable today. And at present we face food conditions which demand not only the practice of strict economy, but application of every help science can offer.

This newspaper could not consistently omit its utmost in the dissemination of such knowledge. For during the last seven years, with the aid of Mrs. Scott, we have so emphasized the value of a varied diet, and one which includes fruits and green things, that we could not overlook such sanction of our course. In this connection, we wish to quote from a recent editorial from the "Journal of the American Medical Association":

> "The discovery of the vitamin has emphasized the value of those elements of food which,

> although present in minute quantities, exercise a determining influence in the utilization of the ordinary articles of diet. As Garrod says: 'The immense practical importance of these hitherto unknown factors is in the fact that once the missing element -the vitamin-is discovered, a specific remedy for the disease has been found.'
>
> "That the nutritive value of a diet does not depend wholly on its calorific value must be admitted. The importance of flavors, spices, and of the preparation of food so as to arouse the esthetic senses-in other words, the nutritive value of good cooking--has been pointed out by Sternberg, of Berlin, who insists that the science of cookery is not merely the application of chemistry and physics, but rather an application of the physiology of the senses, applied psychology and esthetics. The spices and flavors used by the cook, Sternberg suggests, may be closely allied to the vitamins, if not identical with them. They may stand in the same relation to loss of appetite and health in general that the specific vitamins do to particular diseases."

Thus is the vitamin closely linked to our present needs. The war is forcing us to a food situation which will necessitate particular attention to diet. Its insistence on no waste will compel us to eat foods and parts of food hitherto little used.

Instead of being a deprivation, this may prove an immeasurable benefit. For it may force us to become acquainted with the power of vitamins to protect our bodies against invading hosts of disease which still are unconquered.

It is rather doubtful if the orange-juice cure so "long known" is really understood. If it is not, it may lead to wrong conclusions. The facts are that orange juice in the treatment of babies is not a very old remedy, and as yet not a widely used one. When there is indigestion and poisoning from the decomposition of fats--cream--in young babies and children, orange juice, which is potentially alkaline, antidotes or neutralizes the acid of decomposition; and it is just possible that scalding the juice does not entirely inhibit this action, but it certainly does weaken it. To say that a vitamin in the orange juice did the curing is working the imagination overtime--it is simply assumption If what is claimed for vitamin be true, all one needs to do to prevent decomposition, or prevent stomach and bowel derangement, or cure all types of diseases, is to extract a little vitamin from some favorite food, and use this "mysterious substance" in abundance. Another cure-all! Another way to prevent diseases! What about germs as a cause? And the specific antidotes made from the specific germs? Indeed, when there is so much known of cause, cures, and immunization, is it not strange that there is any sickness at all? The laboratory struggle still goes on in search for specifics that will out-specific all other specifics. Professional asininity is obvious all the time to the discerning.

One of the most necessary things to do for the victims of scurvy, scorbutus, or acidosis is to rest from food for a while; then start the eating on fruit; and then select a proper diet--fresh fruit, vegetables, etc. Those who are very much poisoned on carbohydrates and proteins combined, because of eating to excess, complain that they cannot eat fresh fruit; that it distresses them--which it does, and will continue to do until there is a decided lettingup on overeating and improper mixing.

Regarding rice: Much is made of the rice story. Indeed, that story is worn to a frazzle by every novice in dietetics. It has become a professional platitude. In spite of it, however, polished rice is still eaten, as is white flour. Both are eaten in preference to the less refined grain preparations--and it is perfectly all right for those who supply the necessary enzymes by eating freely of fresh fruit and salads.

It is doubtful if there has been a test made where no food is eaten except rice. Until that is done, no one can tell what a mono-diet of rice will do. I should expect a race of people to go down on such a diet, even if only unpolished rice were eaten; for rice is not an all-around food. Fruit for one meal, rice and fruit for another meal, and meat, fish, cheese, nuts, or beans, with salad, for another meal, will supply all the food and enzymes--vitamin--needed to attract all the life--energy--required.

It takes more than one dietic error to bring man to grief.

There is much to the chemistry of food--far too much to make a cure-all of enzymes, misnamed vitamin; or to make the lack of enzymes--vitamin--the cause of all bodily derangements.

Fermentation is the important process that stands between food and body-building. It is a question of which ferment will be given the right-of-way--unorganized (enzyme) or organized (germs, bacteria).

An ordinary lay mind can understand that the stomach glands must secrete digestive juices, furnish enzyme, or unorganized ferment, or food cannot be brought to a state of solution, fitting it for absorption. A solution is not all that the ferment (enzyme) accomplishes. A property of resistance is imparted to the food pabulum by the enzymes that acts the same as is claimed for vitamin. This is necessary, and for the purpose of resisting the influence of organized ferments (bacteria or microbes), which are everywhere present, ready to "do their bit" in preparing food for elimination which resists enzymic fermentation because of its unfitness as a food, or because the intake is beyond enzymic (digestive) power.

The food that is acted upon by the unorganized ferment (enzyme) attracts life; the "mysterious substance" of Dr. Funk is a subtile enzyme; it is this mysterious element that brings about the fermentation necessary to cause the egg to hatch, the nut and seed to germinate. Ah, it is this element in the cell of living flesh (animal tissue) that enables the animal to live and reproduce itself--that enables the cell, the unit of the body, to produce a successor. And this quickening element, this mysterious enzyme, starts the fermentation that attracts life, It is then that vitamin flows in and being begins.

This mysterious element, enzyme, appears to be subject to the law of summation--of accumulation and dissipation. In the nut and the seed this element lies dormant, and under favorable conditions may remain ages, retaining the power of fermenting and starting the quickening process. After quickening begins, maturation depends upon whether the environment in which the resurrection takes place contains elements of nutrition potentized with enzymes sufficient to attract the vitarnin--life--necessary for cell proliferation.

Individual life is a state that must vary in keeping with the environment. If the nourishment contained in the environment is potentized with enzymes, then vitamin (little life) will be added; for it is the ever-present link, it is the ever-present immanence--the bridge leading from inanimate to animate.

The air must be vital. I do not mean that it must contain oxygen; for all air--that in the mountains and that in the valleys, in the basement, in the cluttered room, or on the wide-open veranda--is of the same composition. But not all air is potentized with life-vitamin. Sewer air does not differ from mountain air in the amount of oxygen and nitrogen which it contains, but it does differ in the amount of vitamin. The mountain air is potentized with vitamin; the sewer air, the air in closed houses, in closed bedrooms, in dark closets, etc., is dead air. Bottled water, stagnant pool water, boiled water, distilled water, are dead waters. Cooked foods are dead foods. That "mysterious substance"--life, vitality, resistance, vitamin--always eludes the chemist. In the laboratory, it is or it is not in the test tube. It cannot be found except by mental analysis--through the power of deduction. Life, energy, vitality, vitamin, is found--it is in the air, the water, the food, the sunshine, or it is not. We must find out by mental deduction. We have learned from observation that air and water are potentized with life (vitamin), or they are not. We know that where these elements have an opportunity to renew themselves from the world's great storehouse, they contain vitality--vitamin; but when they are confined they become poisonous; not from a lack of basic elements, but they become toxic; for life (vitamin) is always supplanted by toxin when life, or vitamin, fails to be forthcoming from the source of its generation.

Life--vitamin--is cumulative and dissipative. We in our daily lives are either building resistance or we are not. If we persist in supplying our lungs with the air that is vitalized--that contains vitamin; if we persist in supplying our bodies with food that is potentized with enzymes (raw fruit and vegetables), and if we supply our minds with mental food that is vitalized with vitamin, we are building power--resistance. It is well to remember that vitamin--life--is not subject to the rules of the laboratory, and is not confined to substances as coarse as that used in laboratory experiments; but it potentizes thought as well as material food for body-building. And it should not be forgotten that all elements which are to enter into the development of being must be potentized with enzyme. Without the enzymic torch to light the way for vitaminic transfusion, animation fails to appear.

Vitamin will never be bottled; hence the medical mind that looks for a cure-all which can be applied with a hypodermic syringe is doomed to disappointment. Modern medical mind has not got away from its ancestral idea of cure. Enzymes may be extracted and used to bring about fermentation, but vitamin--life--will not be attracted, and scurvy, or acidosis, will overtake the victim of laboratory extracted enzymes and such food as malted milk and artificial foods in general.

It is not cure that we need. It is knowledge of how to adjust our bodies so that the ever-present vitamin will flow into us. We must know how to make a vacuum of our bodies that will attract life, energy--vitamin.

Dead thoughts (old theories that have failed) will not be potentized by clothing them with new-fangled notions. A right theory must be based on fundamentals--on eternal verities. If it is, then the false all around us becomes truth. Truth always must have a potentiality of fallacy; and whether we get the truth or the false depends upon our development--what we are developed for or attuned to. Is our mentality potentized with the enzyme of truth? It it is, then the false can be evoked into life. Vitamin will be added; for it is ever present.

There are dead thoughts. There are thoughts that are languishing, because that on which they feed is devoid of the enzyme of truth. And there are live thoughts--thoughts pregnant with vitamin.

If we clothe our bodies in such a way that our skin is supplied with life (vitamin), and that air can get to it, we shall cumulate energy--we shall store our bodies with vitamin. But if we breathe air, drink water, eat food, think thoughts, that are devitamined--devitalized; if we keep vitamin away from the surface of our bodies by improper clothing; if we drink dead water, eat dead food, think dead thoughts, we become devitalized, and toxin takes the place of enzymes; sickness and death take the place of vitamin--life.

Life, as stated above, is cumulative and dissipative. Such diseases as scurvy and all so-called blood diseases, scrofula, syphilis, tuberculosis, et al., are wholly dependent for their continuance on a lack of enzyme--a lack of food that carry enzyme into the body. Hence the body cannot attract vitamin or life. Consequently disease follows. This is demonstrable. When the profession and the people generally give up dernon-worship--give up their belief that what is called bad, disease, devil, evil, has an existence, and are able to see that these supposed entities have no existence per se, but are different phases of health handicapped from a lack of vitalized food, air, water, sunshine, and mind, then truth will flow in, and a proper theory and practice of the healing art will evolve.

The reason why syphilis is so formidable is because the remedies used are allies of the morbid process. When the gentle influences of life-building activities are allowed to develop normally, this supposed-to-be greatest foe to the health of man, which, we are told, taints the human family, will fade like a dream. It matters not if the remedy is called enzyme, vitamin, or life, or if it is called by any other name, or called by no name at all; success does not depend so much on isolating and prescribing "mysterious substances," or administering wonderfully wrought synthetic experiments, such as "606," et al., which are "so indispensable to life," as upon knowing how to help the human body appropriate and accumulate such an amount of enzymes (vitamin-this "mysterious and evasive element") that it may fortify itself against unnecessary decay, which is another name for scurvy, scorbutus, acidosis, scrofula, tuberculosis, syphils, cancer, etc., etc.

Nature is prodigal in furnishing seed--ova and sperm--the major portion of which fall upon stony places and fail to quicken; others spring up, but fail to find a supply of enzymized food; or, as the "North American" editor and his doctors would say, their food fails to carry the vitamin necessary for growth.

Life is a state which oscillates between quickening and decay, between integration and disintegration, between synthesis and analysis, between physiology and pathology. Standing at the head of these two processes are two ferments. At the head of organization is an unorganized ferment, named enzyme; at the head of disorganization is an organized ferment, named bacteria. When the body is dominated by unorganized ferments, growth, renewal of tissue--in a word, metabolism--is poised and normal. When the food supply is short of enzymes--that miracle-working "mysterious substance" which Drs. Funk and Coudiss misname "vitamin"--then the organized ferments gradually gain control; and as the body's stock

of enzymes runs low, diseases of a toxic character--of which scurvy, tuberculosis, cancer, and syphilis are types-spring up.

Drs. Funk and Goudiss use the word "vitamin" where enzyme" can be used more understandingly. Advanced dietitians are beginning to realize that the end of enzymic variety occurs coextensively with cell, tissue, organ, and organisms. All the different digestive secretions are different enzymes. Food, in its travel from the mouth to its ultimate synthesis---cell-development--meets first with the gross enzymes found in the alimentary canal, which disintegrate and bring to solution the food intake. Not only is food prepared for absorption, but it is potentized with life--vitamin. It should be obvious to everyone who has followed the argument that the function of the enzymes is not only to prepare food for absorption, but to prepare the pabulum for the ever-present vitamin, or life, to take up its abode; and as the pabulum becomes more refined at each new enzymic influence, not only is more life added, but the life becomes psychic when cell-development is reached. At every succeeding step, food pabulum meets with a more refined enzyme, until at last it becomes sufficiently vitalized to be born a living cell with mind-potentially. It is the function of enzymes to metamorphose food into living tissue. If the food intake is devitalized--is devoid of enzymes, or Dr. Funk's vitamin--the body's enzymes run out, and then a retrograde metamorphosis begins to appear. The symptoms are a general discomfort--a tired feeling; the bright health glow of the surface of the body gives way to sallowness; the eye shows dullness; the mind is less active; life begins to drag; interest is lost; different organs begin to function badly. From this point, unless the body is served wittingly or unwittingly with enzymes, ill-health will continue to death.

The miraculous transformation in the health of pigeons given the enzymes of the rice is only observed about laboratories. Only the East Indian fakir and his dupes can see trees matured before their eyes, and hills leveled while they wait. There is a lot of credulity or illogical reasoning among many medical high-brows.

It takes a lot of inability to reason to believe that babes can be fed in such a way as to bring on scurvy, or acidosis, and then be suddenly transformed into health by orange juice or an injection of "vitamin." What is that so-called waste--that material which is polished off the rice? A ferment that is to conserve the rice; an enzyme needed by the rice to prevent bacterial fermentation from killing the germ of life when sprouting--when generation is taking place.

No one would think of the gastric secretions as food. Enzyme is not a food; it is a ferment, and its function is to prepare food for absorption and fit it for quickening.

It is refreshing to find a few scientists who are willing to admit that there is something besides protein, carbohydrates, fats, and salts in the process of metabolism. Indeed there is; but it is not vitamin, unless that name is to succeed digestive ferments--enzyme.

In reading the "North American" quotation, kindly substitute the word "enzyme" (digestive ferment) for "vitamin." Mystery will disappear, and the truth win stand out and seem so simple that he who runs may read.

This "vital substance" is made by each organism. Each organism makes enzymes for itself out of the food elements furnished. If all the elements necessary are furnished, and in sufficient quantities, the organism builds itself ideally. If there is a shortage in any, the body will he weakened to just that extent.

For years I have denounced the machine mode of feeding. I have contended that feeding so many calories and so much protein, fat, etc., was fallacious, was a subordinate part of dietetic wisdom, and had nothing whatever to do with dieting the sick. This contention has certainly borne fruit, in that doctors who make diet prescriptions on the quantitative and qualitative plan never cure anyone, and never can.

Good cooking does not consist of flavors, spices, etc., to arouse the esthetic sense, or arouse an unnatural appetite. Good cooking means the simplest cooking possible to retain the normal taste of the articles cooked. A pampered appetite that cannot eat of this simple cooking should be sent to cold storage, and stay there until any natural food tastes well.

The major part of the medical profession is a long way from the Tipperary of a curing understanding of diet.

"Tildenites" have long known how to live, and the present war reform will not change their manner of living.

Just use the word "enzymes" for "vitamin," and mystery disappears.

Therapeutics defined is, in a few words, the science and art of applying remedies to the cure of disease.

"Everybody knows" that there is such a thing as curing disease; hence, when I say that there is no such thing as curing disease, the average individual looks askance and inquires: "If you don't cure anybody, what do you do? What are you teaching?"

There is a therapeutics of doing nothing. For years I have said that it takes more wisdom to do nothing well than to administer all the remedies in Christendom. It takes more knowledge, more experience, more will, more independence, more individuality, to do nothing well, and scientifically, than to apply all the science that has ever been discovered.

Carlyle said:

The profession of healing is a sacred one--the outcome and acme of all priesthoods--divinest conquest of the human intelligence--and will appear one day.

The question is: Did Carlyle build better than he knew? The probabilities are that he believed in some kind of therapeutics, and his highest conception was that there would be a divine remedy, instead of human intelligence, to pilot man out of disease-producing influences.

On the subject of therapeutics--giving something to cure--I am a drug nihilist; I have been accused of drug nihilism for forty years. It has been said that I do not believe in anything; and I am accused of it yet. However, I never have seen anyone who has more beliefs than I have. I have beliefs enough and to spare; and I admit having a lot of unbeliefs. I do not believe in the fixity of states and the unchangeableness of good. I believe in never-changing law and order, and man's ability to adjust himself amicably to nature's requirements.

Whether Carlyle knew what he was talking about I cannot say. But he told one of the biggest truths that have ever been recorded. Now, what did he mean by it? If he meant what is ordinarily understood as sacred, that would indicate that he did not have the right idea of cure--that he did not have the right idea of therapeutics.

Perhaps it would be well for me to say what I mean when I admit that I am a "drug nihilist"--why I talk on therapeutics, and yet do not believe in therapeutics.

All curing is within the body itself. All we can do is to make the sick comfortable by removing obstructions to the normal operations of the body. The tendency of the body is toward health. The tendency of everything on the side of evolution is toward the ideal. The tendency of vegetation is to develop the ideal type; and if it does not develop the ideal, it is because of obstruction. When trees are planted close together, they grow high and very slender, they are not well proportioned, and they always lack vital resistance. A plant that grows ideally must not be obstructed; it must receive the sun's rays, be exercised by the wind, and have enough of suitable nourishment to promote its growth and allow it to develop ideally.

It is the same with the human body. If it has been planted unideally--in a soil that does not represent all the elements--the child cannot grow ideally and cannot represent an ideal human being. Now, the question is: Can a child born in such an environment ever be brought around to an ideal state? To answer this question opens a large field of therapeutics in which I do believe; namely, the adjusting of the individual to the environment, and the environment to the individual, so that he may evolve into as normal or ideal a state as his potentiality will allowhis potentiality is able to assimilate the elements necessary to bring on

ideality.

If man is hampered by being gestated and born in an environment that does not represent all the elements necessary for ideal body-building, and then the mental state of the mother has been one of depression all the way through the gestation period, we have a big job in bringing that child into an ideal state. The question is: Can it be done?

Eugenics is the subject of much talk these days, and a lot of it means nothing. There is too much importance attached to heredity. The possibilities of man making good are as numerous as the rays that radiate from a center of light. This being true, why talk about his being held down by his inheritance? It is his environment that holds him down, more than heredity.

Pausanius was a Greek traveler who lived in the second century. A physician said of him: "He ails nothing." To which he replied: "I use none of your physic." Again the physician said: "Sir, you are an old man." To which Pausanius replied: "That happens because you never were my physician." Long life often means possessing enough sense to avoid all kinds of opportunities to die. Doctors have had to take the jokes of philosophers from right and left; and it is right that they should, for they as often kill as they cure. Why is it that the people are suspicious of the profession today? Why is it that there are more people who do not have the confidence in the profession which they once had?

Because doctors send out a boomerang every little while that strikes back. The most recent is attempting to force state medicine. It shows obvious, even to lay minds, that if regular medicine were all it assumes to be, there would be no other system of healing necessary. To keep the ranks as thin as possible, students must be selected, and entrance to the profession made as impossible as it can be made, so that only young men of leisure and wealth, or of special favor, may enter. This bars many men of strong ideals and inventive imagination and original thought. As the practice of healing requires as much of art as of science, and as long college training kills the art faculties, our present plan of making doctors ends in the construction of a very complicated human machine that has no more independent mental action than the mechanical jumping-jack. This result, however, is exactly as the heads of the profession desire. That is, they think they do; but, being mechanical human machines themselves, they desire the rubber, the elasticity, the fluidity, the adjustability, taken out of students; and they have almost accomplished their desire. The result is that the average medical man is as incapable of making an independent movement as a mechanical toy. A pronounced type of one of these products, engaged in writing health articles, signs his name with an appendage, and often adds the name of his college mother; which, of course, is as it should be, for such a callow olive branch should not get far from his mother's apron string. Raising the educational standard, and making what the schools teach so obscure that students cannot pass examinations, impresses members of collateral professions and sciences with the idea that modern medicine is becoming worthy of all it claims. To make this belief doubly sure, the state and national governments--two automatic entities--lend the power of their influences; all of which influences go far to imperialize medical power; then, when the liberty-loving people feel the autocratic medical power, it turns their former respect into hate. The effort today is to make college professors out of college men who have great learning, but no practical experience. As well undertake to make an expert carpenter without tools. Knowledge wedded to experience builds wisdom.

Franklin said: "God heals; the doctors take the fee." He was not a physician; he was a philosopher. The philosophers know that doctors cannot cure anything--doctors have no curing power. Why is it that people cannot get that idea? If philosophers in all ages have known that truth, maybe I am not far wrong in saying that there is no therapeutics--no curing influence--outside the animal organism. It is preposterous to say that something can be taken internally or put on the outside of the body that will cure.

Optimistic suggestions are good, and may help the sick to health by imparting hope. Anything that makes people hopeful is curative, but the cure is within the individual.

Dryden said:

"The first physicians by debauch were made;

Excess began, and sloths sustained the trade."

Swift said:

"The best doctors are Doctor Diet, Doctor Quiet, and Doctor Merryman."

The immortal Holmes said:

"Folks want their doctors moldy, like their cheese."

The mold need not be from age so much as from lack of use. Holmes was ostracized in 1844 for advocating what the medical fledglings at this writing are discovering in France; namely, that wounds heal when left open--when clean, not medicated!

Heroes, chiefs, gifted men, enthusiasts--the giant minds among tribes and peoples--were named gods, and they were the first physicians. They were recognized as gods; they were worshiped by the simple-minded and those who knew nothing; and the big men administered to them as best they could.

There seems to be a disposition in man to worship anything which he does not understand. That is why individualistic men had, and still have, healing powers. That is why people who think they are enlightened still take drugs. That is why some of our learned medical fledglings, who know how to warble the word "quack" before they can even think, will automatically write a prescription calling for strychnin to be given to a case of infantile paralysis. As well give the remedy to a dead man! Superstition, your other name is modern medicine! Any school of healing, system, creed, faith, pretention, assumption, or declaration, founded on the usual fallacies, and offering cures that do not put those needing them to the trouble of correcting bad habits, proclaimed vehemently enough, can build a following of humanity who will declare their faith in the system.

Every faking system of cure must be accompanied by "sounding brass and tinkling cymbal," and the drawing part of the fakery must be the successful pretentions to charity.

To save the people--for the good of the people--is the strongest card in the hand that is stacked against the people. Nothing can succeed in faking the people that is not run in the name of charity or for the good of the people.

"And though I have the gift of prophecy, and understand all mysteries, and all knowledge; and though I have all faith, so that I could remove mountains, and have not charity, I am nothing." Paul was a doctor of laws, and he understood psychology better than most doctors today.

It matters not what ridiculous cures are offered the stupid, ignorant public, if they are handed out in a capsule of sweet charity, they will be gulped down with avidity and a smile, and the palliation, when there is any, is in the faith generated. Church hospitals are typical shrines; for God blesses the vandalism practiced in them. The bolus--the therapeutic agent--may be determined, but the capsule of charity brings the Balm of Gilead to the hungry soul.

Man is born with a large void in his nature, and that void is aching for sympathy and charity. This void is infinite in capacity, and is capable of assimilating any old junk, if encased or honeyed by sweet charity.

Then, whoever would explore this void with X-ray perception will find in the scrap-pile, hospitals, sanatoria, resorts, shrines, long- and short-haired fakers of all kinds; fakers from the Dives (rich-man) pattern to the Lazarus (ragamuffin) pattern; representatives of "surgical plants" --fake doctors who have vandalized the beautiful human body in the name of charity; blatherskites who cut out parts of the body for nothing, to prove that they are embodiments of charity--who use the cloak of charity to further their surgical exploitations of the human body.

Every curing system on earth, and every cure-all, can be found in this aching void; and there is no hope that it will ever be overloaded. It is well that the capacity is unlimited; for every generation of men will come with its new, elegant, and sublime fakers, with a taking variety of charity.

It is not within the possibility of many men in each generation to be endowed with the perception to recognize the fakers and the faked; hence their endeavors to save the people by imparting a little common-sense will fail to receive enough attention to change the human trend to any great extent.

The hope of a rational system of securing and keeping health will be pushed back, to give place to a therapeutics that can cure without removing cause; and as cause consists largely of bad habits, a remedy that can cure without removing habit will always be popular. The people will always be willing to allow saviors to die for them.

The immediately preceding is a frank statement of the probability that the masses will never be willing to give up bad habits for the promise of health; indeed, most people cannot be made to see that disease is of their own building, and that a correct therapeutics is simply correcting the errors of life. As every child is born. a lump of protoplasm without knowledge, the question is: Will society ever evolve a belief that disease is never anything more than an undesirable state of health, brought on from a maladjustment of man's body to its environments, and that a reasonable amount of care, a knowledge of which is within the mental grasp of all, will make health possible to all who are corrigible and willing to live in a manner necessary to evolve the highest mental and physical efficiency? If this is possible, then children may yet be born with an inherited potentiality for self-control, and ideals that can and will subordinate appetite and passion to a higher development. The present human potentiality at birth is dominated by sensuality, and a morality so perverse as to barter worship of an imaginary Deity for the privilege of indulging in pious types of sensuality.

It is not an evidence of immorality that the masses fake and are faked; no, it simply means that the faker and the faked are still on the unmoral side of life--they are unmoral; they have not evolved into a moral understanding. Much of what we see of human vandalism, as practiced by the medical profession, is not a breach of moral ethics; it is the way the blindly ignorant soul has of finding light. It is the mental urge--the subconscious longing for mental birth.

The worship of gold and position is in keeping with the belief in whatever is up and beyond the understanding. It is the sensual mind's way of seeking light.

The plant, with its urge for light that was potential in the seed, is forced to push its tender shoot around obstructions that its insinuating insistence cannot persuade to part and allow it to proceed more directly to its goal. The clinging, insinuating manner in which the tender shoots of growing plants hug, embrace, and penetrate clods, rocks, and other obstructions, might be described as love and worship--but is it? I think not. It is the plant's way of seeking light. It may have to go a very devious waysometimes backward, then again forward, and from side to side; hugging, embracing, and seemingly evincing much attachment to these associations. But not so. The potential urge for light forces the plant to cling to, and take every advantage of, its environment-not from a love of it. but for self-development--self-protection--self-preservation.

The plant's struggle for light is typical of mind-growth.

We see the undeveloped mind worshipping heroes, chiefs, gifted men, enthusiasts, fanatics, and gods--worshiping position, wealth, influence, and power. Should we not be nearer right if we said that mental urge--the desire to grow--causes mind to cling to all these objects of so-called worship, until it, the mind, develops enough virility to be sufficient unto itself?

Like the plant in its growth, mind must grow around and through obstructions, such as false theories, creeds, and schools--around great men, and gods. It must try the power and might of wealth. The mind must cling to something in its growth upward toward light; and its clinging to the false, in the manner that it does, is nothing more than the survival of the fittest, or its struggle for existence. It is better to cling to the false than not to grow at all. It is this mental urge--this desire to live--that causes mind to tether itself to its environment, seemingly clinging to, its obstruction because of its love for it. But this is not true. Mind is potential in nature, and its urge is toward full development, with truth as its goal. Truth being the goal, mind must grow through or around such obstructions as fixed creeds, great men, and gods. The selfishness of man (it is not selfishness in the vulgar sense; it is a desire to live, to grow; and it dare not let go of one

support until safely annexed to another) causes him to stereotype knowledge, and brand it with his own name, or a name of his choice; and then go to war, if necessary, to prevent change--progress--growth of mind.

What are schools, creeds, state medicine? The disposition of men to fix beliefs so that there will be no progress--no mind-growth. This is the ignorant manner of expression--this is the social understanding; but the truth is that creed is for mind what the rock is for plant; namely, obstruction to growth. But it must cling to it until safely attached to a more substantial support.

The so-called intellectual always impose on the credulous and ignorant. Man must worship something, and it is immensely gratifying to his vanity if he can manage to be the object of worship. The selfishness of man would cause him to stop progress, if in doing so he could become a god; for the word "god" means a finished product. As soon as God is discovered, be he a man, or a deity, one on the outside of the universe, progress ends. As soon as a cure is found, progress stops; and around the little god of cure, or stone of obstruction, every protection is built to immortalize it.

Simple-minded people and the credulous allow themselves to be dominated by those who are selfish. As a result, obnoxious laws and customs are established which prevent progress.

The regular school of medicine is struggling with might and main to saddle on the people its present germ theory, and its corresponding immunization and therapeutics. Which tacitly means: We have arrived at perfection, and it is time to stereotype and ossify.

This is the curse of school, creed, and church. Around and through these obstructions, mind-urge must force its tender shoots. I dispute that it is love or worship that causes mind to cling to heroes, churches, or god. Indeed, they are obstructions to mental growth; but growing mind must cling to them until strong enough to grow independently.

The intellectual have imposed, and always will impose, upon the ignorant and credulous. The medical profession is working largely on the theory that people want to be humbugged; and it is supplying the want.

The priests were the first physicians. Prophets and divines were consulted. Pythagoras, Aristotle, Athenaeos, the early Christian teachers, the mystics of the later centuries, on to the present, not only "instructed in arcane, metaphysics, and general knowledge, but treated disease."

The late Dr. Alexander Wilder declared: "The knowledge anywhere possessed of the art of healing is the measure of the refinement and civilization to which the people have attained." Show me the doctor any family employs, and I will tell you of the intellectual level to which that family has attained. Their beliefs in regard to church, healing, drugs, etc., mark the stratum in intellectual life to which they have attained. This may be a questionable compliment to those who pretend to be intelligent, yet are clinging to childish superstitions.

See people chasing after quacks--chasing after cures that are not cures--willfully helping the physician give a distorted notion about their diseases, so they will not be interfered with in their daily habits! It is obvious to what an intellectual level people have attained when they will take drugs, or are vaccinated, to cure diseases caused by bad habits. When habits are of more importance than health, and when people will struggle in every possible way to secure a healer who will indulge them in their habits, and cure them without requiring them to stop the habits, that cause disease, it is easy to see where they belong intellectually, titles to the contrary notwithstanding.

Man is civilized by social relations. His refinement depends entirely upon the mental attitude of those with whom he associates. Has a man true refinement who will, for the sake of gain, recommend an operation when he is doubtful in his mind as to whether it is necessary--doubtful as to whether any good will come from it? There are a few barbarians who say: "Damn the people! I am not my brother's keeper. We are here to give the people what they want." What kind of civilization is that? And yet we boast of our civilization.

Kindness and charity represent real culture. The only country that boasted largely of its culture before this European war was Germany. Does war represent culture? aaaa

Does the preparedness of a country represent culture? Is that an ideal religion? Is Christendom Christian? Do Christians believe in Christianity? Is Christianity a reliable therapeutic remedy for misanthropy? Does Dr. Christian know how to use Christianity to cure man of his unethical disease?

The art and technique of healing proceed from knowledge, refinement, and culture. The province of intelligence is to investigate and discover the cause and origin of disease. Scientific knowledge and artistic skill are not so much concerned with cure as with the individual himself. It will always be impossible to get rid of the personal equation in formulating a system of healing. So long as systems are formulated with the personal equation of the patient left out, the system must fail. Indeed, the patient must be the doctor, and the present doctors must become teachers. Medicine is an art. Science, when it is used as an art, will help; but when it is taken out of art, science will never give a solution to the problem of cure.

A man may paint a beautiful picture scientifically; he may have planned the picture carefully, laid out the plans beautifully in advance, and prepared formulas for his colors, blendings, light and shade-all correct according to the best formulas. But when the real artist comes along-the one who carries his model in his soul, the creator- he will make a picture of the same subject that will throw the first into the shadow so far that a second look will never be given it. That is the difference between art and science.

Do not jump to the conclusion that I do not believe in science! It is the basis on which we must build; and every man should have as much science as he possibly can get. But if he is going to cut loose from everything else, and have nothing but science, he will make a bungling record.

In a general way, the skilled physician can tell that his patient suffers; but he cannot know anything of the state of emotions, the wants, the longings, the heartaches. The doctor can see the results of appetites and passions, the same as he can see the results of an accident, the cause of which he knows nothing about. There is an element in every disease that the doctor cannot know without the aid of the patient; and there is an element of cure that belongs to the patient, without which the doctor is helpless. It is nonsense to expect cures to be performed on patients whose lives, physical and mental, are not known.

Taking a drop of blood for analysis, or examining the urine, tells but one thing--and that is the state of the blood or the urine; but nothing of how the perverted state was brought about, if it is perverted. A cure must be formulated on the cause, and not on the effect.

Without an understanding of cause, hope for cure must be lost. How can there be anything done toward removing cause without a complete understanding of what cause is?

The divine conquest of the human intellect is made when cause is known. All before that is chaos. Knowledge, religion, ethics, and morality are in a state of chaos until a knowledge of cause comes to set man right. That cause must be known not only scientifically, but artistically as well.

Archaic Medicine

In archaic medicine there was a therapeutics in the form of suggestion. It was in the form of foretelling and divination. There was something in it to help the people. Sick people want someone who can look ahead and give them hope; and hope is one of the important remedies. Suggestive therapeutics is built largely on hope--belief in betterment. We have schools of suggestive therapeutics, and there are many who practice it. They teach people how to suggest themselves out of a belief in sickness. The cure comes from within the individual; and if it happens to be that the individual needs a mental therapeutics, suggestion helps him think a little differently--helps the patient develop a more health-building belief.

In archaic medicine the serpent on the staff is the symbol of medical art. Egypt, Greece, Germany, South America, and North America employ it.

The asp on the crown of Queen Isis was a sign of the physician.

The fire serpent on a sign-post was the sign of an Assyrian physician.

In Mexico and Brazil the rattlesnake is the sign of the profession.

The serpent signifies occult life-principles and power to divine--preternatural power. The seraph on the staff set up by Moses possessed the power to save those about to die. When they were sick they had the belief that, if they could look upon the seraph, they would get well. They were sick in their minds, the same then as now. Fifty per cent of all sickness is mental.

When a person gets sick, the mind gets busy at once. Nearly all people are afraid of tuberculosis. When they have a cough or a pain in the chest, they go to doctors to find out if there is anything wrong with their lungs.

Places of learning were built in cemeteries in the valley of the River Nile.

Herodotus declared that the Babylonians had no physicians. They used the public parks. The invalids would congregate in the parks, and the people passing along were expected to talk with the sick people and ask how they felt. If they themselves or any of their family had had a similar ailment, they would tell the sick person how they got well. It was the duty of the well people to converse with the sick and help them get well according to the methods they had used. This plan, under wise guidance, could become a more perfect system of cure than any of today.

It is not very different in this day. We can always find someone who thinks he is capable of prescribing for all who are not well, notwithstanding, perhaps, the leading physicians of the community are prescribing for them. Such laymen know very well that their prescription is better than the treatment received from the physician. The layman does not realize that all the experience he has had is with himself, while the experienced physician has watched hundreds and should know much more. It shows that people are natural-born healers, all of them.

It was the same in the days of Jesus. The sick came to the road where he was expected to go by, and they expected him to heal them. That kind of healing has come down through the ages.

This method of healing the sick was not confined to Assyria and Palestine; it was in vogue even in Egypt, along with priestcraft and secular physicians.

Placing the sick in the public thoroughfares is alluded to by many of the older historical writers.

Fast-days were one of the therapeutic remedies of the Euphrates countries.

Mysterious rites, incantations, formulas, the secret word, images, symbols, sacred texts, have all served their purpose in exorcising the evil spirits that caused disease.

All the therapeutics, ancient and modern, above referred to, rests largely on the belief that cures must come from without. This is a belief that will bar the profession and the people from reliable health knowledge, so long as it prevails.

Causes must be discovered and removed. A cause is something--in influence--that always acts; not an influence that acts part of the time, and part of the time it does not.

Germs, as a cause, act sometimes, and sometimes they do not.

Germs always act under a given circumstance; namely, when the body is enervated--when resistance is lost. Then, to prevent germ action, the proper thing to do is to keep the standard of health above the point where germs thrive.

What must be the therapeutic agents? Correct eating, correct care of the body, correct sanitation, and a sane, well-balanced mind.

A knowledge that will help man to enjoy health, evolve the greatest efficiency, and save him from driveling senility or early death, is procurable today.

None but the misinformed will go about seeking cures. Cures, like salvation, spring from within, not from without.

Knowledge is the only reliable therapeutic agent.

HOME HYGIENE LIBRARY CATALOG

INTRODUCTION

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B. PATHOGENY

Instead of microbes being the cause of disease, they are at most only capable of joining with the culture media to develop an affection--certainly not a disease. As cause, bacteria must be classed with the elements and other influences in man's environment which are good or bad for him, depending on his health--resistance.

Efficient cause is anything powerful enough to produce primary disease. There are chemical causes--poisoning--and animal toxins. The poison that can prostrate and kill man must be able to overcome his normal resistance. Nothing belonging to man's normal habitat can break down his normal resistance; hence the idea that germs unaided cause disease is a delusion which the medical world must outgrow, as likewise the idea that serum can antidote germ influence; for germs have no influence except as they join other auxiliary influences and break down resistance.

C. PATHOLOGICAL PHYSIOLOGY

This should not be recognized as differing from physiology. Biology is the same whether the process be normal or abnormal. Law is the same now and forever. Biological laws are the same in health and disease. If a given disease-producing influence is experienced, disease will be established; remove the influence, and the laws, which are always the same, continue to act ideally, and health will return. Death itself is the only way to prevent the ideal working-out of physiological law.

It should be illuminating to those who think of disease and health as distinct entities to be assured that they are states, not entities, and that both are produced by the same laws; that it is within the power of man so to present his body to the laws that the state following will be health, not disease.

Correcting disease must have a limit. Where a disease has been running on until enervation is profound, or until the integrity of a vital organ is far spent, coming back to the normal may be impossible.

A patient complains of pain in the chest. On examination, congestion is found. Congestion not being a disease, on further examination a heart derangement is discovered. The pulmonary congestion is due to heart insufficiency. As there are no organic diseases proper (all organic derangements are reflex or secondary), a cause for the heart disease must be found. There may be a history of an infectious disease suffered years before--typhoid fever, rheumatism, or any of the contagious diseases. In regular medicine the primary cause--say, typhoid fever--is gone. The cause, then, is gone; so treatment is given to the heart, notwithstanding the heart lesion is not considered primary. Heart stimulants are given, which revive the organ for a time; but soon it must give out, for the treatment is stimulation, and the cause of its derangements is stimulation. In the first place, it was overworked by fever, infection, and drugs which left it impaired; then wrong eating and other habits, practiced after recovery from the disease that brought on the cardiopathy (heart weakness), prevented the organ from returning to the normal, which it would have done if it had been left for a few months or years to regain its normal tone.

In making a diagnosis, no consideration is given to daily life by the average physician. Because a patient suffered with syphilis twenty to thirty years ago, and today he has lost his faculty of speech, he must be suffering from syphilis. The intervening years of bad habits count for nothing. If symptoms of tabes dorsalis (locomotor ataxia) present, the best doctors doctor syphilis, even if tests fail to affirm their diagnosis. The past twenty to forty years of sensuality count for nothing; the whole trouble is due to a specific germ that has been hibernating in the tissues of the body.

Indeed, if correct living habits are practiced, no disease can remain in the body for any length of time. The body has the power to renew and purify itself, when given an opportunity; and all the opportunity needed is to receive sane care. There can be no hope of a thorough house-cleaning so long as the organism is taxed beyond a reasonable limit by an oversupply of food, by stimulants, by sensual indulgence, and, neither last nor least, by drugs that cause sclerosis.

Morbific cause is often beyond the reach of our remedies, because we are looking beyond the daily and hourly cause or causes for a cause that will vanish as soon as its support is gone.

In the matter of nutrition, many good and intelligent physicians often treat for the removal of an effect of malnutrition rather than for malnutrition--mistaking the effect for cause. Indeed, nearly all the work done by average physicians is on this order.

D. PATHOLOGICAL ANATOMY

A lesion of any structure when healed leaves a scar. Scar tissue is more liable to undergo degeneration than normal tissue, not because it carries a potentiality of the old disease, but because scar tissue is not nourished so well as other tissue and breaks down much more easily.

An inflammation of the urethra that extend to ulceration will leave scar tissue when cured, it matters not whether the inflammation is specific, or brought on by self-abuse (onanism), or from irritation caused by urine strongly acid from chronic toxin poisoning.

The scar tissue reduces the caliber of the urethra. This partial obstruction prevents self-cleaning. All tubes, ducts, and canals that are partially closed--strictured--fail to evacuate and cleanse themselves thoroughly. Hence, behind the strictured point, irritation and inflamation develop--a catarrhal inflammation which gradually lessens the caliber and finally develops complete obstruction. If the trouble is of the eustachian tube, noises in the head, ringing in the ears, and deafness follow; if of the urethra, slow and difficult urination from obstruction of the urethra and bladder irritation follows, and, as a result, lost coordination is liable to result from reflex irritation. In esophageal, stomach, or bowel obstructions, ulcerations and cancer are liable to follow, with all the evils accompanying partial to complete obstruction.

Primarily there must be a chronic state of toxin poisoning and pronounced diathesis before local inflammations of mucous membranes can take on chronic irritation, inflammation, ulceration, cancer, or syphilis . If a chronic state of toxin poisoning is not developed and maintained by bad habits of life, accidental irritations and nflammations will pass away from lack of support-from a lack of daily fuel supply. The truth of this can be proved at any time by noticing how quickly and well inflammations heal in those who are free from dyscrasia. and intestinal putrefaction. And another proof may be worked out-namely, correct the chronic toxin poisoning, and a stop will be put to all silent, subacute, inflammatory hyperplasia.

I have found no better definition for disease than the following: Disease is the morbid process considered in its entire evolution, from its initial cause to its final consequence; affecton is a morbid process considered in its actual manifestations, apart from its cause.

The so-called diseases, such as heart diseases, rheumatism, typhoid fever, pneumonia--in fact, every disease named in medical nomenclature--are in reality only affections. Real disease is perverted nutrition, caused by toxins generated within or without the organism. It is this chronic state of toxin poisoning that breaks down resistance and allows affections to develop. Such affections as cold --catching cold in the winter time, hay fever in the summer time, and asthma in both winter and summer--are affections resting on a base of diathesis sensitized by toxemia. The more pronounced the diathesis, the less the natural resistance, hence the harder to overcome the disease, which is chronic toxin poisoning.

All affections, commonly called diseases, are "hors de combat without a culture-medium-=a body prepared by chronic toxin poisoning--in which to develop.

E. SYMPTOMATOLOGY

1. The Patient

As it is the physician's business to cure the sick (at least, that is what nearly all laymen, and perhaps ninetynine and nine-tenths per cent of the profession, believe), those who are uncomfortable or in pain place themselves under the care of a physician to be made well, and when the pain is gone a cure is supposed to have been wrought.

The patient presents symptoms, some of which are subjective and a part of which are objective. The subjective symptoms are those about which the patient knows, while the objective symptoms are the changes of the exterior and interior about which the physician knows.

The subjective symptoms are those that have developed in the consciousness of the patient. They may have come on rapidly, or they may have come on very slowly.

The history of disease is that of a coming-on and a going off of discomfort; and on the revolutions--the cycles--made by diseases rests the reputation of all systems of palliation. The patients feel bad, and the doctors of high and low degree, representing schools whose scientific data--theories of cause and cure--are poles apart, and whose therapeutics range from conceit to the fanciful and on to the grotesque, gather around their victims and administer their "dope;" when, behold! as if by the touch of the lamp of Aladdin, the victims are blessed by the remedies, in spite of the fact that these are as opposite in their specific actions as it is possible for them to be. Yet the sufferers are "cured"! Of course, it matters not if the patients are sick again in a week, or a month, or a year, with the selfsame disease--another fanciful "cure" is made, which again our doctors and patients celebrate in the usual way, by telling in scientific terms just how it came about, even the wisest among them being ignorant of the fact that the natural progress of all disease is rhythmical or cyclical--better and worse--until the organism is broken down, and then the patient is better and worse, but never well, until death gives full relief.

It is the history which the patient recites to the physician; and it is the physician's business to weigh, analyze, and criticize what the patient tells him, and, by a physical examination, to determine just what the derangement of body is.

It should be borne in mind that the diagnosis of the exact derangement--discovering just what organ is affected, and determining whether the disease is functional or organic innocent (benign) or malignant--is very far from discovering the primary and insidious cause, without which discovery the treatment must be palliative. There is no cure short of removing the primary or initiative cause. If the initiative cause has passed away, then the secondary cause, which is doing primary work, must be discovered and removed.

The patient may be making his first call upon the doctor. He may be having his first pain or discomfort, or he may have had many attacks of sickness and pain.

The discomfort that caused the patient to seek relief may be a link in a chain of morbid derangements leading back to childhood, or even infancy--not on the order of heredity, for nothing is inherited except a predisposition to be sick in a given way; but if the tendency ever becomes a realization, habits that pervert nutrition must be practiced long enough to break down resistance and start the morbid tendencies to work.

It is necessary to get all the history of the life of the patient, and, when possible, the family history, age, sex, habits, occupation, temperament, beliefs, environments, mode and manner of the care of the body.

It is necessary to know all about the life which the patient is living, and all about the life which he has lived, if he has changed his style recently. It is not only necessary to know the physical habits of the patient, but his mental habits as well; and, in addition, the physician must have the confidence of the patient and know his secret life. The physician must enter into the relationship of "father confessor" with every important case that calls upon him. If he has not the personality to secure this confidence, and draw out the secrets that are hidden in the occult chamber of the individual's soul, he is not possessed of those qualities of character which make for healing. The doctor must have sympathy--not, however, without firmness and sternness, when necessary. The quality of selfishness in a doctor must be covered by a very large coating of politic politeness, or he will not draw patients, and certainly will not be a physician at any time. If his selfishness is pronounced, it is liable to be subconsciously interpreted by the patient, and this knowledge kills influence.

Lost self-confidence, self-respect, and self-control are the psychical elements with which the patient contends in chronic diseases, and which make management of a cure impossible for the selfish, vain, and unsympathetic doctor; for only the sympathetic can draw confessions--and confession is necessary to cure.

It is well, this early, to disabuse the mind of any reader of the idea which he may have that a successful curing system is, or can be, based on a set of cut-and-dried formulas. Indeed not; every case is different and a law unto itself. The only thing that is fixed and unchangeable is the natural laws within and without the patient. It is our attitude before the law that determines health or disease. If our actions agree with the law of our being, or the environment, all is well.

Health results from an agreeable adjustment of the body and mind to natural law and order; and impaired health--a lowered health standard, called disease--comes from disagreeable adjustment of the body and mind to natural law and order.

Diagnosis is determining the symptoms and learning just what is the cause of the morbid process, and its effect on the body.

I practiced medicine in the orthodox manner for twenty-five years. A number of those years were spent in determining just how much my treatment had to do with the recovery of my patients, and how much it did not. Little by little my drug superstition sloughed off. Not rapidly, but little by little, I learned that the physician is a woefully deluded man.

In the first place, it is most unscientific, not to say senseless, for medical colleges to teach clinical medicine, using as subjects men and women broken down in mind and body from years of bad habits, and to use, as a teaching force, medical men who do not consider the influences of the daily habits of mind and body as factors in producing disease. As proof of the folly of such teaching I cite the growth and prosperity of Christian Science, which has proved such a haven of rest for millions that have escaped the barbarous practice of "scientific" doctors who were struggling in a medical way to medicate, vaccinate, inoculate, extirpate, serumize, immunize and demonize patients, but succeeded only in teaching all a large sick habit. Christian Science has always builded better than it knew; but this is one of nature's compensating acts. The regular profession builds in an inferior way with what it knows. Selfishness, snobbishness, and bigotry have blinded the eyes and dulled the understanding of medical schools, as ignorant conceit and religious superstition have blinded the eyes and understanding of Christian Science.

Each system is standing in its own light, and prefers to be wrong rather than to give up its selfish advantages. The medical schools teach without any adequate means of finding out what the habits have been and what part habits play in the evolution of disease. Of course, habits are talked and written about; but, so far as applying the knowledge in the healing of disease is concerned, the subject is a dead letter; it does not enter into consideration, except in the most casual and perfunctory way.

There is but one way to learn of the amount of influence exerted by physical and mental habits--what part they play in a given case--and that is by inducing the patient to give them up, while the physician stands by, keeping hands off, watching nature eliminate and readjust. If the doctor cannot be satisfied to do nothing, except watch nature clean house and see to it that the work is not obstructed by the patient's bad habits or by his medical superstitions, he can never cultivate a dependable working knowledge of etiology; and without such knowledge he must remain in a mentally chaotic state concerning cause, effect, and cure.

Our present scientific teaching leads us through a "fool's paradise" of examinations, using instruments of precision to palpate, auscultate, and percuss; chemically analyze the secretions and excretions; microscopically examine the secretions, excretions, and every fluid and solid of the body; bacteriologically examine the entire body--the exudates, the transudates, and the expectorates; aspirate from every secret chamber of the body, analyze the fluid in every way possible, and then spend weeks in bacterial culture; X-ray every suspicious location, and radiograph the same. After all this examination, the diagnosis is "hung up", and the patient is sent away on suspended judgment, to return again in a few weeks or months to go through the same ordeal. This may be somewhat overdrawn, but certainly not in a few aggravated cases of mania in diagnosis.

What are the real causes of the bodily derangements which send professional gentlemen and their diagnostic specialists and experts through this "fool's paradise" looking for something that is not found in this glorious Eden? What is that elusive something that evades the microscope, stethoscope, test-tube,

analyst, X-ray, and every other instrument of precision, and every analytical, synthetical, deductive, inductive, and seductive diagnostic procedure?

It is life--a state that is commonly referred to as health. It is not an entity--a something to see, hear, taste, smell, or feel.

Health is the meter by which life is measured. When health is below a certain standard, we think disease; we lose the thought that impaired life--the state we call disease--is a lowered health standard, and that there is no such thing as disease.

The primary entities with which the physicians have to do are man and his environment. These are both good and adapted to each other, or they could not exist together. Man did not evolve until his environment evolved him. I assume that, inasmuch as nature never stultifies herself, man and his habitat are suited to each other and are potentially ideal, and that, if the unideal evolves, it is because of a maladjustment which is easy of readjustment.

I further assume that it is the doctor's duty, if he would be a physician, to throw his whole power of intellect into the study of why an environment that produces man also destroys him--why benign and life-imparting influences become malignant and life-destroying influences; and I invite any medical man to try successfully to refute my declaration that there is not one influence in man's environment which is not for his good, if he (man) is properly adjusted to it.

What should etiology be? Learning all about the influence of everything that affects man's body and mind. In this study we find that everything necessary to life, liberty, and the pursuit of happiness may be enjoyed to excess, and that, when it is, it enervates--lowers the standard of health; which means that functioning is impaired and self-poisoning takes place by retention of excretions. When this state is brought about, man loses his normal adjustment and every environmental influence has an exaggerated effect upon him.

If he has lowered his resistance from overeating, overwork, worry, fear, overindulgence in any of his physical or mental pleasures, every influence to which he was once normally adjusted affects him uncomfortably. If he undertakes to eat as formerly, he suffers from indigestion; if he works or undertakes to indulge himself in previously enjoyed habits, he is made uncomfortable and to suffer. One to three cigars distress him, whereas once a dozen could be smoked without any apparent subjective symptoms. The hopelessness of this situation lies in his remembrance that he once could smoke, drink, and otherwise indulge his sensual nature without discomfort, and in his belief that if he can find a doctor to "cut out" his disease, or cure it by some scientific means, he may return to his old flesh-pots. He knows very well that he could once indulge; he is quite sure he may again, if a cure can be found; and on this fool's errand he can find doctors and healers galore to accompany him. We have "perhaps the largest surgical plants in the world" just for the purpose of cutting out disease, so that the victims will not be put to the inconvenience of cutting out their bad habits.

The enervated man cannot indulge himself with any of his former sensual pleasures without being thrown into a state of discomfort. He and the medical expert go rummaging through the dump-pile of primary, secondary, and tertiary symptoms--a few of which are: impaired blood, functional and organic changes in various organs of the body, deranged secretions and excretions, etc.--hoping to find cause. Certainly a fool's errand, when, if they would reflect, they should notice that after every enjoyment the sick man is made worse, and after every disappointment in gratifying appetite and passion he is made better.

In this connection it may be well to give a few of the bulletin reports of the scientific activities of the doctors in their treatment of one of the world's most distinguished patients, showing how innocent the profession is of the grotesqueness of its scientific conceits:

> "The queen is sinking. She is unable to take nourishment. Her medical attendants declare that she can last but a few hours." At the expiration of twelve to twentyfour hours: "The queen has rallied, and is able to take nourishment. The doctors declare that there is a chance for her

recovery, barring complications."

What complication or complications could spring up? What causes complications? In this case the complications were obvious enough to any mind not under the spell of medical science.

Complications usually come from the treatment and nursing.

> "The queen is sinking. The rally of this morning was followed by a sinking spell, and she is again unable to take nourishment. Heart tonics given hypodermically keep what little life there is from ebbing away. Only the superhuman skill of the doctors prevents death from claiming the great woman as its bride."

"Verity, every man at his best state is altogether vanity. Selah." Superhuman conceit killed the good woman before her time.

> "During the night the doctors watched at the bedside of the distinguished patient, watching with bated breath the ebb and flow of the declining energies. Once or twice the family was aroused to view the grand queen and mother of the greatest empire on earth, while there was still a little life left in her body. All efforts at keeping life in the aged queen was abandoned at midnight." Next morning: "Most extraordinary, the unexpected happened! The queen rallied, and at this cabling is taking nourishment. The doctors fear, however, on account of the queen's great age and the weakness of her heart, that the rally will only be temporary. Sir John Blatherskite, an eminent heart specialist, was called in consultation, and he favors strychnin for the heart. This heart tonic will be given in place of digitalis, which has served long and well."

If we of the profession could see how childlike and silly much of our boasted science is, we could then see how like grandstand acting are

The queen did die--not, however, until these disgusting medical bulletins were repeated often enough to have put the whole world "wise" to the stupidity of medical science as practiced, and the shallowness of medical thinking, if the world had been capable of cutting loose from precedent and doing a little bit of independent thinking.

The profession is so used to looking to the unusual, the mysterious, the occult; to finding a cause for disease, instead of recognizing the fact that there is no disease per se--only a normal, supra-normal, or infra-normal state of health, and that these different states are brought about by different degrees of environmental stimulation.

All that can be discovered by examination, be it superficial or scientifically elaborate, is the effects of influences or causes which have passed out of existence, or which are still existent, or which have caused secondary causes before passing out. Scientific medicine spends its force on effects; the real causes are left undiscovered.

For example: A subinvoluted uterus, or a misplaced uterus, may be crowded by intra-abdominal pressure, causing a misplacement and perversion of circulation. The return circulation may be sufficiently impeded to cause a passive congestion and an enlarged hyperplastic state to develop; and the larger the growth, and the more constriction and impeding of the circulation, the larger the tumor (fibroid--for that is the character of this morbid differentiation), until restricted by the pelvic walls. This resistance to growth restricts the size and hardens the tissues. If, however, the tumor drags the uterus into the abdominal cavity, it will then, being freed from restraint, take on new and more rapid growth, sometimes filling this cavity equally to the size attained at full-termed pregnancy.

In this case the primary cause may be a catarrhal inflammation at an old placental site; or a catarrhal inflammation of the mucous membrane of the virgin uterus, due to exposure during menstruation, may take on hyperplastic growth, causing an enlargement of one side of the walls of the uterus. This causes a flexion, and a flexion always impedes the circulation, and a fibroid growth follows. All growths are the result of impeded circulation. When the circulation becomes so mechanically obstructed as to bar the

entrance of oxygen and an exit of waste matter, degeneration takes place--malignancy carries off the patient. The cure must be restoration of the return circulation by removing all pressure that causes misplacement.

2. Appearance of Patient

The patient's appearance will tell whether or not he is able to meet the requirements of existence. He looks able to carry on his work--his particular occupation- or he does not. If he does not, he will give the appearance of being sick with either acute or chronic disease.

At the bedside the patient may look robust, sick, collapsed, bluish or cyanosed, thin, fat, with thick and short neck, or long and slender; he is on his back with legs extended, or with the legs drawn up; or on the side with legs drawn up against the abdomen.

The patient may be unable to give a history or describe his symptoms.

Decubitus (Lying Down).--The manner of lying is significant. On the back means exhaustion. This is the position when a patient has lost consciousness.

In a faint or anemia of the brain, the head drops; in congestion of the brain, the head must be supported on several pillows; in asthma of the lungs, bronchi, or caused by the heart, the patient must have much pillow support.

In heart disease the patient lies upon the right side. A normal person can lie on either side equally well.

When heart disease is advancing to the fatal state, the position is sitting, with head and shoulders supported by pillows.

Pain in the abdomen will cause the sufferer to press upon it, or lie on a pillow. Pressure gives some relief. When the pain is intense there will be twisting and writhing.

In peritonitis, appendicitis, cystitis, gallstones, cancer of the stomach and bowels, the tendency is to draw the legs on the abdomen. In peritonitis, the patient will usually be on the back, with legs drawn up.

In gastric ulcer, when suffering with pain, if the ulcer is in the front wall of the stomach, the patient will lie on his back; if the posterior wall is the location of the ulcer, the patient's position will be lying on the abdomen; or upon the right or left side, if the disease is of the right or left side. These positions relieve pressure on the ulcer.

In tubercular meningitis, the child lies on the side, with legs strongly drawn up against the thighs.

Facial Expressions.--Disease as expressed in the face and posture.

Facies cardiac (heart): An anxious expression seen in the early stages of chronic valvular disease.

A purple or bluish appearance of the face, especially about the eyes, temples, and ears, with veins showing on the nose and sometimes on the cheeks, intensified by lying down: Caused by high blood pressure and an approaching dangerously plethoric state of the body.

Hepatic face: An earthy appearance; yellow tinge, jaundice.

Hippocratic face: Indicating rapid approach of death--pinched nose; hollow temples; eyes sunken; ears leaden and cold; lips relaxed; skin livid, and if the skin is pinched it returns slowly to the plane from which it was pinched or drawn.

Ovarian face: Features emaciated and sunken; anxious expression; forehead furrowed; eyes hollowed; nostrils open and sharply drawn; lips full and compressed; angles of mouth drawn and wrinkled, puckered but protruding"fish mouth."

The stupid face is that of typhoid.

Gastric face in children: A white line around the mouth, extending up by the side of the nose, shows irritation from improper feeding. Add to this sign pungent breath and vomiting, and the child has gastritis.

Gastric face in adults: Chronic irritation of the stomach in adults is indicated by a dragging-down of the comers of the mouth. Add to this drooling or driveling of saliva, and the indication is of starch poisoning; and if there is a broad, pallid tongue, the evidence is strong for overeating on starch.

Hysteria is marked by staring and an ecstatic expression.

Epilepsy is marked by a stupid face after an attack.

Protruding eyes and expressionless face in Graves' disease.

They lypermaniac has sadness written in his face. In general paralysis the countenance is composed and satisfied. The enebriate has trembling bps and a wandering expression.

The child with enlarged tonsils and adenoid growths has a stupid expression; the mouth is open, the lips hanging; the nose is expressionless.

The red nose, enlarged veins, bluish lips, cyanosed cheeks, and puffiness of face of the drinking man are called the mitral face. Where the aorta is diseased there is intense pallor. In Bright's disease the face is swollen and white.

The signs of croup are well known, but the type of disease is not so easily told. There are coughing and suffocating when a foreign body is in the air-passage.

Expiratory disturbance is marked by flushed face, puffed and bluish; the eyes are suffused, and the veins stand out.

In marasmus the features are drawn, the furrows deepened, the neck hollow; emaciation is marked, and, when profound, the whole appearance is that of the monkey.

The consumptive appearance is that of emaciation; protruding, flushed cheeks; pinched nose, with flaring nostrils; short, quick, jerky breathing; halting speech, and more or less suppressed voice.

When the face looks smaller--shrunken--and the nose is thin, long, and drawn, the bones prominent, the skin pale and covered with cold sweat, and, when drawn or pinched, the fold remains for some time, this is the facies of peritonitis, intestinal obstruction, renal and hepatic colic.

Fainting: The heart stops; the patient turns pale and falls motionless, but there is no distortion of the face; breathing is suspended.

Apoplexy: The patient is motionless and lies on the back; all animation is suspended; only breathing and pulse continue; the breathing is noisy, and gradually grows more stertorous. If the patient does not react and improve, the breathing and heart action gradually decline, the skin becomes drawn, the nose thinner and longer, the eyes dull, partially closed, glassy. The breathing stops, starts and continues, until it finally ends with a slight bodily convulsive movement.

Physical appearance must be noted--all deviations from the normal mean something.

Deformities, such as rickets, shorten the stature and cause the head to appear too large; the spine is incurved, the pelvis is deformed, the limbs are curved, the ribs project forward.

When the muscles become atrophied they cause general deformity.

Alterations of the heart or lungs cause deformities of the chest.

The bowels are often too large and distended from gas, fat, or ascites; in fevers, from tympanitis and inflammations.

Enlargement of the liver or spleen causes a large abdomen in the upper region; in the lower abdomen, enlargement may come from tumors, distended bladder, or a gravid uterus.

A large swelling at the base of the great toe, with the toe pointing outward, indicates a bunion. This deformity usually means that there is a slight rheumatism. Deformity of the third joint of the fingers--nodes of Heberden--means arthritis deformans. The nodes of Bouchard on the second joints of the fingers indicate dilation of the stomach--a disturbed nutrition from overeating of the carbohydrate foods. Joint distortions indicate gout, rheumatism, or injury; not infrequently they mean all of these. Frequently injury is complicated by rheumatism.

Hippocratic fingers (clubbing of finger-tips, with incurving nails) indicate heart or lung disease--scrofulous diathesis.

Skin.--A straw-yellow hue is found in cancer cachexia.

Paleness may be from anemia, dysemia, leukemia, amyloid degeneration, or Bright's disease.

Articular rheumatism is marked by paleness, and profuse sweats with strong acid odor.

Anger, fear, and jealousy cause paleness. The cause is vascular spasm. Fainting causes pallor.

Plethoric people are too red in color. A florid complexion means the sanguinous temperament and does not mean too much blood.

Unconsciousness may be from syncope (fainting). The face is pale; either no pulse or very light; the breathing very low and quiet. There are no signs of distress; the face is usually composed.

Cerebral Derangements.--If unconsciousness is preceded by spasm, the cause may be kidney disease--uremic coma. Symptoms may be headache, and flushed face with veins standing out. This means congestion of the brain.

A diagnosis--a decision as to the character of a disease and its cause--requires a close examination into the social life of the patient; the family history; the history of previous disease, and the diseases of the family as far back as possible; the history of the present disease; the history of family habits as well as the habits of the patient. It is necessary to know all about the personal habits of the patient, secret as well as open. The eating habits must be known--even to knowing exactly what is eaten at each meal daily. The sex life must be known--the early abuses, as well as those coming later in life.

A diagnosis, so far as determining that a certain organ is affected--for example, that the kidneys are diseased, that the patient has diabetes or Bright's disease--is far from conveying to the physician's mind an idea as to the true cause of the disease. It is true that the physician sees in his mind's eye hepatic insufficiency, or a failure in the dehydration of glucose in the walls of the intestines. But as to what has caused the malnutrition, in what way the patient has brought on his enervation, and what are his habits, the physician knows nothing from the test-tube, which only tells him that there is sugar or albumin in the urine. The diagnosis, so far as naming the diseases is concerned, may be correct; but no information is conveyed to the mind of the physician as to the primary cause of these diseases. Even when germs or parasites are given as cause, this manner of diagnosis throws no light on the question of why germs and parasites do not cause disease in all whom they infest.

Analysis of symptoms, examination of all secretions and excretions, and palpation and auscultation of all organs, amount to a scientific examination of effects; but a positive diagnosis throws no light on cause. Causes must be found and associated with effects before a curing knowledge can be possessed.

Diagnosis may be very correct, so far as effects are concerned; but cause of effects must be known.

It is necessary to know a healthy man. What are the signs of health?

The eye and the skin are clear. The outlines are normal. Those whose lines are obscured by fat are not healthy. Women who weigh over two pounds to the inch in stature are too heavy. Men who weigh more than two and a half pounds to the inch of stature are too heavy and are diseased.

Women and men who weigh much less or much more than the standards named are diseased. By diseased I mean that they give down early; they have not the resistance they should have; they age rapidly; and come to a premature grave.

A healthy body will desire only normal, natural, and simple foods.

Normal health is rare indeed. This being true, is it so very strange that so few live to one hundred or one hundred and twenty years of age-the normal lifetime of a human being?

A Normal Person--Hunger

A feeling of contentment after eating, and no discomfort.

A desire for fresh uncooked fruits, vegetables, and little, if any, seasoning, or thirst for water. Hunger is always moderate.

Urine amber, clear, and with a pleasant bouquet. Heat and acids have no effect on it. Passed with comfort.

Bowel movements should be brown, molded, but not hard; not offensive, and regular.

Skin should be soft, warm, moist rather than dry, and smooth. No disagreeable odors.

Hair is full, long, and possessed of sheen.

Lungs do their work without discomfort and through the nose.

Sleep is long, quiet, and refreshing.

Work and play are pleasurable.

When trouble comes, when disappointments and losses come, they are soon brushed aside and poise is regained with a resumption of interest in life.

Is not envious, jealous, spiteful, nor given to irritability or temper.

Mind is bright, alert and quick to learn. All attention.

Is honest, truthful, generous, kind, forgiving, economical, and philanthropic.

When sick, recovers more quickly because optimistic, and submits more gracefully to the chastening rod of correction; endeavors to get the benefit of the misfortune by reflecting on the cause, and endeavors to avoid a repetition by correcting the life.

An Abnormal Person-Appetite

A desire for more; dissatisfaction and a feeling of discomfort; gas and belching; acid stomach.

A desire for highly seasoned foods, alcoholics, tobacco coffee, and tea. Appetite is always driving; much thirst.

Urine cloudy, full of sediment, bloody, dark, odorless or rank of odor. Passed too often and with discomfort.

Bowel movements are green, gray, yellow, or white, and form into scybala (lumps). Or they are watery, bloody, wormy, and offensive to smell.

Skin is moist to wet; hands and feet cold and clammy. Always wet under the arm. Disagreeable odors from the perspiration under arms and feet.

Hair is thin, lusterless, and dry.

Lungs show asthma, cough, expectoration.

Sleep is fitful, restless, dreaming, and leaves tired on waking up.

Work is disagreeable and tiresome; no pleasure taken in recreation.

Worry, worry, worry, without much excuse. No interest in life. When trouble comes, the life is devoted to worrying.

Is very irritable, spiteful, revengeful, jealous, envious, quick to lose temper.

Mind is dull, slow, and learns with difficulty. No power of attention. Inclined to sleep, yet insomnia at night.

Is dishonest, deceitful, stingy, selfish, unkind, wasteful of other people's property, even when selfish and miserly with his own.

Recovers slowly because mental attitude is that of irritability and impatience. The abnormal person does not learn from experience. Everybody is to blame for his misfortunes, except himself. He is incorrigible.

A very good standard for health is the ideally beautiful--beautiful in body and mind.

Those who would know a sick man should study art. The artistic represents health, both of body and of mind. Then, to know the sick, contrast them with the normal--the ideal.

Post-mortems tell nothing except how terribly the body may be abused before it dies. Yet the dead organs can tell no tale; they cannot stand up and accuse their traducers, nor tell the manner of abuse.

The modern, popular idea of beauty and health is that the body should be incumbered with fat. Stock shows furnish a type of beauty that fits the modern sensual conception of what beauty consists of. Sensuality dominates everything in modern life. Even medical science, in catering to modem sensualism, has won the everlasting gratitude of Bacchanalians and gluttons, by offering the germ as the cause of disease, and tacitly freeing them from all restraint and giving them license to do as they like. Of course, this will be disputed, but I back my statement by referring to the patients themselves.

3. Pain

The evidence of pain. The patient complains of pain, and directs to its location by placing his hand on the part, or as near to the part as he can.

How much pain has the patient? He may be sensitive, imaginative, and inclined to exaggerate; or he may be frightened. On the other hand, he may be reticent and fail to tell the truth about his suffering. Again, he may be too ignorant to give a clear account of himself.

These are a few ways of learning of pain:

(a) Facial expression and bodily movements;

(b) As described by a friend or nurse;

(c) Results, such as weakness and emaciation from long suffering;

(d) Arterial pressure.

When a patient's face is contorted and his body writhes, doubles up, or stiffens, we have good evidence; yet he may be malingering (acting). However, the experienced physician will not be fooled long. It may take a little watching when the patient thinks he is alone. If he really suffers, he will suffer alone as well as when someone is near.

Many are sorry for themselves and make more complaint than necessary; others complain to secure sympathy. The real physician will discriminate, while the doctor is never anything but an amateur. The former cures his patient by imparting assurance; the latter adds to the disease by first discouraging and then operating.

When a patient who looks well declares he has been suffering for months, and he has not lost weight, and there are no objective signs, such as impaired circulation and heart action, and no tumor at the point where the pain is said to be located, it is safe to treat him as a malingerer or a self-deluded individual.

If nervous, imaginative, and self-deluded patients, describing their suffering as "awful ... .. fearful," "I liked to died last night," "I thought I was a goner," etc., are examined for patellar reflex, this movement will be found greatly exaggerated. This proves that they are very sensitive to pain, and should be questioned regarding eating; and it will be found that they eat much starch, and use coffee and other stimulants. Many will be found to have toxin poisoning.

Women bear pain--prolonged pain--better than men. The reason for this is that they are more self-controlled than men. Man is more self-indulged, hence less able to stand pain.

Types of Pain.--There are many kinds of pain; namely: boring, tearing, lancinating; a feeling of pressure, of heat, of cold, of hunger; a feeling of all-goneness, fullness, emptiness.

Colic is distinctive. It is rhythmic--the patient does not suffer all the time. It begins gradually, and increases to a climax; then subsides, to repeat again. Such pains are characteristic of canals: the intestinal, urethra, ureters, uriniferous tubules, bile-duct, eustachian tube, uterus, and fallopian tubes. An inflammation of these tubes and canals is accompanied by rhythmical pain.

Throbbing Pain: Pain that rhythms with the heart and pulse is caused by hyperemia. Headache and toothache are types. Any inflammation that is accompanied with enough swelling will have a rhythmic pain.

Precordial Oppression: This is a feeling of constriction. Angina pectoris is a type of this pain. This pain is of the heart. Affections of the pleura or lungs give no such pain. Asthma is a feeling of suffocation. It differs from oppression in the fact that it is difficult to draw air into the lungs, whereas in heart oppression there is no difficulty in getting air into the lungs, but it appears difficult to extract the oxygen, and the patient feels that he will die of suffocation.

Reflex Pain: When reflex pain is from angina in the lungs or abdomen, resembling indigestion, rheumatism, neuralgia, or neurosis, it may be relieved by rest, but not with the usual palliatives.

Shooting pains are usually neuralgic.

Relationship of Pain to Other Facts Connected with Disease.--Time of recurrence: If regular in time-say, every day or every other day-the cause may be malaria. Pains that are worse of a morning and wear off during the day are nervous headaches and joint inflammations. Pains accompanied with fever and infections usually grow worse toward evening. Fever always runs higher in the evening.

The position of the body: If the legs are drawn up against the abdomen, the pain may be in the bladder, the uterus, the bowels, the gall bladder, or may be due to pyloric disease, ulceration, or cancer of the stomach.

Inflammations of the organs in the abdomen and pelvis are made worse by standing or walking. Lying

down relieves.

When the bowels are distended with gas, or there is an accumulation of fat in the abdomen, such derangements as misplacements of the womb, piles, pelvic tumors, and cystitus (inflammation of the bladder) are all made worse by being on the feet.

The pains peculiar to chronic joint diseases and muscular rheumatism are made worse by staying in bed.

Pain produced by taking food indicates gastralgia, gastritis, ulcer, cancer, obstruction of the pyloris, gallstones, etc.

Enteritis, obstruction, and appendicitis are made much worse by eating. A few sips of milk will start peristalsis, and when obstruction or appendicitis exists, the patient will be thrown into great distress. Pain that is not made worse by eating is not caused by obstruction.

Pain that is frequently mistaken for appendicitis is caused by colitis, constipation, proctitis, ovaritis, neuralgia of the spermatic cord, strictures of the urethra, and gallstone or gall bladder disease.

Relief from drinking or taking food indicates gastric irritation caused by taking fluids too hot, eating too rapidly, overeating, the use of coffee, tea, tobacco, alcoholics, eating between meals, or gum chewing.

Damp weather, by chilling the surface of the body, causes those who are rheumatic to have pain and stiffness of different parts of the body.

Those who foretell storms and changes in the weather are human barometers, made so by a state of acidosis of the body. They have been using a preponderance of foods belonging to the acid producing class, and cooked foods which have had their enzymes killed by heat. Those who suffer headaches--even migraine sufferers--are made worse by meteorologic changes.

Headaches that occur on bright, sunny days, or when the earth is covered by snow, or on train or water trips, are probably due to eye strain.

Sea- and train-sickness is caused from abuse to the stomach by overeating, eye strain, or reflex irritation. Gas in the bowels, pressing on the ovaries, will cause sick stomach. Any neurosis is liable to be aggravated by train or sea voyages. Anything that enervates such subjects will cause them to be bad travelers.

Vomiting that relieves does not indicate that the stomach is diseased, any more than a cough that relieves indicates that the lungs are diseased.

The effort at vomiting shocks and produces reaction, which relieves pain in any part of the body. Pain produced by gas pressure, gallstone, or pain in the kidneys, womb, ovaries, spermatic cord, and testes, is relieved by vomiting. Heat and cold relieve pain. The patient must decide. Heat is more logical.

The sick habit has become a reality in these piping times of great medical discoveries. The habit of thinking sickness, talking sickness, acting sickness, and being coddled and operated upon, has developed an army of people who have become expert in complaining.

The sick habit and the drug habit are products of the medical profession. One of the principal causes is that the doctor must live, and it is to his bread-and-butter interest that every patient applying to him be very sick, or in imminent danger of dying unless operated upon at once.

The average professional calamity howl set up when a patient calls on "the best physician" in the community is quite enough to terrify, shock, and draw the patient's attention to himself and set up a morbid introspection. Once started, the introspection habit builds mountains out of mole hills; and surgical science has developed to such a state of perfection that it can extirpate every symptom of disease, except the disease itself, which is a large sick habit.

Pain Explained.--Every part of the body is supplied with nerves. Nerves, when pressed upon, give out a sensation of discomfort, and discomfort warns that something abnormal is taking place. The worm squirms away from it; the animal runs away from it, as did man in his early development. Man in his ratiocinative state is supposed to reason on the cause, and to remove it; but no, he runs to a mysterious individual, who administers a mysterious remedy, or cuts out an effect; and all concerned are satisfied, and the cause continues.

Nothing but reason, however, will direct man out of the way of harm and help him to understand cause.

When man reasons, he must know that there are two general types of causes for pain--namely, extrinsic and intrinsic. The outside causes, when understood, may be disposed of. The inside causes must be understood from inductive and deductive reasoning.

For example, when we learn that no one will develop angina pectoris who does not use tobacco, coffee, or tea, then man will know how to avoid such an affliction. When man learns that overindulgence in eating meat, or animal proteids, will slowly but surely set up a general lymphangitis and favor the development of catarrhal diseases, from nasal catarrh to tuberculosis and syphilis, he will know how to avoid such diseases. When those suffering from stone in the kidneys, gall bladder, or urinary bladder learn that these diseases follow the neglect of eating eliminating foods, and refusing to eat mineralized foods and drink mineralized water, man can avoid these painful diseases, and become his own physician.

Inflammations in the different organs create pain, heaviness, and fullness in the organs; pain, if the inflammation involves the surface; a dull, full, and heavy feeling, when the disease is of the body of the organ.

A persistent pain at or near the umbilicus is an indication of obstruction, partial or complete, somewhere in the intestine.

Radiation pain may start from an indigestion which causes gas; the gas presses upon an ovary, and the pain in the ovary causes vomiting. The nerve impulse starts in the ovary, goes to the spine, and from this center is sent to the stomach, producing vomiting. The eye strain on a railroad or sea voyage causes vomiting.

Any theory that all pains must be radiated from the spine, or from organs to the spine and from the spine elsewhere, must be limited. The truth is that pain must be taken care of in the storehouses of the nervous system--the ganglia, which are the inhibitors and dissipators of pain, as the lymphatic glands are the repositories and suppressors of toxins.

If it were not for the ganglia, which act as storage batteries for the distribution of surplus energy, the body would be killed from shock, which, under the system of storage batteries, is absorbed and the body is saved the shock.

When a locality of the body is under the continuous stress of irritation, pain must be felt in quite remote parts, because of the transmission, storage, and radiation.

When the batteries of the body become charged to full capacity, radiation or elimination takes place.

Headache results from this overflow. Its elimination causes pain.

The elimination of surplus energy is marked by pains of all kinds, and fevers. Colds and fevers are the unloading of pent-up energy.

Nerves accompany arteries. When much energy is conveyed over nerves, arterial spasms are experienced. Continual overstimulation of the arterial system ends in arteriosclerosis.

If the current of irritation is caused by envy, jealousy, or anger; or from the toxins of alcohol, tobacco, coffee, tea; or from daily decomposition of food in the intestine, with absorption of the toxins or acids or sepsin; or if the shocks come from lascivious thoughts, onanism, or excessive venery, the continual

overstimulation of the arterial system must end in hardening of the arteries, loss of coordination or tabes dorsalis, apoplexy, paralysis, etc.

It is well to remember that pain it not always located at the site of injury or lesion.

When a nerve is compressed, pain is not always found at the point of compression, nor at the nerve's termination. Epilepsy and convulsions generally have a peripheral origin. To be exact, most cases of epilepsy primarily originate in intestinal indigestion, with toxin poisoning; then one or more organs become affected, these affections transmitting their irritations to the central nervous system.

Affections of the spinal cord may manifest at any point other than at the cord. Infantile paralysis is a spinal affection. Its syndrome is impaired nutrition from food devoid of unorganized ferments and basic elements, and the consequent enervation. Resistance is so impaired that extraordinary thermic changes, or depressing physical changes, cause a giving-down of the nervous system, favoring central lesions--cerebral spinal, and meningeal inflammations. The gastric, darting, and girdle pains of locomotor ataxia are peripheral symptoms of a central lesion, and the lesion is caused by toxins.

Headaches are seldom symptoms of head lesions.

Causes of Headache: Anemia, fatigue, hunger, bad air, alcohol, morphine, lead, blood pressure, arteriosclerosis. The headache of old people frequently comes from hardening of the arteries. If examination is made, however, there will usually be found a kidney lesion; but even that and blood pressure belong to the syndrome of arteriosclerosis. Headaches come often from indigestion, constipation, eyestrain, beginning of fevers, brain tumor, and syphilis. A common headache is known as rheumatic headache. It is characterized by spots of "induration," or sensitive spots. This is without doubt the coffee and tea headache, and can be cured by stopping the use of these table beverages.

Refrigeration is said to cause this headache, but coffee and tea make their victims susceptible to cold.

Rachialgia (pain in the back), at the beginning of fevers, smallpox, and the backache complained of by most women are of no value with reference to the location of a lesion. Constipation and uterine disorders often cause much backache.

A common cause of coldness--a feeling of chilliness that cannot be gotten rid of by the heaviest clothing and warmest rooms--is intestinal indigestion; in which case clothing and hot houses are only fuel added to the fire--or, rather, cold added to the chilliness.

I have often told patients suffering in this way that if they would eat more--much more--and put on a half dozen more suits of underclothing, they would stand a good chance of freezing to death.

Neurasthenics usually complain of heat when their hands and feet are cold.

Those who have paralysis agitans are usually too warm.

A pain at any point in the body may be the aura of epilepsy.

A very sensitive state of the abdominal wall, without gas distention, or with a moderate amount of gas present in the bowels, indicates a neurosis. The real derangement may be intestinal indigestion and catarrh of the uterus,

When deep pressure in the abdomen causes no more discomfort than a light touch, the patient is of a nervous type, and should not be subjected to an operation just to relieve her of the notion that she needs an operation.

Hysteria is a hypersensitive state. The hysterical zones are at the top of the head, in the dorsal spine, at the nipple in man, and under the left mammary gland of woman; in the ovarian region, the spermatic cord and testes, and in the patella. It is not uncommon for the knee to be treated for rheumatism, when the disease is of the ovary.

Many men and women are being operated upon today, in our leading "surgical plants," because of pain in the various hysterical zones.

4. Examination of the Patient

In examining a patient, the family history should be obtained; for this gives a clue to predisposing causes and family habits which lead to specific derangements. Then the patient's personal life and habits, mental and physical, must be reveiwed. This information, with analysis of the objective and subjective symptoms, leads to a knowledge of what the patient's illness is; for diseases are the result of broken health laws.

If the patient has pain, this directs to the part of the body affected. It must be determined if the pain is local or sympathetic.

A patient may be sick at the stomach, and be vomiting; yet the real derangement or cause may be of the brain or uterus. If the stomach is treated, the treatment must fail.

Spinal disease may manifest in the joints of the feet and legs. If the physician foolishly treats the pain in the legs for rheumatism, he must fail to benefit his patient. I have met with a case wherein a boy had been treated for rheumatism of the left knee, when his disease was preputial.

Palpitation of the heart comes from stomach derangement oftener than from other causes.

Pulmonary tuberculosis often presents symptoms of heart derangement; and mitral stenosis will cause much coughing, and even hemorrhage of the lungs, which symptoms are secondary to the heart derangement.

(a) Organs of Special Sense

Only the general symptoms are of importance in eye derangements. The special belong to ophthalmology. Photophobia (dread of light) may be due to hysteria, a brain lesion, or an inflammatory disease of the eye.

Ulceration of the cornea is often an index to the state of the blood--often indicates heavy meat-eating, with consequent toxins in the blood.

Dropping of the upper eyelid may mean paralysis of the third pair.

Protrusion of eyeballs, with heart symptoms, indicates exophthalmic goiter. If but one eye protrudes, it indicates a tumor behind the eye.

Long vision, with lost accommodation of light, means ataxia or paralysis. This is the Argyll-Robertson sign. A bright spot before the eyes (scotoma), with loss of power to contract the pupil before a light, may indicate optic neuritis or tabes. If no other symptoms of tabes can be found, it is an eye lesion.

If a person, deaf in one ear, can hear a watch tick, or a tuning fork, placed on top of his head, equally well with both ears, the disease is not central.

When taste and smell are diminished, it is probably due to toxin poisoning, including tobacco, alcohol, coffee, and tea.

A headache is rare indeed that will not get well after the patient corrects his eating and other habits.

A crisis of tears differentiates a hysterical from an epileptic paroxysm.

Purulent ophthalmia is often an indication of gonorrheal infection.

Halos of light, or scintillations passing from a light, indicate indigestion in children.

There are many eye lesions that will pass away when all stimulants are given up. Toxin poisoning must be overcome by eating in keeping with the digestive power. Venereal abuse brings on enervation of the eye and brain, and, unless corrected, no cure can be made. Adopting glasses for many eye defects caused by excesses in sensuality is the height of nonsense.

When noises disturb and prevent concentration, in those who are trained to concentrate or give attention, the nerves are on edge, and the cause is overstimulation--overeating, coffee, tea, tobacco, alcoholics, excessive venery.

If, by applying the ear or stethoscope to the patient's ear, the physician can hear a crackling sound when the patient swallows with his nose and mouth closed, it indicates that the tympanum is intact.

Taste and smell are often much impaired by catarrh.

It can be said that all the special senses are more or less impaired by a style of eating that builds toxin poisoning.

(b) Vasomotor

Sudden redness of the cheeks indicates meningeal inflammation.

The well-known cheek flush of tuberculosis should not be confounded with nervous flush.

Red cheeks of teething children will be accompanied with other signs of teething.

Red cheeks and a white line around the mouth and nose indicate irritation of the stomach; in children, gastric fever, if there is vomiting. These symptoms may precede the eruptive fevers.

Cold, blanched feet and hands indicate vasomotor constriction and have intestinal putrefaction as their cause. When this condition becomes pronounced, it is called syncope of the limbs. The patient may have "dead finger"--a finger or fingers without feeling--and there may develop points of gangrene; or there may be the opposite state--venous congestion or cyanosis, such as occurs in asphyxia--oxygen starvation. The source of toxin poisoning must be discovered and removed, or this state cannot be overcome.

Acute vasomotor disturbances cause hyperemia of the breasts in women. It is too common to amputate the mammary glands, the surgeon diagnosing fluxions as cancer. The careful physician will find an accompanying uterine disease, which, if cured, will do away with the periodical hyperemia of the breasts.

In severe and advanced stages these hyperemic hemorrhages take place in the skin, mucous membrane of the bowels, urethra, ureters--bloody tears, bleeding from nose, lungs, or kidneys. There may be organic diseases, but hysteria should be suspected. Too often the physician is willing to believe the worst--that the disease is cancer.

Dry mouth may be caused by fear, anger, or fever. Salivation (flow of saliva) may mean mercury poisoning, nervousness, neuralgia, cancer, or may be the forerunner of epilepsy.

Sweating is suppressed in neuritis, neuralgia, and brain disease.

Increased urination may be due to polyuria, diabetes, excessive drinking, nervousness, indigestion, hysteria. Fear, anger, and suppression from kidney disease may cut down the amount far below the normal.

In tabes dorsalis there may be hypersecretion of digestive fluids. Hysteria should be suspected. The neurasthenic is inclined to have exaggerations and suppressions of all the secretions and excretions.

(c) Heart

The normal apex beat is a little below and to the right of the nipple. Lying on either side may change the

location slightly either way, A strong impulse should be inquired into; for the reason should be known. The apex beat may be displaced down, or to the right or left. The apex beat must vary in its location. In women the breast development prevents the nipple from being a landmark. In fullness there may be enlargement, and there may be effusion.

By palpating, any undue dullness can be discovered. Pressure over the heart that causes pain indicates either myocarditis or pericarditis. This should not be confounded with intercostal neuralgia or rheumatism, which is strictly local, on or between the ribs.

Percussion.--In examining the heart, there are two zones--namely, a superficial, which corresponds to a lung-dull sound, and means that portion of the heart covered by the lung; and a heart-dull sound, which is triangular- shaped and flat. The lung-dullness is bounded by a line extending along the left border of the sternum, at the lower border of the second rib, and extending by an imaginary curved line reaching the apex of the heart. Then draw a second line from the border of the second rib to meet the end of the imaginary line at the apex, curving it to the left somewhat. The two lines leading downward from the second rib may be called the right and left arms of an irregular triangle; the point where they meet at the top may be called the apex of the triangle; and the line connecting the right and left arms at the apex of the heart may be called the base of the triangle. The flat or heart-dull sound begins at the level of the fourth rib and terminates at the apex of the heart.

The flatness (heart-dullness) of the base of the triangle may be confounded with liver-dullness; but the physician will follow the outline of the liver and make his deductions as to liver and heart sounds.

It is to be understood that the area of dullness and flatness may vary in health, and the variation must be greater in disease.

The principal modifications are:

First, in hypertrophy of the left ventricle, the apex is pushed downward and outward. The flatness is slightly above the nipple.

Second, in hypertrophy of the right ventricle, the apex is pushed outward, and the flatness is slightly above the nipple and to the right of the sternum.

Pericardial Effusion.--If the accumulation is slight, the flatness extends below the apex beat. When the effusion is great, the flatness extends over much more of the chest wall.

Auscultation.--The most important mode of exploration of the chest is by auscultation. It requires a good ear to be educated into reading symptoms by sound.

Location of Sounds.--The aortic orifice is in the right second intercostal space. The pulmonary orifice is in the left third intercostal space. The mitral orifice is at the apex beat. The tricuspid orifice is at the xiphoid appendix.

The Normal Heart Sounds.--There are two sounds: The systolic, or first, sound is caused by contraction of the ventricles. Then there might be a short silence, followed by the diastolic, or second, sound, which is caused by the closing of the semilunar valves on the arteries. These sounds may be represented graphically as follows: The first sound (venticular) may be represented by the following figure: "u" . Then there is a brief silence, followed by a second sound, which is diastolic and longer, and may be represented by -- Then silence, and the sounds are repeated.

The attention must be educated to distinguish slight variations in these sounds. Many normal hearts must be examined to become familiar with the normal sounds. The first deviation from normal may be said to be that of emphasis on the sounds--they are more pronounced. To get the sound, have someone with a normal heart exercise vigorously for a few minutes; then, if the ear is placed to the heart, the sounds will be louder and faster. When this occurs without exercise, it must be caused by stimulation. The stimulation may be from fear or some other emotions, or from the use of stimulating foods or drugs.

An increase of the second sound may be heard at the pulmonary orifice (left third intercostal space), indicating nothing more than a disturbed circulation in the lungs.

A weakened sound may be caused by an accumulation of fat in the thorax, and it may be due to weakness of the heart. If so, it is the first sound that grows dull and finally disappears. This symptom is not so significant as a weakening of the second sound.

When there is an effusion in the pericardium, the heart sounds are muffled and sometimes extinguished.

Disturbed Rhythm.--There are two types of rhythms described by some authors; namely, intermittent rhythm and arrhythmia (irregular, lack of rhythm). Intermittent rhythm is where the pulse beat is suspended, or misses a beat occasionally. These missed strokes are usually followed by a more pronounced systol (contraction). The cause is enervation from stimulation. Perhaps, if there is one class of stimulants, more than another, inclined to produce this state of the heart, it is the coffee-and-roll or toast habit. It means a preponderance of food of acid potentiality.

Arrhythmia is marked by irregularity in the succession of pulses. Then there is a type presenting a prolongation of one of the heart beats or of one of the silent periods. Arrhythmia is also marked by cardiac bigeminate (double), and trigeminous (treble); which means the production of two or three beats, one after another, followed by a natural pause. Then there is the alternating pulse--one strong beat followed by a weak beat; then there are two short strong strokes followed by two weak strokes. The weak ones are not perceptible at the wrist.

There is the fetal rhythm, in which the two beats become similar, and the frequency is augmented so as to convey to the ear the sound given out by the heart of the unborn child.

The fetal rhythm is of unfavorable prognostic significance. lt develops in some cases of arteriosclerosis. Murmur of recall is a modified second sound which is divided into two short sounds. This occurs in a disturbed pulmonary circulation, which modifies the action of the valves, and is found in mitral stenosis.

Galloping murmur is found in two places. One place is at the left heart, a little above the apex beat, and means myocarditis or rheumatism of the heart. A second location, less frequent, is found in the right heart; this can be heard at the end of the sternum, and accompanies gastric and hepatic derangements, especially gallstone.

A murmur that accompanies normal heart sounds is of less gravity than one that replaces them.

Friction murmurs mean friction of the pericardium. They sound like the creaking of leather.

A blowing murmur is a sound like that of bellows. When accompanying the first heart sound, it is called systolic blowing; when with the second sound, it is called diastolic blowing; mesosystolic, when it occurs in the silence between the regular sounds of the heart; presystolic, when occurring before systole; in this case it may be called auricular systolic.

Heart murmurs that disappear on holding the breath are cardio-pulmonary, not endocardial.

Murmurs accompanying the radial pulsations are systolic; those that precede the pulse are presystolic; those following are mesosystolic. The diastolic murmurs accompany the second sound and are more quiet.

During the systole the ventricles contract. If the murmur is at one of the auriculo-ventricular orifices, it indicates that the blood flows backward from ventricle to auricle. This means insufficiency or incompetency of the auriculoventricular valves. When the sound is at the arterial orifices, it means stenosis of the aortic.

When the murmur is diastolic, it Corresponds with the second sound, and means that the blood flows back- ward from the arteries to the ventricle. This is aortic insufficiency. The rolling murmur heard at the apex means stricture or stenosis of the auriculo-ventricular orifice, usually the mitral.

Reduplication of sounds indicates that valve action is not simultaneous and that there is heart strain present, or high arterial tension, as in stenosis or kidney diseases.

Mitral insufficiency often gives out a whistling, musical piping sound. Aortic insufficiency is a mild, soft, and blowing sound. Mitral stenosis is a rolling sound.

When the murmur is heard outward or inward from the apex, or at the left border of the heart, it may be said that it is functional; when in the aortic area to the right border of the sternum, it is organic. Murmurs along the left border of the sternum are organic.

Before it is safe to say that a given murmur is organic, an apex murmur must be heard in the axilla and in the back, and basic murmurs must be heard through the vessels originating from the affected orifice or along the sternum. When aortic incompetency is suspected, the stethoscope may be applied to the femoral artery, and in these subjects to the abdominal aorta.

Ile following are graphic sounds of the heart:

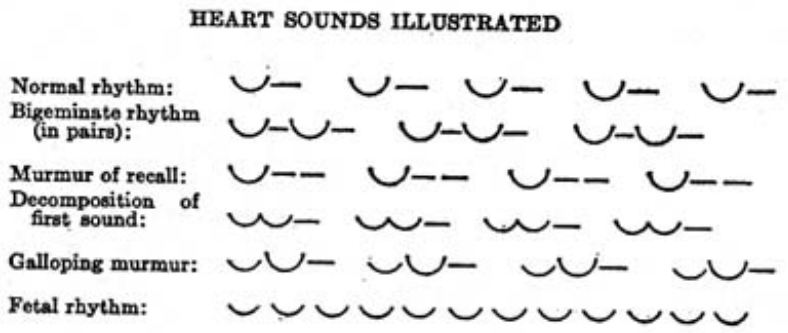


TABLE OF HEART SOUNDS, LOCATION, AND SIGNIFICANCE

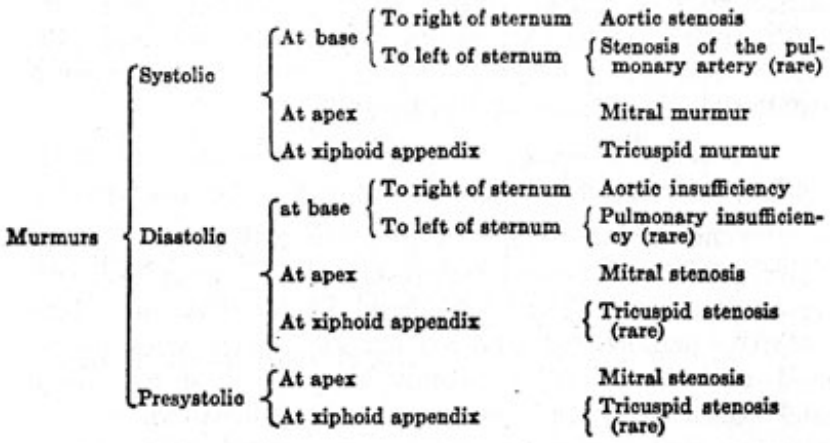
First Sound	Short Silence	Second Sound	Long Silence
Ventricular systole. Heard at apex--apex beat. Felt at radial pulse. Systolic blowing murmer heard at this point.	Mesosystolic. Blowing murmur.	Closure of the semilunar valves between heart and arteries.	Diastole, or auricular systole. Presystolic murmur.

At the first sound, the ventricles close (systole). If there is a murmur at one of the auriculo-ventricular orifices, it is because blood flows back to the auricle. This means insufficient closure of one of the valves.

When the murmur is heard at one of the arterial orifices, it indicates that the blood does not flow through so easily as it should. This means a diminution of caliber. Stenosis is the cause.

Diastolic murmur coincides with the second sound, and means that the blood regurgitates or flows back from the arteries to the ventricles. This means aortic insufficiency--occasionally pulmonary insufficiency. This murmur is heard at the apex and has a peculiar character--namely, a rolling, rather than a blowing or purring, sound. It means stricture of one of the auriculo-ventricular orifices, more often the mitral. Presystolic murmur means the same.

The following table describes the location of the murmurs:



Mitral insufficiency is often a whistling, musical, or piping sound.

Aortic insufficiency is mild, soft, and blowing.

Mitral stenosis is like a rolling sound.

Congenital malformation is marked by a systolic, forcible, vibrating murmur, heard at times in the center of the chest, not accompanied by purring, and heard best over the fourth dorsal vertebra.

Mitral murmur should be looked for in the left axilla; also behind, under the angle of the scapula.

Murmurs of the pulmonary orifice are conducted toward the left clavicle; they stop before reaching the bone.

Aortic murmurs extend toward the right clavicle, and often reach beyond even in the neck.

The diastolic murmur of the aorta passes along the sternum to its end, the xiphoid appendix. The murmur is a soft, blowing sound. There is accompanying this murmur a jerking pulse--a throbbing or dancing pulse.

To sum up: In a weak heart, when both sides are affected, there is observed venous stasis, with functional disturbance of lungs, liver, kidneys, stomach, and brain, with their various symptoms: dyspepsia, dyspnea, local pain, vertigo, palpitation, etc.; with, as termination, dilation and collapse of the heart.

A valvular defect is important as regards accommodation, whereas a dilation has a very serious importance.

Venous stasis from dilation presents cyanosis, turgid veins, with and without pulsation of the jugular and other veins, cardiac asthma, hyperemia of the liver and lungs, catarrh, hemorrhage and edema of the dependent parts and cavities. Cardiac asthma may be due to swelling and stiffness of lung substance from congestion.

Heart weakness may be due to muscular or valvular insufficiency, or both. It may be primary or secondary to other derangements which obstruct the circulation. The liver and kidneys must receive attention.

Congenital Heart Defects.--Potency of the foramen ovale, ductus arteriosus, defects of the ventricular system, and lesions of the pulmonary orifice. Prematurity is the usual cause of these defects.

Symptoms: Cyanosis (blue child-not always present), dyspnea, cough, convulsions, edema, and restlessness.

(d) Respiratory Apparatus

The larynx must be examined with special instruments. The bronchi and lungs present pain in the side, chest cough, difficult breathing, and expectoration. Difficult breathing and dyspnea may be due to either lung or heart affection. It may be reflex; if so, any of the organs may cause it.

Cough may be lung cough, or it may be reflex.

Respiration and pulse normally have a ratio of about one to five.

Cheyne-Stokes respiration belongs to cerebral or meningeal lesions, At first it is rapid and superficial, and gradually becomes more profound. This is followed by a diminution, with a final arrest; then a short period, followed by short, shallow breathing, gradually becoming faster, with a repetition of the former sounds.

Diabetic coma is characterized by abrupt and deep inspiration, followed by a pause; then a quick expiration, and a pause. These types of breathing are due to medullary derangement-possibly toxin poisoning.

Rales are of three types:

Dry or sonorous rales are called rattling when they have a grave pitch; sibilant when acute. They indicate bronchial inflammation or catarrh.

Crepitant rale is like rubbing a lock of hair between the thumb and finger close to the ear. It means pneumonia.

Moist rale has a bubbling sound. When high, it indicates tuberculosis, when of fine bubbles, capillary involvement.

A blowing sound, when heard between the shoulders, indicates bronchitis. It is tubal when it has a slightly metallic or whistling character. The pleuritic murmur has the sound of "i" spoken in a whisper through the closed fist as an ear trumpet. The sound will be modified in keeping with the amount of effusion.

In empyema (pus in the pleura) the percussion dullness will be flat like the liver sound. If the patient will count "one, two, three," while the ear is placed on the chest, the sound conveyed will be far distant-removed; whereas the voice will come to the ear when there is no accumulation.

Egophony.--While the patient is speaking, if the voice comes to the ear with a tremulous murmur, this is called egophony, and is indicative of pleurisy or splenopneumonia.

(e) Digestive Apparatus

The teeth should be inspected--the entire mouth, lips. tongue, and throat. Many stomach derangements are cured by keeping the mouth and teeth clean. Pyorrhea begins with neglect of cleanliness, and starch and sugar poisoning. Scurvy and mercury are leading causes.

"In diabetes the second lower molars are affected, and their alteration serves as guide to diagnosis."

Premature loss of teeth indicates failing nutrition from wrong eating (too much starch and sugar, and not enough raw fruit and vegetables).

The tongue is somewhat of an index, but altogether too much is made of it, as likewise of the temperature of the body, by most physicians.

A broad, pallid, thick tongue indicates too much starch eating. A long, pointed tongue denotes irritation of nerve centers. A small tongue indicates insufficient nourishment. A red tongue, with enlarged papillae ("strawberry tongue"), means great irritation of the stomach. This is the scarlet fever tongue.

Ulcerations on the tongue often mean injuries from teeth. Continual tongue irritation and ulceration should be investigated by a dentist; if not corrected, nocturnal epilepsy should be suspected.

The throat, when abnormally red, indicates irritation of the stomach, tobacco or alcohol poisoning. The throat is an index of the stomach. Treatment of the throat is very far-fetched. The throat will not go wrong unless the stomach or bowels go wrong--no, not even the tonsils. Tonsillitis is symptomatic of wrong eating--wrong combinations.

Many derangements start with an angina; but I insist that all diseases--yes, the eruptive and so-called contagious diseases--get their infective agent in gastro-intestinal putrefaction, and that without this cause they can have no existence. Hence, to cure any and all of these diseases, correct the generation of toxins. To do so is not only curative, but preventive. All so-called contagious diseases are autogenerated. This truth may require years to become popular--be accepted by the profession--but it will come.

Stomach derangements are brought on by abuse at the table. Heartburn means overeating, or too much starch or sugar eating, or all three causes.

A fullness after eating means overeating, or wrong combinations, or too rapid eating, or too much fluid with meals.

Flatulency.--Gas means overeating, or waterlogging with too much fluid intake. Navy beans, peas, sweet potatoes, apples, and other foods cause gas. Apples and other fresh fruits cause gas in those who are starch-poisoned. The habit is built by much water drinking between meals. Constipation is built by gas distention and too large fluid intake, forcing the kidneys to do the eliminating for the bowels. The present universal habit of water drinking to overcome constipation is another medical fallacy.

The tired feeling of a morning means food poisoning--toxemia. The physician should know the influence of food taken in excess, the influence of wrong combinations, and the influence of all mental and physical habits; then he can prescribe intelligently.

Vomiting.--In case of indigestion the vomitus is usually acid. It is alkaline in cases of catarrh and cholera.

Vomiting may be watery, alimentary, bilious, fecal. hemorrhagic, or purulent.

Aqueous vomiting is often viscid and soapy because of the presence of mucous. It is seen in alcoholic gastritis, ulcer, cancer, sick stomach, and cholera.

Alimentary vomiting is of food recently swallowed. Bilious vomiting shows the bile in the ejected matter.

Fecal vomiting is of the contents of the bowels, and means obstruction.

Blood vomiting may be hemorrhage of the stomach. If bright red, it means ulcer; when dark and like coffee grounds, it indicates cancer.

False membranes, and long casts of mucous, are sometimes passed. These indicate muco-entero-colitis.

White, jointed, tapelike appearances may be tapeworms. If found, watch should be kept for a few weeks. If there is really a tapeworm, portions of it will pass almost weekly.

Stomach

Deformities are often produced by corsets. The organs are pushed down; then there is compression from the liver being forced against it. Indeed, the stomach may be pushed in all directions by corset pressure, causing difficult breathing, palpitation, etc. A high stomach means hearty eating; a pendulous abdomen means debility and visceroptosis (falling or prolapsus of the viscera). Medium enlargement in the upper part indicates enlargement or dilation; and dilation means overeating, fermentation, and gas distention.

Depression at the pit of the stomach, when the patient is turned on the side, indicates inanition--great weakness. A bulging at this point means distention of the stomach. Flattening below the navel, with protrusion below, means visceroptosis.

Palpation discovers sensitiveness. A general sensitiveness to touch, without fever, indicate a general toxin infection from gastro-intestinal decomposition of food. In these cases there are usually constipation, colitis, catarrh of the womb, piles, etc.

To palpate the abdomen successfully, the patient should lie on the back, with legs flexed on thighs and thighs flexed to a right angle to the abdomen. The hands of the examiner must be warm; otherwise contractions will occur.

The sloshing sound or clapotage (a sound like that obtained by shaking a bladder half filled with water) should not be heard six hours after eating. When it is, it indicates dilation, ptosis, slow digestion, cancer of the stomach, etc.

Pyloric thickening, or cancer of the pylorus, is felt as a hard lump or tumor at the right of, and two or three inches above, the navel. If this lump is found, and there is vomiting, every two or three days, of ingesta (previously eaten food) that were eaten, one, two, or three days before. and there is clapotage six or more hours after eating, and this sound can be elicited at all times, except immediately after lavages, or until heavy vomiting takes place in advanced cases, the ejecta will present blood of a grumous character. This symptom, with cachexia, means cancer. All cases can be cured by lavage and restricted diet before this stage is reached. Surgery will not cure after this stage, and it is not necessary before. If performed, it will handicap and inconvenience the patient for the remainder of his life. These cases are non-cancerous at the start, and, if properly treated, should recover.

No case should be pronounced cancer until everything has been done that can be. The surgeon is an advocate of his calling, and will declare that surgery is the only cure. Indeed, it is never a cure, except when it fortunately removes a cause.

The stomach should be washed out daily, and the patient properly dieted. If attended to carefully, many cases pronounced cancer can be saved.

A dilated transverse colon may give out the peculiar clapotage sound; but there is always more tympanitis with the colonic affection, and the sound is farther below and at the points marked by the ascending and descending colon.

A tumorous state of the pylorus and the great curve of the stomach--the left of the stomach--can usually be palpated, while it is more difficult to discover tumifactions of the cardia or esophageal orifice.

Intestine

Many mistakes are made in examining the intestine. Constipation with accumulation is often diagnosed as floating kidney (a very rare affection), appendiceal abscess, ovarian enlargement, uterus tumor, pregnancy, tumor or cancer of the intestine. It is true that such mistakes are ridiculous and do not occur often with skilled diagnosticians, but first class professional men do make these mistakes often enough to cause laymen to seek confirmation of a diagnosis before submitting to an operation. It is not proper to seek confirmation by calling upon a physician selected by the physician in charge; for he will pick one who will agree with him. Either call a physician, and do not allow him to know that a diagnosis has been made, or call a rival of the one making the diagnosis. At all costs, try to eliminate the subterfuges of medical ethics, which means all things to doctors, even if it spells ruin to patients.

Professional ethics is a medical Potter's Field where the mistakes of doctors are interred without publicity. Consultation is where two or more professional men gather together to enjoy a private smoke and to discuss the mistakes of Moses or anyone else who haplessly is not present.

A painful point in the intestine may be caused by inflammation, impaction, gas, tumor, or cancer.

If inflammation, there will be mucous with the stools, and an accumulation of fecal matter will cause pain from pressure, and gas will cause pain from distention. A pain at McBerney's point indicates inflammation, gas, or constipation. Colitic pain is peri-umbilical, or in the right or left iliac fossa. In dysentery the pain is in the left flank and extends to the anus.

Fecal Matter.--When dry and covered with mucous, it indicates constipation and colitis. When of rank odor (putrid-smelling), it means overeating of animal proteids. When sulphureted in odor, it may be due to sulphur or sulphate of magnesia taken to relieve sluggish bowels.

The consistency may be hard, soft, liquid, mucoid, or bloody. If watery and mucoid, it indicates diarrhea and catarrhal inflammation of the mucous membrane.

When the stools are small, and largely mucous, with much bearing-down pain, the disease is probably flux or dysentery.

When the stools are of peculiar form--small and round, ribbon-like or pencil-like--there may be stricture.

Dark color may be from food or drugs; green, from spinach or other vegetables; or, in infants on milk, it means acidity and indigestion from overfeeding. Green, mucoid stools, studded with white curds, indicate overfeeding. and unless a fast is given, followed with a cutting-down in quantity, the child may be very sick.

Light color, if not from an exclusive milk diet, means lack of bile secretion and sluggish liver.

Blood in the stools may be from piles, ulcer, or cancer. When red, it indicates that it comes from the lower bowels. A local examination should discover whether the bleeding is of the nature of piles or local fissure, ulcer or polypus.

Black blood from the bowels must be considered in connection with other symptoms. Give the patient the benefit of the doubt as to the disease being malignant.

Bismuth may color the stools dark for some time after its administration has ceased.

Typhoid discharge, when the patient is fed, is yellowish and nauseous in odor.

Whitish stools indicate fat; fatty stools indicate that the pancreatic juice is unable to emulsify, or that the juices are cut off.

Sand or gravel in stools indicates that stones in the gall bladder have disintegrated and passed out--a natural form of elimination.

Abdominal Pain and What It Signifies.--Sudden abdominal pain diffused, or in the umbilical region, will in a few hours become localized in the region of the affected organ. Deadening drugs should not be given, for they will mask the affection and obscure diagnosis, Sudden abdominal pain, with vomiting, is indicative of peritonitis. The cause may be volvulus, invagination, internal or external hernia, extension of septicemia, rupture of ectopic pregnancy, or rupture of an abscess into the peritoneum. The abscess may be typhlitic, perityphlitic, appendicular, tubal, pelvic, subperitoneal, cellulitis, perforations of ulcers, ulceration caused by biliary or renal calculus, etc. An operation at once, with drainage, should save most cases. Delay means death. Unfortunately, advantage is taken of this truth to urge people with intestinal indigestion, gas pains, uterine and other pains, to have an operation at once.

Absolute quiet, frequent copious enemas, and abstinence from food, is a safe "watchful waiting." To use cathartics is unnecessary under all circumstances, but to give them where any of these symptoms exist is positively criminal ignorance.

In peritonitis the pulse is of more value than the temperature. The pulse is rapid and small (120 to 150); the temperature may be normal, subnormal, or high; the breathing is costal and rapid (30 to 40); the urine is usually highly charged with indican. Collapse threatens early. The face is anxious, the skin cold, and

the mind clear. Often the intoxication is so great that the patient talks and acts as if there were little the matter. This, however, depends on the cause. Puerperal cases are liable to act in this way. I have seen cases dying; yet they were hopeful and believed in an early recovery. When the organ involved in causation is the liver, pessimism is present.

Pain that precedes or follows bowel movement indicates rectal disease, hemorrhoids, fissure, ulceration, cancer.

If pain recurs with menstruation, the reproductive organs should be examined.

Sudden pain experienced for the first time should be analyzed carefully. If the same character of pain has been experienced before, time may be taken, if necessary, to find the cause. If pain follows exertion, it may be from hernia, rupture of tubal pregnancy, rupture of peritoneal adhesions with hemorrhage, volvulus, rupture of cystic tumor, or twist of tumor on its pedicle. Pain following trauma may be from rupture of the bladder, stomach, intestines, or other viscera.

Pregnancy, with threatening abortion, may be the cause of pain. Horseback, or rough riding, of any kind, followed with pain, is suggestive of calculus. Repeated abdominal pain due to painful peristalsis in the uterine, fallopian, biliary, ureteral, urethral, intestinal, spermatic, and other ducts, is not often recognized. If it could be, many mistakes would be overcome.

I have seen neuralgia of the spermatic vessels diagnosed appendicitis, and, after the appendix was removed, the pain that came back was diagnosed adhesions. It is no uncommon thing to have the appendix removed, then the right ovary, then operations for adhesions, then operation on the gall bladder, because of genital affections; namely, spermatorrhea, ovarian irritation, endometritis with stenosis of the neck of the womb (a very common cause of abdominal pain in nulliparous women), or urethral tenesmus.

There are many gall bladder operations because of painful peristalsis caused by gastro-intestinal indigestion, and irritation and inflammation of the viscera. After hernial operations, pain may continue because of adhesive bands. I know of one death caused by obstruction from adhesions at the internal ring of partial hernia.

Women of menstrual age should be examined for affections of the genito-reproductive organs.

Sudden abdominal pain in anemic young women should cause the physician to suspect perforating ulcer of the stomach or duodenum. In children, abdominal pain usually means gastro-intestinal derangement, such as gastritis, enteritis, twist, invagination, colitis, appendicitis.

In those past middle life, particularly in old age, cancer is the common cause of abdominal pain

The character of pain should be noticed. In perforation the character of the pain is the same in all viscera.

In invagination the pain is paroxysmal and periodic, due to peristalsis. Strangulation is generally intense and periodic, due to peristalsis; later there is aching and dragging. In appendicitis the pain comes on suddenly, and is intense in fulminating cases. There is a type which comes on slowly, and is easily controlled by fasting and quiet. A sharp, lancinating pain, continuous in character, is possibly due to perforation. A continuous, agonizing pain spells diffuse peritonitis, and means death unless immediately relieved by operation and drainage.

Pain caused by obstructed peristalsis is periodic, and will subside if no food or drink be given. In appendicitis the patient will remain comfortable, but in obstruction from a twist or invagination, discomfort and pain will not leave, the pulse will run high, and the face becomes anxious.

When a stone is passing, the pain will be periodic. When it comes on, it will be excruciating. Between agonies (which means between the rhythms of peristalsis) there remains a feeling of soreness--a tolerable aching, which, contrasted with the greater pain, is insignificant, but which would in time become intolerable, if full relief could not be found.

Pain from stone lodged in any canal--appendix, enteron (intestine), colon, biliary, pelvis of the kidney, ureter, urethra, etc.--is very excruciating, and food increases the pain,

Gastric ulcer is inclined to give out pain when chilled with cold drinks or ice cream. When it is fully developed, pain may be caused by the ingestion of solid foods.

In coming to conclusions regarding an affection, pain is a guide; hence it should never be suppressed by drugs, nor ignored or disputed.

Pain on palpation may be caused from radiation; hence the hands of the physician should be warm, and the temperature of the room should be warm. It should not be forgotten that the personality of a physician may be such as to cause pain. Such surgeons find much excuse for operating.

Facial expression, position of body, tension of muscles, all may manifest pain.

On account of the number of organs and the complexity of the nerve supply, the great variety of functions, etc., the abdomen sends out the greatest variety of pains.

The gastric crisis of locomotor ataxia presents paroxysmal vomitings and severe gastric pain, lasting several hours or several days, which may recur after days or weeks. Other symptoms of tabes dorsalis will clear up the diagnosis, and save a foolish and unnecessary operation for some abdominal affection which happens to fit the particular insanity of the surgeon called. If there were not such senseless operations performed, I should not make such disagreeable statements.

Nephritic crisis (kidney crisis) is caused by a dislocated kidney. The nerves and blood vessels are twisted more or less, and the ureter is flexed. This axial rotation may cause serious strangulation. Where the right kidney is misplaced, the symptoms are nausea, vomiting, pain in the back and thigh; excessive or defective secretion in the bowels, causing indigestion and similar disorders in the renal secretions.

Gas in the bowels frequently causes pain. The gas produces the pain by stretching the peritoneal covering.

Pain at a given point does not always signify that the cause of the pain is located in that region. Absence of pain in regions is often significant,

Pain at the navel is not diagnostic; yet it often signifies appendicular, fallopian-tube, or invagination affections, cancer of the stomach, etc.

If, when pressing the abdominal wall, there is one spot that gives out pain or discomfort, and no other point is sensitive, it is reasonable to believe that the disease is located. When the whole abdomen is sensitive, the pulse is quick, and there is an anxious expression of the face, the disease is peritonitis. If the patient is bright and all attention, and the symptoms appear within a week after confinement, the disease is puerperal peritonitis. When there is no fever, and the pulse does not vary very far from the normal, yet the patient complains at every touch. and the bowels are disturbed with gas, the case is that of trauma, or stretching of the peritoneal sheet, which is made sensitive by toxin poisoning from gastro-intestinal decomposition. This is an affection that is turned aside by a class of physicians as hysteria. Because the patient complains of pressure on one part as much as on another, the doctor decides that there is nothing the matter--just hysteria. Another class will diagnose the case according to the delusion that happens to possess them at the time of examination. It may be fibroid tumor (such cases are liable to have a fibroid); and, of course, the tumor is the cause, and it must be removed. If the doctor's delusion runs to the appendix, gall bladder, floating kidney, enteroptosis, displacement or prolapsus of the womb, etc., etc., the operation selected will be in keeping with his delusion. Is this statement of mine a delusion? I wish it were. These delusions are created and propagated at medical societies. Two or three leading men force their delusions on the rank and file. Medical societies should be suppressed; for they are a menace to society. For a few months after the A. M. A. meetings there is an epidemic of operations, ninety to ninety-five per cent of which are inexcusable, except for the delusions inoculated at the last meeting of the association. Of course, this statement will be pooh-poohed by those whom it fits; but if proof of insanity is desired, surely the inmates of an insane asylum should not be consulted regarding their delusion.

An accumulation of fluid in the abdomen will, on palpation, show flatness at the most dependent point, and resonance at the highest points; whereas an ovarian tumor will show the reverse. In a vaginal examination, with a finger on the vaginal roof and the hand upon the abdomen, the transmitted movements will be felt if there is a tumor; if dropsy, there will be no sensation transmitted. Advanced pregnancy should not be mistaken for tumor or dropsy; yet this mistake has been made by "first class" surgeons.

Arterial pulsations in the epigastric (stomach) region are seldom due to aneurism. To keep from making such an awkward mistake, patients with tension and severe throbbing of the abdominal aorta should be examined daily, and kept on a fast for a few days. If the condition is high blood pressure, the throbbing will soon pass away, and will not return unless overeating or improper eating be indulged in, or sensuality in some form be practiced. The symptom is often found in habitual coffee drinkers.

Obscurity of Abdominal Symptoms.--Reflex pains often get physicians into trouble. Operations on the abdomen have been performed by wise physicians for reflex pains in pneumonia; the symptoms being pain, tenderness, gas distention, temperature, frequent respiration, but lacking the pulse of peritonitis. Extensive intercostal neuralgia may be mistaken for abdominal affection; also for lung disease. The intercostal nerves end in the abdominal wall.

Abscess in the wall of the abdomen may be mistaken for peritoneal disease. More than forty years ago a case of abscess of the abdominal wall came into my hands, after several good physicians had named the disease peritonitis and given an unfavorable prognosis.

Volvulus (Twist in the Bowels).--This is a rare obstruction, constituting about one-fortieth of an intestinal obstructions. Men are said to have this affection oftener than women. The cause is probably an extra-wide mesentery. Invagination is probably made possible from the same cause.

Volvulus symptoms are tympanitis; great peristatic pain; inability to have an action from the bowels after the segment below the obstruction is emptied with enemas.

At first the pain is periodic. It gradually increases and becomes more constant. If no food is given from the start, pain will not be so marked. Vomiting will be a more or less constant symptom. Symptoms must vary to agree with the temperament and excitability of the patient.

The disease is so rare that a diagnosis will be made after an operation. Any case presenting symptoms of obstruction with symptoms of profound prostration--giving the appearance of being on the verge of collapse--should be opened up, and whatever is found should be righted as quickly as possible. Such cases do not stand the shock of prolonged operations well.

Robinson declared that the chief etiology of volvulus sigmoid (this furnishes about sixty per cent of the locations) is elongated sigmoid, possessing a narrow foot, accompanied by inflammation caused by vigorous action of the left psoas muscle, which injures the sigmoid, inducing migration of germs or their products through the coats of the bowels, inciting plastic peritonitis. Adhesions follow, favoring the development of this mechanical obstruction. The cause back of all causes is intestinal decomposition, with infection by toxins. Man pays and pays for lack of control in eating--for food drunkenness.

Volvulus occurs in subjects over forty years of age. Marked tympanitis, or meteorism, or gas distention, is first located in the left iliac fossa. This may be remembered as a small, but not dependable, diagnostic point.

Liver

Hypertrophy of the Liver.--A fullness is observed under the ribs on the right side. Tumefaction of the spleen co-exists. When it does, there is tumefaction of the upper half of the abdomen. This is especially noticeable when the patient stands. The liver is more developed in children than in adults.

To determine the amount of enlargement, place the patient on his back with legs flexed, and begin the palpation and percussion on the lower abdomen, gradually going up toward the ribs. In enlargement the

dull, flat sound will be found anywhere below the ribs, depending upon the amount of enlargement. Under normal conditions the flat sound begins two fingers' breadth below the nipple, and terminates at the costal border (border of the ribs).

The liver is prolapsed when the flatness is below the points mentioned.

The border of the upper line of the liver is on a line drawn from the right border of the sternum at the level of the sixth costal cartilage. It then follows the sixth rib to the right mammary line, and reaches the seventh rib on the axillary line, the ninth on the scapular line, and ends, at the spine, at the eleventh rib. Strong percussion is needed above to bring out the dullness, but light percussion is sufficient below.

Normally the lower limit of the liver may be confounded with kidney flatness at the axillary or the scapular line. The liver extends from the eleventh rib, following the costal border midway between the ensiform cartilage and the umbilicus, and terminates in the left side at the level of the apex of the heart. Liver flatness is diminished when there is emphysema of the lungs, gas distention of the stomach or bowels, or distention from ascitic effusion.

Atrophy of the liver occurs in cirrhosis and yellow atrophy.

General hypertrophy occurs in alcoholism, and the enlargements occasioned by liver and heart derangement brought on from excessive eating of starch and sweets,

(f) Urinary Apparatus

Lumbar pain is an accompaniment of all derangements of the pelvic viscera. The lay mind associates backache with kidney disease; but backache may mean rheumatism, constipation, piles, fissure, prolapsus of the womb, endometritis or endocervicitis, enlarged prostate, stricture of the urethra, etc. Too much attention is given to lumbar pain or backache in connection with kidney affections. Indeed, severe kidney disease may be developed without much discomfort in the back.

In nervous diseases, pain in the bladder is felt in urinating, especially at the expulsion of the last few drops. In urethral irritation it is the first urine that causes discomfort. Hysterical women are very prone to have urethral irritation. Hysterio-cysto-neurotics are usually subjected to so many operations that they are ruined, but never cured.

In this connection I wish to chronicle an observation that I have made: In all cases of tabes dorsalis I have found granular inflammation and great sensitiveness of the urethral mucous membrane, and almost invariably stricture. I have made a practice of using the olive-tipped sound and rubbing away the granulations, and at the same time dilating any stricture that may be present. I have found this treatment a valuable adjunct to the general treatment.

Of all influences leading to the development of tabes, venery stands first. Hence a successful treatment of tabes dorsalis must keep in view the need of remedying the sexual neurosis.

In locomotor ataxia, and in some cases of arteriosclerosis, desire for urinating is lost. The subject must use his reason and attend to this function at stated interval. The urine is sometimes voided without consciousness, and unless the subject sees it pass he will not know it.

Frequent desire to urinate may be wholly due to nervousness; or it may be due to stricture, granular inflammation of the urethra, irritation and inflammation of the bladder, gravel or stone in the bladder, polyuria (hypersecretion of urine) due to drinking overmuch, or eating sloppy foods--soups.

In urethral stricture the stream is often divided, the length and volume of the stream is diminished, and a few drops will be passed after leaving the urinal. This is also true of prostatic enlargement. When the urine stops suddenly, it indicates stone in the bladder. Pain at the end of the penis is another sign of stone in the bladder.

Retention of urine is where the urine is held in the bladder without power to empty it. This demands

catheterization. Partial retention is the habit of carrying residual urine--a small or large amount may be retained after all is passed that can be passed. This in time causes a filthy bladder, and consequently bladder disease. Catheterization and washing out the bladder with tepid water will give great relief. Enlarged prostate, stone, and partial paralysis are the causes of this affection.

Anuria is suppression of secretion, and the bladder is found empty.

Examination of Urine (see tests in medical dictionary).--Urine varies in quantity. When below 1,200 grams (38 ounces), oliguria (scanty urine) is said to exist; when above 1,500 grams (46 ounces), polyuria exists.

It is necessary to note the amount of urine voided in twenty-four hours. Make a note of the time of urinating, and throw the first urine away. Then save all voided, including that which is passed at the close of the last hour in twenty-four. If there are about thirty-eight to forty ounces, with no symptoms of kidney derangement, such as sugar or albumin, all is well.

Note the color, transparency, consistency, odor, filaments (threadlike appearances), substances in suspension, sediments, and always the reaction and density.

When the urine is turbid, its cause must be known. This condition is due to the presence in it of mucous, pus, uric acid, urates, phosphates, etc. Mucous precipitates by adding acid; pus forms a curdle by adding ammonia. Uric acid and urates are dissolved by heat; phosphates become soluble by adding acetic acid.

The cause for change in color should be determined. A reddish or brown appearance is caused by the presence of blood. However, certain drugs cause this appearance (coal-tar remedies in certain subjects). The microscope reveals the red corpuscles. Hemoglobinuria, requires the spectroscope; also urobilinuria. An intense color indicates bile pigment. (See test table in medical dictionary.)

The most important tests are for albumin and sugar. A simple test for laymen to determine the presence of albumin is to boil urine in a test tube, or a spoon if a tube cannot be procured. If the urine becomes milky or cloudy, add a few drops of lemon juice. If the urine clears up at once, there is no albumin. When suspicious of albumin, the patient should consult his physician and have the urine thoroughly examined.

Normal urine has a peculiar, well-known odor. When urine gives out an ammoniacal odor (smells of ammonia), it indicates bladder derangement, retention of urine, or possibly it may come from eating raw vegetables. Fecal odor indicates a vesico-rectal fistula--an opening from the bladder into the bowels.

In diabetes the urine, like the breath, may have a sharp, pungent, metallic, or ether smell. This odor is an unfavorable prognostic sign. It indicates a threatening diacetemic coma (diacetic acid in the blood). When this odor is present, the urine should be tested with ferric chloride, which gives off a burgundy-red color.

In dyspeptic coma, related to diaceturia (diabetes), diacetic poisoning, the principal symptoms are: a sharp epigastric plain (stomach pain); an increasing wandering or beclouded state of the mind, which gradually terminates in coma; then comes the final state, which is marked by a characteristic breathing, described by Kussmaul as follows: "The breathing is divided into four stages; namely, a brisk inspiration, a pause, a brisk expiration, and a pause," This syndrome (aggregate symptoms) is liable to be precipitated by anything that will produce fatigue. A journey is liable to precipitate the symptoms. I have noted that diabetic subjects, on coming to Denver from low altitudes, are liable to do themselves harm through their desire for sight-seeing--they are inclined to walk overmuch and overdo in many ways.

Before the ending referred to develops, there may be detected a peculiar odor of the breath and urine; namely, a strong ether odor, in some cases very pungent. This odor from the breath of diabetics is not characteristic; for I have met with it in children suffering an attack of gastritis, also in fasting to overcome various morbid affections. This peculiar breath develops in those suffering great anger, and from other excessive emotions.

It is said this odor is caused by the development of acetone in the blood. Rheumatism--the arthritis-deformans type--is especially marked by the development of acetone (vinegar) in the blood.

It is thought that diabetes is more probably caused by the development in the blood of a ptomain. I have found that gastro-intestinal decomposition is invariably a precursor of diabetes. When digestion is reduced by dietetic abuse, and the nerve energy is broken because of enervating habits, power to digest the carbohydrate foods is lost, when they are ingested, acetous fermentation must take place. Just what syndrome is set up will depend upon the physical state and the personality of the patient. A diabetes may develop; some form of rheumatism may be the manifestation; insanity or crime may be the ultimate result of the morbid process.

Where this state of the blood or urine is suspected, the following test should be made: Place urine in a test tube. Allow a drop or two of perchloride of iron to trickle down one side of the test tube. The iron, being heavier than the urine, falls to the bottom of the tube. If there is sugar present--if there is ethyl-diacetic acid present--the perchlorid turns the urine brownish. This coloring is not characteristic, for the same color can be obtained if the patient has taken antipyrin. The use of the drug should be suspended until the sugar test is made, and then the drug should be abandoned by those who would like to get well. Anything that depresses the body will prevent recovery.

Turpentine, onions, and asparagus impart a disagreeable odor to normal urine.

The consistency of urine varies. Sometimes it is thick, and viscid. It may froth easily. This should lead to examination for albumin. If a spot of urine on the clothes attracts flies, sugar should be suspected--which, of course, suggests diabetes.

The color of urine varies. It may be very light-colored in diabetes, inflammation of the kidneys (interstitial nephritis), nervous polyuria, and at crises--which latter means at the time when symptoms of disease decline.

The color is deep when disease is intense; for the excretions are scanty. The urine then is a reddish or brown color, due to bile. When the urine is very red, blood should be suspected. If in women, menstrual discharge may account for it. If the blood is from the urethra, it will pass when not voiding urine. When from the kidneys, the blood is more uniformly mixed with the urine. Carbolic acid imparts to urine a blackish-brown color; rhubarb, logwood, and senna color the urine red; santonin gives it a greenish yellow appearance.

Chyluria.--Instead of urine being clear, it becomes turbid when containing chyle (emulsified fat) or pus.

An excessive flow of urine--a temporary polyuria--may be caused by eating freely of vegetables, soup, fruit, and salads. Besides, there may be a slight urethral and bladder irritation, produced by the excessive alkaline intake. Coffee and oranges, or other fresh fruit eaten for breakfast, exclusive of other food, will often cause an excessive flow of urine. Watermelon causes an extra secretion of urine, and should not be eaten by those of a constipated habit, because it diverts fluid elimination by the kidneys. Any foods inclined to stimulate the kidneys to extra action should not be eaten by those with an established constipation habit. Thirst should be endured; for it is a demand for fluid in the gastro-intestinal canal, and unless supplied by drinking or using an excess of fluid furnishing foods, the eliminatng organs will yield to severe demand (thirst), and the necessary amount of fluid to supply the thirst will be forthcoming from the blood for normal secretion, and excretion will be established by the bowels; which means that the vicarious work of the kidneys will be given up when elimination by the bowels has been reestablished.

Scanty secretion of urine--anuria--may be caused by diarrhea or obesity. In the former case the bowels have taken up vicarious work for the kidneys. In the latter case the tissues of the body take the place of a lavatory. In unmasked language, the victim of this physical state urinates into his own tissues.

One of the very necessary states of the body for maintaining health is the proper disposition of water in the system. When constipation exists as an established habit, swilling the stomach with water fails of accomplishing the desired end--causing the bowels to act. On the contrary, it waterlogs digestion, causing fermentation, diluting the enzymes, and flushing them out of the body by way of the kidneys, leaving the bowels as dry as Sahara.

Bladder.--When the bladder is distended, a hand laid over it will feet a globular swelling, which gives out a dull sound on percussion.

(g) Genital Organs

Sex power should be examined into. At the beginning of nervous diseases the power is often increased, but it diminishes as the disease advances. Anaphrodisia is viewed as unfavorable in diabetes, Abuse of this function hastens old age and old-age diseases. A natural lack of this power indicates inefficiency, lack of ambition, and low resistance.

Masculinity is necessary to accomplish work. Sex neurosis must not be mistaken for power. Lasciviousness means mental weakness and lack of discipline. Drunkenness cannot be said to be thirst or a desire for water.

Empire-builders and great men are those who use their power for self- and world-building and not for self- and world-destruction.

Disease from sexual abuse brings on paranoia sexualis or primary monomania--a delusional insanity confined to the sex subject. 'Those in this state are given over to physical and mental abandonment, to satyriasis (excessive venereal desire). In women the disease is named nymphomania (excessive or furious desire); other names are hysterio-mania and furor uterinus. As the name implies, there is an affection of the womb and ovaries, bringing on the sex excitement.

The mental state of the sex neurotic is beyond the influence of moral suasion. Physical and mental training may overcome the disease. Local diseases must be corrected. Urethral irritations, inflammations, and strictures must be overcome; uterine irritations, hyperemia, inflammations, enlargements, and ovarian affections must be corrected. Constipation should be attended to first, and morbid appetities must be corrected. Candy, cake, and ice cream eating is injurious. The mental state must receive special attention; for all derangements of a sex nature are more mental than physical.

Lasciviousness is a bad mental habit which is easily. enough overcome before the habit is fully formed. But like all bad habits, it requires all the power, and in man; cases more than the power, which the sex neurotics have, to throw off the disease.

Self-abuse appears to be universal; but the better class abandon the disgusting habit early in life. The harm comes from lost self-respect and the curtailment of efficiency. Men are handicapped in every race in life. The silver-tongued orator barters brain power for sex pleasure, and forty-five years of age finds him no more interesting than he was at twenty-five. Man, to be interesting, must continue to grow as long as he lives. Only the sensualist retires and is satisfied with half-achievements.

When the sex power is utilized in self-development, man never ceases to grow mentally. This is the reward of self-control. All men who have made history have done things-have actually lifted themselves by their own mental boot-straps. They have been strongly sexed, and have not dissipated their energies lasciviously.

Women who allow themselves to develop lasciviousness lose their color early. They become nervous, irritable, and shrewish. Old age comes too soon. They may attract by giving their personal appearance much attention; but their aura sexualis attracts satyrs who are lust-drunk, rather than those who are looking for loyal friends. A nymphomaniac--a woman whose psychology is pronouncedly hysterio-maniacal--cannot find satisfaction in the love of one man. As a rule, there is one for whom she would lay down her life, but loyality is not in her make-up. Promiscuity is one of the features of monomania sexualis. Voluptuaries, if ever cured, must eat properly, take the proper care of the skin, and be very busy in a work that will occupy every hour. lf such people have one idle hour, it will be spent in disloyalty to self, friends, and family in unlicensed liberties.

A man may have but one bad habit, and that habit in time will ruin him. There is but one safe life to live for man or woman--namely: be busy, cleanly, and constantly on guard in resisting the formation of bad habits; for everyone who builds bad habits in time is mastered by them.

Fortunate, indeed, is the one who is mastered by good habits.

Children should be examined for tight prepuce. Circumcision is seldom necessary. Simple dilation with dressing forceps is sufficient. Then, if there is adhesion, the foreskin may be rubbed or pushed back.

Little girls often are troubled with leucorrhea. The cause is acid poisoning. The acid comes from gastrointestinal fermentation. The treatment is cleanliness and proper diet.

In examining adult males, scars on the penis point to soft chancre. The hard chancre does not leave a mark, unless it has been subjected to severe cauterization, which is unnecessary in either form of chancre.

Eruptions, eczema, herpes, syphilitic papules, etc., are often found. Too often herpes will be treated for syphilis by someone who is either ignorant or knavish. The greatest harm to the victim of such treatment is the developing of syphilitic mania--syphilophobia.

Varicocele (enlarged veins in the scrotum) is known by the sensation of a bag of worms. Surgery for this derangement is malpractice, the same as operating to remove varicose veins of the legs. Venereal abuse, self-abuse, lasciviousness, are the causes, along with digestive abuse. Eating in a way to generate toxin poisoning is a live second to venereal abuse. The cure must be the correcting of bad habits of mind, body, and eating. All cases can be cured, if properly treated early.

Hernia is easily diagnosed. There is a history of a small tumor that comes on standing and coughing, and goes away on lying down.

Enlarged prostate may be discovered by introducing a finger into the rectum. About three inches, or from two to four inches, anterior, a round, hard, tumor-like body will be felt. This is the prostate gland. Much injury is done this organ by massaging it--a treatment that is quite a fad among a certain class of medical men. This treatment is often as far-fetched as giving digitalis or strychnin for an already jaded heart, or morphine for a restlessness brought on from oxygen starvation in pneumonia, or for precordial oppression when the heart is enervated, or for headache due to hyperemia of the brain. There is a difference in the results, however. The drugs used in such haphazard fashion often cause death, while the massage cultivates an enlargement of the prostate; or perhaps I should say that the massage becomes an ally of venery, coffee, tea, alcoholics, tobacco, sugar, meat, and starch in hastening a senile tendency.

Manipulating the prostate is one of hundreds of nonsensical professional inanities. The average human being is inexcusably gullible toward the title-decorated profession; and the professions, being made up of the same common clay, do not hesitate to park their wants on a common so succulent.

The mass of humanity--the high, the low, the rich, the poor--nearly all are educated to stand for useless professional service amounts to--are superfluous and have in palliating or extirpating symptoms or effects (affections)--and this is what ninety per cent of present-day professional service amount to--are superfluous and have no excuse, except that the people are unwittingly educated into an officious impertinence which would be criminal if the acts were not covered by the ethics of social custom--which is only another name for the dogmatism of convention.

There is but one other as tragical parallel in civilized life, and that is war. The ethics of war allows those connected with it to commit crimes so impossible and atrocious that hell weeps at their enormity.

Custom is a refuge for inhumanity; and in the matter of healing, the sins committed in the name of professional science, charity, humanity, and skill--expert service--are equaled only by our present World War.

Such a small affair as massaging the prostate gland is professional impertinence practiced by those who look enviously on those intrusted with larger impertinences, such as removing the appendix or ovaries, operating on the gall bladder, and all other internal organs, with no more excuse for the crime than that professional ethics and human gullibility permit it.

Impotency may be a symptom of nerve-center derangement, excessive venery, auto-suggestion, or

mental worry.

Priapism is a sex neurosis brought on from abuse of the grand passion, eating overstimulating foods, and "going the pace" until the body is desperately enervated. It is a sign of sex exhaustion.

Only the olive-tipped sounds are fit for diagnosing and successfully treating stricture.

The examination of women should begin with an inquiry into the function of menstruation--its regularity, if painful, quantity, etc. Painful menstruation may be due to inflammation of the mucous membrane--catarrh--flexions, versions, ovarian engorgements. The primary cause of all uterine and ovarian derangements in young or single women is infection of the pelvic lymphatics from intestinal putrefaction. Correcting the dietary, mode of living, and care of the body will soon correct the worst forms of pelvic affections of single women. In married women--especially those who were married suffering from pelvic-lymphatic infection--all sorts of evils will follow confinements. In the first place, labor will be longer and more painful than it should be; injuries will not heal kindly; slight septic infections will be experienced, which will cause a perversion of the milk, followed by sick children; and mothers Will be left with enlarged wombs, with an impetus in the line for building uterine or ovarian tumors, and, in time, with chronic toxin poisoning and some form of cancer.

Uterine hemorrhages in virgin women may be due to ovarian and uterine engorgement, brought on from lymphatic infection, lascivious habits, idleness, reading of trashy literature, and picture show suggestions,

Hemorrhage in married women is due to three causes, aside from puerperal hemorrhage; namely miscarriage or abortion, submucous fibroid, or cancer.

Leucorrhea.--A slight discharge before and after menstruation does not mean anything except an acidity from overeating or eating improperly--eating candy or too much sweets.

A thin, catarrhal, albuminous discharge, greenish, yellowish, or white, means catarrh.

A muco-purulent and copious discharge is indicative of venereal disease. A fetid odor may mean an incomplete abortion, or cancer.

Abortion Habit.--It is generally thought that repeated abortions are due to syphilis. I have not found this true. I have found that there are temperaments that establish habits very easily. Such people, when they meet with one miscarriage, are liable to have others follow. Correcting life and habits will cure.

Enlargement of the lymphatic glands in the groin (adenopathy) often indicates an ulcer or chancre in the vulva. Where there is enlargement of these glands, and they feel like bird- and buckshot under the skin, this condition indicates toxin infection from putrefaction in the bowels. This is true of men as well as women. An infection with syphilis under these conditions is favorable, with the usual treatment, for developing a very formidable type of disease. These glands enlarge in cancer of the womb or rectum.

Inflammation and suppuration of the glands of Bartholin, situated on either side of the lower part of the vagina, indicate gonorrheal infection. Unless such cases are treated carefully, systemic infection may spread, break down the health, and cause death.

(h) The Nervous System

The facies (appearance) of paralysis is quite pronounced, and understandable to those acquainted with the various expressions.

Paralysis and its deformities are many. Any part of the nervous system may be involved. The muscles and organs to which the nerves are distributed must become atrophied, and the opposing muscles are rendered rigid and spasmodic. The intellect must be affected, and the countenance becomes an index.

Action or motility must be observed.

Motion--voluntary motion--is lost. The amount of paralysis must be in keeping with the amount of lost power.

Monoplegia is where one limb is paralyzed. **Hemiplegia** is where one arm and one leg are involved. Where the face of one side and the limb of the opposite side are involved the name of **crossed** or **alternate paralysis** is given.

When the two upper or two lower limbs (which is rare) are affected, the name of **paraplegia** is given. Where the paralysis is confined to less than one limb, or to a part of the extensor, or part of the contractor, muscles of one limb, the paralysis is named **partial paralysis.**

Where the limb is entirely paralyzed, it is readily recognized; for it is devoid of all motion and cannot defend itself at all. When raised, it falls as dead, if allowed, if burned, it cannot get away from the torture.

Where the paralysis is of a muscle or two, the auxiliary and opposing muscles undertake to do vicarious work. Where this condition is pronounced, deformity must develop; for the muscles which are doing extra work are unduly developed, and those which are paralyzed go into a state of atrophy. The two extremes in a limb cause the limb to be deformed. If the strengthened muscles are extensors, the limb is forcibly extended, and vice versa.

A paralyzed side of the face is smooth. This contrasts very greatly with the opposite side, which is overdrawn and contracted because of losing the counterpoising effect of the paralyzed opposite side.

If the patient attempts to whistle, spit, or put out the tongue, the movements mark the change that has taken place. The movements lack uniformity.

The orbicularis palpebrarum (the muscle that closes the eyelids) is paralyzed when the cause is peripheral (external); but when the lesion is central, this muscle is left intact. When this muscle is paralyzed, the eye remains open, and the dust settling in it is a source of much annoyance as well as discomfort.

Where muscles are relaxed, the paralysis is said to be flabby; the opposite is contracture.

Where there is contracture or rigidity of muscles, the upper extremity hugs the side, while the lower extremity extends. The arms stick to the side; the forearm is bent at a right angle; the hand is flexed and pronated (palm down). The toes of the extended leg are flexed toward the sole.

Contractures may be hysterical or functional; but often they are due to organic change, caused by an inflammatory state brought on from toxin poisoning or a traumatism (injury). Atrophy of the brain, spinal cord, or membranes accompanies or causes paralysis. All permanent lesions end in contracture. The reason for this, as stated before, is overdevelopment of opposing muscles and atrophy of the paralyzed muscles. A time comes, however, when there will be a wasting of even the muscles not paralyzed, because they become so contracted that they have no other movement than that of contraction. The effect is that of inactivity, nutrition fails and the whole limb withers.

Much of this sort of deformity follows infantile paralysis. The disease is central. Where the paralysis is of vital organs, the children die. Where the paralysis is of one extremity, complete, there will be no contractures, hence no deformity. Where the paralysis is partial of one limb, or partial in two limbs, there must be contractures, hence deformities.

Much unnecessary financial burden is placed on the parents of paralyzed children. In many instances the burden is too great, when the end is, or should be, known to the medical adviser. The end of all treatment must be contracture, which means deformity. Possibly the cutting of tendons to correct a very inconvenient or unsightly deformity may be advisable; but if the object is a cure, or holding out a hope of cure, it is cruel to parents to give hope where there is none to be given.

All lesions sooner or later end in contracture, and mean degeneration. Of brain diseases it may be well to mention: inflammation, hydrocephalus, tumors, hemorrhages, traumatism (injury), degeneration,

medullary diseases (diseases of the white substance of the brain), myelitis, sclerosis, tabes, and meningitis; for the latter disease has contractures among its symptoms. Indeed, it is reasonable to believe that infantile paralysis is cerebro-spinal meningitis.

Gait.--Where the contracture is not too great to prevent locomotion, the following symptoms appear: In flabby hemiplegia, or hysteria, the leg drags (helcopode). The sole of the foot drags or sweeps the ground; or the movement may be circular (helicopode), and the foot comes to the ground on the toes.

In flabby paraplegia the step is short, the legs are apart, and each limb is alternately dragged without clearing the ground. The hips incline and rotate while walking.

Paraplegia with contracture is marked by short and slow steps. It is difficult to lift the foot, and only the toes touch the ground. There is a tendency for the feet to cross each other; the knees touch, and the thighs are held close together. The body reels as in balancing. This gait is called "cross-legged progression."

In paralysis agitans there is the added feature of an irresistible propulsion, which gives the patient the appearance of falling forward. Those unacquainted with the gait will have a feeling that the patient is putting on, or otherwise he surely must fall; yet such patients will walk for blocks, pitching forward as though they must fall.

"Steppage" is the gait of tabes dorsalis. Paralysis of the extensor muscles, especially of the anterior and external muscles, of the leg allows the toes to drop. This necessitates the lifting of the leg high (a stringhalt lift), so as to swing the foot which hangs, and the toes strike the ground first.

There is a pseudo-tabes of alcoholic, lead, and other toxin poisoning. Its gait is different from that of locomotor ataxia. The latter gait is not from paralysis; there is lost power for coordination (directing movements). When such patients close their eyes, or undertake to walk in a dark room, they cannot take a step.

It requires a close observer to detect the early symptoms. In the early stages the patient is awkward in turning back abruptly or standing on one foot.

Combined sclerosis--namely, posterior and anterior lateral hardening of the cord-is known by spasmodic rigidity of the extremities and a tabes--spasmodic gait--an exaggerated tabes gait.

There is another incoordinate gait of mixed tabes dorsalis--namely, that of the drunk man--in which the patient straggles and strays from a straight course. He sways and staggers, regains his equilibrium, to again lose it and then reestablish it, etc. In this case the patient holds his arms extended in the manner of balancing. This gait should not be confounded with chorea.

Convulsions.--Convulsions are readily recognized. The symptoms are characterized by a series of abrupt, involuntary contractions, which at times last long enough to keep the affected part in a set position for a while. These are named tonic convulsions. At other times the contractures follow each other rapidly--an intermittent contraction. These are called clonic convulsions.

Convulsions are general or local. In children, convulsions are common as a result of toxin poisoning. The earliest cause of convulsions in childhood occurs in the first month, and sometimes the first week, of life--namely, septic poisoning. The mother receives a laceration, or a bruising, which sloughs off, allowing absorption of more or less septic material. The only symptoms experienced by the mother are a slow getting-up, a slight fever, pallor (septicemia), and slowness in returning to normal. The septic state may be due to imperfect womb drainage. Rarely septic poisoning may be produced by a putrescent cord resting on an excoriated surface at the umbilicus. The convulsions from septic poisoning range from a slight one or more, to seizures repeated every twenty to thirty minutes for days.

Several years ago I was called to see a child, two weeks old, who, I was told, had been convulsing for eleven days. I watched it for an hour, and it had four during the hour. The spasms were short, not lasting more than two minutes. Recovery followed by proscribing the mother's milk. Another case comes to mind. This child, a bright boy a week old, had severe convulsions for twenty-four hours, which put his mentality

in statu quo. He lived an idiot, and died at twenty-two. Now I am told that his mother is dying of cancer of the womb, twenty-five years after the birth of that boy--undoubtedly due to lack of proper attention to the injury received at the birth of that child. This woman was a Christian Scientist at the birth of her child, and is yet, so far as I know. Nature moves on ideally or not, as she must; faith, backed by intelligence, ends well, but, when backed by fanaticism, it ends in disaster and ruin.

Convulsions in children, coming from irritation in the bowels from fermentation, and toxic poisoning from decomposition, are of daily occurrence. Convulsions starting in this way come and go. The child may outgrow them--whatever that means; but the epilepsy of after-life takes its origin in childhood convulsions.

Jacksonian epilepsy is a partial or sympathetic convulsion confined to one-half of the body. The herniplegic type, which belongs to the epileptic type, involves progressively the two limbs of one side. This type of convulsion is not accompained by loss of consciousness at first or in the beginning of the seizure. The patients watch their own paroxysms. This form of epilepsy indicates a lesion of the brain on the opposite side.

There are abrupt, involuntary contractions of one or several muscles of the face. The cause is neuralgia; and the neuralgia is caused by toxin--coffee, tea, tobacco, alcoholics, or gastro-intestinal decomposition.

Trembling or Tremors.--A motor disturbance. There are three varieties: (1) rapid rhythm-eight to twelve per second; (2) that having from five to five and a half to seven and a half per second; (3) slow, having four to five to the second.

One variety stops during voluntary movements (paralysis agitans); the other begins with the movements and grows more violent as the end approaches (multiple sclerosis). Then there is a type confined to one limb--the hemiplegic type.

Chorea belongs to children's diseases. It is an indication of bad care--lack of poise. Rest and correcting the manner of living, is the proper treatment.

F. NOSOLOGY

Nosology is naming and classifying disease; but as there is but one disease--namely, **Toxin Poisoning**--the names given to the organs affected are really nothing more than naming and classifying affections. Real disease may be likened to a string or cord on which affections are strung as beads. Break the cord, and the beads are lost--correct the toxin base, and affections must scatter. (See "Crises.")

II. Diagnosis

Diagnosis is a mystifying subject, because, unless great care is used, affections will be mistaken for primary disease, and treated as such until the organ takes on such pathologic changes as to become organically changed. For example, irritation of the stomach, kept up long enough, ends in cancer.

Inasmuch as mistakes of this kind are being made all the time, and not alone by mediocre professional men, too much caution on this subject cannot be preached.

When tumors are removed without even a thought of their cause, it is time to get busy on cause.

When gallstones are removed, when the appendix and ovaries are removed, without a thought being given to the cause of the derangements, we think of lack of etiological efficiency in high places.

Bacteriology is to blame for a great deal of shiftless laziness on the part of average physicians.

There are several orders of phenomena to be noticed in every disease; namely, direct cause, and reactory effects. A morbific cause starts up a physical or mental derangement; then follow organic affections. For example: Excessive eating brings on indigestion; indigestion causes gas distention of stomach and bowels. The pressure from gas on the diaphragm causes thoracic symptoms, such as dyspnea, oppression, heart

palpitation; eructating gas causes irritation of the throat. In time a sensitive throat and catarrh, enlarged tonsils, adenoids, and all the diseases peculiar to the mucous membrane of the nose and throat, will in turn be added.

The gas distention kept up by heavy eating causes distention in the lower bowels causes displacement of the stomach and bowels, and constipation. Constipation causes colitis, typhlitis, appendicitis, and inflammation of the lymphatic glands from absorption of putrefaction. Gas distension in the lower bowels causes displacement of the pelvic organs, interfering with the pelvic circulation, causing prolapsus, tumors, etc. The bladder also suffers from pressure; and in males this pressure produces irritation of the neck of the bladder and prostatic enlargement. The rectum becomes involved; piles, proctitis, and prolapsus develop. While these and many minor and obscure affections are in process of development, the nervous system is being affected; enervation is established to such a degree that resistance to disease-producing influences is lost; the environmental influences, which once were passed unnoticed, affect profoundly. Digestion and assimilation are profoundly affected. At this stage, germs become a complicating cause. This is the stage in this vicious pathological circle where tuberculosis and glandular involvement show up. In all this morbid circle, germ influence is an after-consideration; for in about a year and a half after tuberculosis has started in the lungs, germs are discovered, and it is said that the germs are not found earlier except in cases that progress rapidly. Man, like an apple, resists decay until resistance is lowered. Germ decay follows a bruise to the apple. In man, germ influence follows enervation.

Epidemic, infectious, and contagious influences get their work in after mankind's resistance is lowered by a thousand-and-one influences that break down resistancethat enervate.

The graphic picture of affections following the single cause--namely, overeating--must vary in keeping with the peculiarities of the patient. This vicious circle may be established in a child or adult who looks well to the unprofessional eye. Yet he is inflammable, so to speak, and only waits for the fulminant, which may be a germ of diphtheria, scarlet fever, measles, or some other external morbific agent.

After enervation, the affection follows the cause--overeating; then germ or contagious and infectious influences become secondary causes.

When a pathological chain of causes and reactions, as described above, is once started, it is obvious how very impossible it would be to fit a satisfactory nomenclature to it. Nomenclature forces too much attention to names, and so-called diseases are nothing more than affections set up by morbid sympathies. A nomenclature has, however, been evolved, and it is safe to declare that, instead of its being a benefit to the profession, it is a hindrance to right thinking; for it is almost impossible to find two expert physicians who will agree on a diagnosis.

Much to the disgrace of the profession, it is generally known that, if a score of physicians are consulted, the patient, when through with his last counselor, will have from ten to twenty different opinions.

Why is this? No doubt there are many reasons that could be given of an irrelevant nature; but only one reason is necessary, and that one is that all these different diagnoses are right and they are all wrong.

The rhinologist finds adenoids and bony growths in the nose. His diagnosis is right! The throat specialist finds catarrh, enlarged tonsils, and follicular inflammation. He is right! The heart specialist finds an overworked heart; if the disease has been running on long enough, he will find a heart lesion. He is right! The stomach and bowel specialist finds ptosis of the stomach and transverse colon, retarded digestion, and retention of food in the stomach. He is right! The gynecologist finds inflammations, prolapsus, fibroid tumor, maybe an ovarian cyst. He is right! The abdominal surgeon finds appendicitis, ovaritis, tumors, misplacements, etc. He is right! The genitourinary specialist discovers an enlarged prostate, and a foul bladder from retained urine. He is right! The kidney specialist finds albumin or sugar in the urine, and his diagnosis is Bright's disease or diabetes, He is right! The syphilophobiac finds a positive Wassermann test, and his diagnosis is syphilis; and he is right!

All other specialists find something relating to their specialty; and they are all right, and, as stated

before, they are all wrong. Their failure in curing the case is proof positive that they are all wrong. Of course, more or less palliation is given, but no cures need be expected; for all these so-called diseases are affections--sympathetic derangements--and, to get rid of them permanently, the cause must be removed. Such patients are better after taking the prescriptions of one doctor, and worse after taking the advice of another; but the ebbing and flowing, or the oscillating between better and worse, is the legitimate and characteristic progress of toxemia or intoxication, and the getting better or getting worse after taking a given treatment is simply coincidental. In this fool's paradise some doctors are made famous and others are ruined. It is largely a game of chance, except when social favoritism loads the dice. (Read in this connection chapter on "Crises.")

III. Prognosis

To foretell the evolution of diseases without a comprehension of real cause is attended with delusions--mental mirages.

There is such a thing as classifying experiences based upon the habits and customs of society, disease-building though they be, enabling those who become expert in the science to diagnose and render aid, without the priests of the system having even a conception of what a change of habits and customs would do for their theories built on the sands of error.

For illustration: Physicians who are adjusted to a clientele that uses alcoholics, tobacco, coffee, and tea would be professionally lost in a society of abstainers. A science of palliation based on debauchery will ill fit one based on normal habits or sobriety.

Cause of disease can never be discovered in those who are abnormal from debauchery. Health, and what it takes to maintain it, is the only way to find a correct diagnosis and prognosis. When cause is found and removed, therapeutics is superfluous. (See chapter on "Therapeutics.")

IV. Therapeutics

Therapeutics is that branch of medical science which considers the application of remedies as a means of cure.

The drug idea is to relieve and cure. In the very nature of man, the drug-and-relief idea is bad; but if man is one thing more than another, he is a habit-forming animal, and if his habits are bad and work for his destruction, he will accept relief rather than stop his habit, which is a natural cure--if to stop a disease-producing habit can ever be considered in the sense of a remedy or cure.

Drugs, or anything that will relieve without removing cause, is a questionable good, and certainly an outrage and a crime where the remedy blinds the physician as well as the patient to the need of searching for cause and removing the same.

To illustrate: Today 1 received a letter from a gentleman who wrote me concerning his wife. He declared that for the past twelve years his wife, fifty years of age, had enjoyed very good health, with the exception of occasional slight indispositions, which were quickly cured by ----- a drugless physician. He then so graphically described symptoms which had made their appearance within the past month that it left no doubt that his wife was far advanced with cancer of the womb. Should such tragedies happen? Never! They are the fruits of a fallacious system's understanding of the cause of disease. A physician who was not in bondage to a creed-bound etiology would have discovered this woman's perverted nutrition in time to save her.

There is no excuse today for systems of healing which ignore the truth that there can be no cure without righting errors of nutrition, and there can be no errors of nutrition the causes for which cannot be found in the mental and physical habits of the patient, and the patient's attitude toward his or her environment; for be it known that we attract what we have.

To relieve a pain with drugs, by manipulations, by ignoring, by suggestion--in a few words, to relieve in any way without knowledge of the true cause--is a crime against the patient, against society, against

morality, against ratiocination, and tends to bind man hand and foot below his possibilities.

Discomfort and pain are educators. If man could not find palliation, he would be forced to seek the cause of his discomfort and remove it; and, in doing so, he would discover himself and his God--which is the object of being. Know thyself!

First of all, man seeks thrills and shocks, after he has dulled his sensations on the commonplace--after abusing his privileges. When he takes to the toboggan because the travel on the plain has grown monotonous, his pace will soon force him to seek relief. It is at this stage of man's career that he flounders in reliefs.

What is a saloon? A place to secure relief from discomfort. What is a cigar store? A place to find a new sensation--relief from discomfort. What are midnight lunches? Means of finding relief from discomfort. What are bawdy-houses? Homes for lost souls seeking relief from discomfort. What are doctor shops and drug stores? Places for seeking relief from discomfort and pain. The same is true of hospitals and sanitariums, resorts of all kinds, including globe-trotting, sight-seeing, etc., etc. And, neither last nor least, what are churches? Places for those who are uncomfortable in mind and body--palliation.

After a glimpse at a few of man's institutions for seeking relief from suffering, it is well to think over the question of whether all this restless seeking after relief is necessary. Yes, anything that is, is necessary, and will remain until something better can take its place, The relief which man seeks is in keeping with his development, and his development must be held down to the horizon of his sensations.

Those who are looking for a better plan to secure mind, heart, and body ease would do well to read this first volume over and over; it should be found a rational way out of discomfort. It is not a doctor, a healer, a drug, a formula a diet chart, some peculiar exercise or bath, that man needs. He needs to know what causes his discomfort; and then he can become his own physician, as soon as he proves the truths of the book in his own life. When man learns to know how and why he fell, he can lift himself up.

The day for healers and saviors should be past. Teach man to be his own healer and savior--then civilization can reorganize on a rational basis. So long as it is man's duty to save the world, the world will not be saved; but when man learns to save himself, without any intermediary, then the world is saved.

We need no therapeutics--no remedy; we need knowledge of life. Instead of the professions being a good, they are a curse. The world would be better off in a hundred years from now if they could be blotted out; for they are a menace to progress; they are palliatives; they cater to man's appetites and passions; they keep him in ignorance of his best interests; they keep him enslaved to his passions.

Nature can take care of herself; and, as man is a part of nature, he can take care of himself, if obstructions which have grown up about him are removed.

Nature's Plan as Concerns Utilization of Building Material

Birth and death are activities always present in man's body. Every minute cells are born, and every minute cells die.

The process going on is building up and breaking down. This process means that new material must be brought in and made into new cells, and that the old cells must be broken down and removed. To accomplish this, **Two Ferments** are required; namely, unorganized ferment (enzyme) and organized ferment (bacterium). The organized has received attention in a previous chapter.

It is my desire that the readers of this book look upon bacteria as beneficial rather than as enemies to man.

At the very genesis of this process--namely, bringing food to a state of solution, fitting it for absorption--there must be some plan for preparing material for cell building; and there is. The material must be dissolved, and from the time food enters the mouth until it is a living cell it is accompanied at every step

of its progress by refining elements called enzymes. The enzymes--from those in the mouth, stomach, and bowels to those that kiss life and mind into a finished brain cell--are graduated and fitted for their special purposes; and so subtile and varied are they in their work that they are a constant surprise to medical scientists. To show how the learned men of the profession are surprised at the mysterious subtilty of some of the finer ferments, enzymes, I take pleasure in reproducing one of my recent articles from "Philosophy of Health":

Vitamin--What Is It?

Vitamin ("vita" = life + "minum" = small)--small life. We talk much about life; we see where it is, we see what it does, we see it manifest all about us, we know that there is life; yet we cannot see it, we cannot feel it, we cannot analyze it. We cannot live without it. We know that it is, because we see how matter acts under its influence, and how it acts when life is removed from it.

Life is, or it is not, an entity. If it is an entity, it is much too microscopic for man's extended senses (instruments of precision). If it is not an entity, then it must be the "summa summarum" of a physiological synthesis. If it is an entity, then it must be a something that is ommipresent, and at the same time so subtile, subsensorial, and elusive as to sidestep the chemist and all his analytical wiles. Yet it adds the missing link to a synthesis that becomes an animate being.

It is difficult to conceive of life as not present. As in the case of air, light, and electricity, we must assume that it is; or otherwise analytical reasoning becomes void. Nature--the great artificer, the chemist par excellence--and the associational, or social, nature of elements, cause the latter to assemble and unite in just the right proportion to make a compound--a synthesis--attractive for the everpresent life, which at once enters, and the inanimate becomes animate.

Would not life--animal life--be exceedingly precarious if omnipresent life itself were not ever present? Suppose a supply of air, which is a coarse substance compared with life, should have to be gathered, or material for its supply should have to be discovered and purposively supplied--would not life be so precarious that being would scarce secure a hold, and that to remain in being for years, as man does, would be impossible? As it is, man dies for lack of air. The lungs and blood fail to exchange gases, notwithstanding the fact that air is ever present and man's body is submerged in it continually. Let us assume a simile for life: Suppose that a living being were compelled to discover just what foods contained life--vitamin--and he were compelled to provide himself with enough or die, is it thinkable that the world would be populated with beings? Every little while the medical profession discovers something which "God forgot" that is necessary for man's continuance in life! Oh, wonderful man! Wonderful doctor! Wonderful mind!

We must not forget that, in seeking knowledge, a little wisdom should not be despised. The medical blend of knowledge and wisdom is not good. A little more wisdom and a little less knowledge would help some.

Life is not dependent upon procuring a food that has a mysterious property, but upon knowing how to care for the body in such a way that life will flow in and take up its habitation therein.

Iron is needed in our bodies; without it we cannot extract the oxygen from the air. Why do we at times lose the power to appropriate iron from the food consumed? Because assimilation is injured by toxemia, and toxemia is developed by living in a manner to cause intestinal decomposition. The toxin overstimulates and enervates; and enervation causes sluggish elimination. The retention of excretions injures the life of the blood, so that it renews itself badly; then it fails to appropriate the iron from the food intake. And as this is true of iron, so is it true of every other element. At times all elements are refused; namely, minerals in the food, oxygen from the air, and, neither last nor least, life--vitamin--from the living presence.

A physiological synthesis must be made up of just the required elements to attract the absent--which is ever-present--life. Then, when the elements in the synthesis become quantitatively disturbed, this subtile element departs and the synthesis disintegrates.

Vitamin is a new name--a misnomer--to describe an element that may or may not be found in food. It may be refined out of food, as in polished rice and white flour; it may be rendered inert by cooking; and it may be antidoted, as we can prove at any time, by the use of iron, alcohol, tobacco, coffee, tea, narcotic drugs, mineral poisons, toxin from decomposition, and, neither last nor least, by depressing and discouraging thoughts, fear, envy, hate, etc. This element is as old as life--as old as creation--and is known as enzyme. Digestive ferments have been known for many years, but not known in their most subtile forms and obscure developments.

No wonder that the subtiler forms of enzymes are mistaken for life--vitamin; for they are so closely linked to the genesis of being that one appears as necessary as the other, and the action of one may be confused with, or mistaken for, the action of the other.

If there were some way to extract the enzyme from an egg, it would not--it could not--hatch. Of course, we know that the egg must be fertilized, or it cannot take on quickening--the vitamin, the little life, cannot be attracted. The last step, however, in the synthesis of being is fermentation, and coincidently quickening. The most refined, unorganized ferment is the last element before life-vitamin--adds itself to an organized compound of elements, which I call a synthesis of being.

Enzymes range from the coarse solvents--namely, ptyalin, amytopsin, trypsin, steapsin, pepsin, et al.--to those within the blood, and those whose subtilty fits them for cell-building and becoming the all-important key to life in the formation of new beings. It is these bodies--it is one or more of these subtiler enzymes--that have been discovered and named vitamin. How do I know? By analogy. It is unthinkable that life (vitamin) is an entity that can be destroyed, or that can be extracted from vegetable or animal beings, bottled, and given out "ad libitum" to those who have forfeited theirs in riotous living.

The description of the substance said to be vitamin tallies exactly with what we know, and can conceive, of the action of a refined and subtile enzyme.

The description of the substance said to be vitamin discovered by Dr. Funk, misnamed vitamin, and which substance he declares is indispensable to life (how can life be dependent on a little life; how can electricity be dependent on the electric light or any other manifestation of itself?) does not fit any conceivable description of life. Life is as old as food itself-an element as old as creation. It is the breath of life that quickened man. It is the word made flesh--the subtile presence that quickeneth all things.

"The word 'vitamin' has not found a place in the dictionary yet;" and it is scarcely defined and barely understood by its discoverers.

It is said that Dr. Casimir Funk, a Russian chemist now of New York, invented the name to fit "certain mysterious substances in food," which have been demonstrated by a Scandinavian chemist as substances which apparently are not food, yet necessary to its utilization. Isn't this the description of a digestive ferment--an enzyme? Certainly, food cannot become food until acted upon by a ferment.

It is said that Dr. Funk has isolated those substances which he says are "indispensable to life;" and since his announcement "other scientists have added to the meager sum of knowledge."

Digestive ferments have been taken from the hog (pepsin) and from the chicken (ingluvin--pullus gallinaceus). Would it be so very strange if chemists should analyze out of every organized structure (plant or animal) a ferment, or the genesial elements out of which ferments are made? So important an element as ferment must, like life, be present, either in form or potentiality, everywhere.

In the olden time, and up to the very recent present, the perpetual-motion discoverer was abroad in every land, and was always just about ready to demonstrate its discovery to the world. But, alas, the world waited in vain; for no announcement ever came. And now the perpetual-motion explorers are out of business forever--put out by the electric discoverers.

Electricity is a power that is elusive to the chemist, and beyond our senses; yet it can be sent over a wire half as large as the little finger, silently and unobjectively, in such quantities and with such power as to move a train. This has awed the perpetual-motion crank into silence. When we know that electricity is

made up of electrons (units) so small that a pane of glass allows them to pass through its pores as though it were a coarse sieve or not at all present, we can understand how a cyclone of fifty thousand volts can pass through our bodies as an open door, leaving no trace of its coming or its going.

Yet electricity is probably so coarse, compared with the subtilty of life, that there is not much hope of a Russian, or any other chemist, gathering or isolating it. If, however, "these substances," which are "indispensable to life," are what I insist they must be, they are not vitamin, but ferments--enzymes, and are indispensable to life. Yes, indeed; for "this mysterious substance," which they call vitamin, is without doubt ferments, and in the evolution of beingevolution of cells, quickening of fertilized ova--stands next in importance to life.

The human mind is yet so coarse in its thinking that it alludes to the subtile and universal manifestation of life as "mysterious substances," and talks of gathering or isolating these substances. Certainly we are far, far away from its discovery, so long as our imagination and ideals are so coarse.

Dr. C. Houston Goudiss, editor of the "Forecast" magazine, declares: "Not the wisest man living can tell us just what vitamin is. While these substances appear not to be food, they do appear to be essential to the digestion and assimilation of food; for their withdrawal, suppression, or absence, from whatever cause, results in disease and death of the animal or man fed on such food." Dr. Goudiss unwittingly describes exactly the attributes of enzymes. Probably the name "vitamin" confused him. Any "wisest" physician should tell us just what an enzyme is, even if he balks at life.

In a crude way, vitamins--enzymes--have been known for many years. That there is an enzyme constituent in every cell, in every being, animal or vegetable, in animate nature, is as true as reason. Why? Because it is necessary for reproduction. It has been known that scurvy--a disease newly named acidosis--is caused by living on foods deprived of enzymes; and it is as widely known that uncooked vegetables and fruit, taken in abundance, will cure scurvy, or scorbutus, or acidosis, by supplying the ferments--enzymes--necessary to attract life. The secret of the raw-fruit-and-vegetable cure is that scurvy, or scorbutus, or acidosis, means that more food has been taken than can be appropriated by the body, and the body, like a machine, has become choked by waste products and debris to the extent that decomposition exceeds recomposition; and when enzymes fail to maintain asepsis, and toxin gains the ascendency, disease is brought on and death is threatened; for toxin destroys enzymes, and, as the enzymic power weakens, life power weakens, since not enough life can be appropriated out of the living presence to perpetuate the life of the body.

By using succulent fruits and vegetables in scurvy, or acidosis, much distilled water is furnished the body with which to flush out the accumulated putrescence. Fruit and vegetables contain over ninety per cent water. The salts are antiseptic; they antidote the toxins that have been generated by the decomposition resulting from the oversupply of food devoid of vitamin (?)--no, enzymes--which brought on the scurvy. Bread, meat, cakes, pies, puddings, sugar, etc., etc., are mostly food formulas that are artificially prepared and refined to the extent of excluding the enzymes, hence are not in keeping with nature's formulas. Therefore they are not ideal foods--they are short on enzymes; and, when they are eaten, the body is furnished too much nutriment, and not enough enzymes to keep a digestive and assimilative equilibrium. When this style of eating continues, a time comes when the chemistry of the body is perverted by acid fermentation to such a degree that it fails to attract the ever-present life--vitamin--and it must crumble into decay.

Such diseases as pellagra, hook-worm, tuberculosis, scrofula, syphilis, and many others, are directly and indirectly caused by a dietary--foods--that has had its chemistry tampered with. The chief element--namely, enzyme, not vitamin--has gone out of it, allowing decomposition to become established. This far-reaching and not generally known truth can be demonstrated at any time. When a treatment is based upon this truth, syphilis becomes easy to manage.

Those who attempt in any way to explain what vitamin is, do so in something like the following fashion:

> "We have learned that there are vitamins that promote growth, vitamins that prevent scurvy, and vitamins without which the baby will soon become rickety. Some of them are destroyed

by cooking, but cannot be dried out, while others are not appreciably affected either by heat or drying. "--Goudiss.

In the same way a multiplicity of attributes may be credited to electricity. We might say that there are electricities which promote different lights--white, red, green, yellow, etc.; electricities that run trains and cars and motors, kill criminals, etc.; electricities that warm the feet and hands, cook food, iron clothes, etc. Electricity is the same yesterday, today, and forever. It is the motor power for all these manifestations, and a world of others. Then shall we speak of it in a plural sense? Life, according to common understanding, is not plural. It is not quite obvious that there is a different kind of life in different kinds of animals; that the monkey, man, and all other animals and vegetables known to have individual existence, are possessed of different kinds of life.

It is not true, yet it is pertinent to the argument, that it requires a different yeast (bacterium) to raise 'bread, cake, doughnuts, puddings; to cause apples to sour into vinegar, grapes into wine, malt and hops into beer; to cause carbohydrates to ferment in the stomach and bowels, causing acid stomach, rheumatism, etc., or to cause proteids to decompose and develop a toxin that, directly or indirectly, is responsible for all the septic or zymotic diseases. It is as unreasonable to contend that there is a distinct organized ferment (bacterium) for every disease, a distinct unorganized ferment (enzyme) for every tissue that is built, as to declare that there is a different life for every animal and plant, or a vitamin (a little life) for every phase of life.

The tendency apparently is for the educators to compound, complicate, and comminute all knowledge, until it is a wilderness so entangling that there is no show for a John-the-Baptist to come out of it and teach the people how to make the paths of their thinking straight. It appears that everything in life of mental value must be mystified and complicated, or it is not considered worthy of attention.

We are told editorially by the "North American" for September 13, 1917, in commenting on what Drs. Funk and Goudiss have to say on vitamin:

Ten or twenty years hence we will know more about them. Wider knowledge may reveal mistakes in deductions which at present are little more than guesswork. But certain facts long established by usage and now approved by science so firmly uphold Dr. Funk's description of the vitamin as an indispensable attribute of life, that people should know all there is to be known on this subject.

For instance, it long has been known that orange juice is the best preventive of scurvy among babies. It also has been common knowledge--though until lately ignored by science--that the potato not only is a most nourishing food, but that since its introduction into Europe whole countries formerly ravaged by scurvy have been almost free from this distressing ailment.

Now science vindicates the experience of "ignorance" by showing that orange juice and potatoes are notably rich in anti-scurvy vitamins. And in these two instances, heating even to the boiling point does not injure the vitamin content. On the other hand, the vitamins of milk are sensitive to heat. Even the low degree required for pasteurization seems to affect them, while sterilization appears to destroy them entirely.

Beriberi is a disease of the nerves which for many years had wrought widespread ravages in our Farthest East possessions. Early in 1910 a severe outbreak of this malady was speedily and completely checked by the substitution of unpolished rice for the polished product, which constituted the chief food among the sufferers. Subsequent tests on men and animals proved that beriberi not only is caused by a diet consisting chiefly of rice from which the outer coat or pericarp has been removed, but that it can be cured by the substitution of whole unpolished rice, or the administration of the so-called "waste" which results from polishing.

By isolating from these polishings a crystalline base which cured fowls that had developed a disease similar to beriberi after being fed a diet of polished rice, Dr. Funk was led to his discovery--one which yet may rank with Harvey, Pasteur, and Lister.

Subsequent experiments of like nature by other scientists proved the case beyond doubt. Now we know it is the absence of this vitamin from polished rice that causes beriberi. Just how the vitamin in the rice grain affects the human system; just what it does, or where are its fields of operation, we do not know.

That it must play a vital part in the maintenance of health is well evidenced by the fact that pigeons fed on polished rice until paralyzed with beriberi will revive almost instantly when the anti-beriberi vitamin is injected, and in a day's time be fluttering about as though they never had been ill.

> "This almost miraculous transformation can be due only to the presence of the injected vitamin," said Dr. Goudiss; "and the minuteness of the quantities used supports the view that the vitamins are not foods in the usual sense of the term, but have some obscure connection with the production of internal secretions which are essential to assimilation."

He further says:

> "No longer can we regard ourselves as properly fed because our meals show a scientifically correct balance of protein, carbohydrates, fats, and mineral matter; for without that evasive element which in some mysterious manner gives the word to the forces of the body to digest and assimilate these nutrients, we might as well eat sawdust. For a time, it is true, we may get on very well, for the body stores vitamins against the time of need; but these cannot last long, and without a constantly renewed supply, disease and death inevitably await us."

In addition to beriberi, recent investigations have led to the belief that other deficiency diseases are caused by lack of vitamins. Chief among these is pellagra, so alarmingly prevalent in many of our southern states and which, curiously, is found chiefly among those whose diet consists almost wholly of corn meal ground in the modern way, with the germ and hull of the grain removed.

In localities where the old-fashioned "whole-ground" corn meal is used, pellagra is almost unknown. This has led scientists to assume that the outer coat of the corn grain contains a vitamin which will prevent its development, even when corn is the sole article of diet. When used in a mixed diet, as is the case in most instances, the employment of whole-ground corn meal becomes a matter of secondary importance; for the needed vitamins will be supplied by other foods in the menu.

It also has been shown that a diet consisting solely of white wheat bread will produce a disease not unlike pellagra; and here again science is forced to conclude that in wheat, as in corn and rice, the vitamin inhabits the outer coat of the grain. It is not yet known where this vital substance secretes itself in fresh fruits and vegetables, but science is sure of its existence in nearly all such articles of food.

Thus far, the foods found rich in vitamins include raw milk, or milk just brought to a boil; the yolk of egg; meat juice and broths; fresh vegetables and vegetable soups; fresh or cooked fruits and their juices; whole grains, slightly broiled meats, and cod-liver oil.

Those apparently deficient in this element are sterilized, preserved, or cooked milk; white of egg; sterilized meat extracts; dried fruits and vegetables; highly milled grains; soup meat and preserved meats; and bread raised with soda without the addition of sour milk.

We have dwelt on the details of this subject because it concerns a matter no one can afford to ignore. However easy it once may have been for some persons to dismiss the subject of food as relatively unimportant, no such attitude is tenable today. And at present we face food conditions which demand not only the practice of strict economy, but application of every help science can offer.

This newspaper could not consistently omit its utmost in the dissemination of such knowledge. For during the last seven years, with the aid of Mrs. Scott, we have so emphasized the value of a varied diet, and one which includes fruits and green things, that we could not overlook such sanction of our course. In this connection, we wish to quote from a recent editorial from the "Journal of the American Medical Association":

> "The discovery of the vitamin has emphasized the value of those elements of food which,

> although present in minute quantities, exercise a determining influence in the utilization of the ordinary articles of diet. As Garrod says: 'The immense practical importance of these hitherto unknown factors is in the fact that once the missing element -the vitamin-is discovered, a specific remedy for the disease has been found.'
>
> "That the nutritive value of a diet does not depend wholly on its calorific value must be admitted. The importance of flavors, spices, and of the preparation of food so as to arouse the esthetic senses-in other words, the nutritive value of good cooking--has been pointed out by Sternberg, of Berlin, who insists that the science of cookery is not merely the application of chemistry and physics, but rather an application of the physiology of the senses, applied psychology and esthetics. The spices and flavors used by the cook, Sternberg suggests, may be closely allied to the vitamins, if not identical with them. They may stand in the same relation to loss of appetite and health in general that the specific vitamins do to particular diseases."

Thus is the vitamin closely linked to our present needs. The war is forcing us to a food situation which will necessitate particular attention to diet. Its insistence on no waste will compel us to eat foods and parts of food hitherto little used.

Instead of being a deprivation, this may prove an immeasurable benefit. For it may force us to become acquainted with the power of vitamins to protect our bodies against invading hosts of disease which still are unconquered.

It is rather doubtful if the orange-juice cure so "long known" is really understood. If it is not, it may lead to wrong conclusions. The facts are that orange juice in the treatment of babies is not a very old remedy, and as yet not a widely used one. When there is indigestion and poisoning from the decomposition of fats--cream--in young babies and children, orange juice, which is potentially alkaline, antidotes or neutralizes the acid of decomposition; and it is just possible that scalding the juice does not entirely inhibit this action, but it certainly does weaken it. To say that a vitamin in the orange juice did the curing is working the imagination overtime--it is simply assumption If what is claimed for vitamin be true, all one needs to do to prevent decomposition, or prevent stomach and bowel derangement, or cure all types of diseases, is to extract a little vitamin from some favorite food, and use this "mysterious substance" in abundance. Another cure-all! Another way to prevent diseases! What about germs as a cause? And the specific antidotes made from the specific germs? Indeed, when there is so much known of cause, cures, and immunization, is it not strange that there is any sickness at all? The laboratory struggle still goes on in search for specifics that will out-specific all other specifics. Professional asininity is obvious all the time to the discerning.

One of the most necessary things to do for the victims of scurvy, scorbutus, or acidosis is to rest from food for a while; then start the eating on fruit; and then select a proper diet--fresh fruit, vegetables, etc. Those who are very much poisoned on carbohydrates and proteins combined, because of eating to excess, complain that they cannot eat fresh fruit; that it distresses them--which it does, and will continue to do until there is a decided lettingup on overeating and improper mixing.

Regarding rice: Much is made of the rice story. Indeed, that story is worn to a frazzle by every novice in dietetics. It has become a professional platitude. In spite of it, however, polished rice is still eaten, as is white flour. Both are eaten in preference to the less refined grain preparations--and it is perfectly all right for those who supply the necessary enzymes by eating freely of fresh fruit and salads.

It is doubtful if there has been a test made where no food is eaten except rice. Until that is done, no one can tell what a mono-diet of rice will do. I should expect a race of people to go down on such a diet, even if only unpolished rice were eaten; for rice is not an all-around food. Fruit for one meal, rice and fruit for another meal, and meat, fish, cheese, nuts, or beans, with salad, for another meal, will supply all the food and enzymes--vitamin--needed to attract all the life--energy--required.

It takes more than one dietic error to bring man to grief.

There is much to the chemistry of food--far too much to make a cure-all of enzymes, misnamed vitamin; or to make the lack of enzymes--vitamin--the cause of all bodily derangements.

Fermentation is the important process that stands between food and body-building. It is a question of which ferment will be given the right-of-way--unorganized (enzyme) or organized (germs, bacteria).

An ordinary lay mind can understand that the stomach glands must secrete digestive juices, furnish enzyme, or unorganized ferment, or food cannot be brought to a state of solution, fitting it for absorption. A solution is not all that the ferment (enzyme) accomplishes. A property of resistance is imparted to the food pabulum by the enzymes that acts the same as is claimed for vitamin. This is necessary, and for the purpose of resisting the influence of organized ferments (bacteria or microbes), which are everywhere present, ready to "do their bit" in preparing food for elimination which resists enzymic fermentation because of its unfitness as a food, or because the intake is beyond enzymic (digestive) power.

The food that is acted upon by the unorganized ferment (enzyme) attracts life; the "mysterious substance" of Dr. Funk is a subtile enzyme; it is this mysterious element that brings about the fermentation necessary to cause the egg to hatch, the nut and seed to germinate. Ah, it is this element in the cell of living flesh (animal tissue) that enables the animal to live and reproduce itself--that enables the cell, the unit of the body, to produce a successor. And this quickening element, this mysterious enzyme, starts the fermentation that attracts life, It is then that vitamin flows in and being begins.

This mysterious element, enzyme, appears to be subject to the law of summation--of accumulation and dissipation. In the nut and the seed this element lies dormant, and under favorable conditions may remain ages, retaining the power of fermenting and starting the quickening process. After quickening begins, maturation depends upon whether the environment in which the resurrection takes place contains elements of nutrition potentized with enzymes sufficient to attract the vitarnin--life--necessary for cell proliferation.

Individual life is a state that must vary in keeping with the environment. If the nourishment contained in the environment is potentized with enzymes, then vitamin (little life) will be added; for it is the ever-present link, it is the ever-present immanence--the bridge leading from inanimate to animate.

The air must be vital. I do not mean that it must contain oxygen; for all air--that in the mountains and that in the valleys, in the basement, in the cluttered room, or on the wide-open veranda--is of the same composition. But not all air is potentized with life-vitamin. Sewer air does not differ from mountain air in the amount of oxygen and nitrogen which it contains, but it does differ in the amount of vitamin. The mountain air is potentized with vitamin; the sewer air, the air in closed houses, in closed bedrooms, in dark closets, etc., is dead air. Bottled water, stagnant pool water, boiled water, distilled water, are dead waters. Cooked foods are dead foods. That "mysterious substance"--life, vitality, resistance, vitamin--always eludes the chemist. In the laboratory, it is or it is not in the test tube. It cannot be found except by mental analysis--through the power of deduction. Life, energy, vitality, vitamin, is found--it is in the air, the water, the food, the sunshine, or it is not. We must find out by mental deduction. We have learned from observation that air and water are potentized with life (vitamin), or they are not. We know that where these elements have an opportunity to renew themselves from the world's great storehouse, they contain vitality--vitamin; but when they are confined they become poisonous; not from a lack of basic elements, but they become toxic; for life (vitamin) is always supplanted by toxin when life, or vitamin, fails to be forthcoming from the source of its generation.

Life--vitamin--is cumulative and dissipative. We in our daily lives are either building resistance or we are not. If we persist in supplying our lungs with the air that is vitalized--that contains vitamin; if we persist in supplying our bodies with food that is potentized with enzymes (raw fruit and vegetables), and if we supply our minds with mental food that is vitalized with vitamin, we are building power--resistance. It is well to remember that vitamin--life--is not subject to the rules of the laboratory, and is not confined to substances as coarse as that used in laboratory experiments; but it potentizes thought as well as material food for body-building. And it should not be forgotten that all elements which are to enter into the development of being must be potentized with enzyme. Without the enzymic torch to light the way for vitaminic transfusion, animation fails to appear.

Vitamin will never be bottled; hence the medical mind that looks for a cure-all which can be applied with a hypodermic syringe is doomed to disappointment. Modern medical mind has not got away from its ancestral idea of cure. Enzymes may be extracted and used to bring about fermentation, but vitamin--life--will not be attracted, and scurvy, or acidosis, will overtake the victim of laboratory extracted enzymes and such food as malted milk and artificial foods in general.

It is not cure that we need. It is knowledge of how to adjust our bodies so that the ever-present vitamin will flow into us. We must know how to make a vacuum of our bodies that will attract life, energy--vitamin.

Dead thoughts (old theories that have failed) will not be potentized by clothing them with new-fangled notions. A right theory must be based on fundamentals--on eternal verities. If it is, then the false all around us becomes truth. Truth always must have a potentiality of fallacy; and whether we get the truth or the false depends upon our development--what we are developed for or attuned to. Is our mentality potentized with the enzyme of truth? It it is, then the false can be evoked into life. Vitamin will be added; for it is ever present.

There are dead thoughts. There are thoughts that are languishing, because that on which they feed is devoid of the enzyme of truth. And there are live thoughts--thoughts pregnant with vitamin.

If we clothe our bodies in such a way that our skin is supplied with life (vitamin), and that air can get to it, we shall cumulate energy--we shall store our bodies with vitamin. But if we breathe air, drink water, eat food, think thoughts, that are devitamined--devitalized; if we keep vitamin away from the surface of our bodies by improper clothing; if we drink dead water, eat dead food, think dead thoughts, we become devitalized, and toxin takes the place of enzymes; sickness and death take the place of vitamin--life.

Life, as stated above, is cumulative and dissipative. Such diseases as scurvy and all so-called blood diseases, scrofula, syphilis, tuberculosis, et al., are wholly dependent for their continuance on a lack of enzyme--a lack of food that carry enzyme into the body. Hence the body cannot attract vitamin or life. Consequently disease follows. This is demonstrable. When the profession and the people generally give up dernon-worship--give up their belief that what is called bad, disease, devil, evil, has an existence, and are able to see that these supposed entities have no existence per se, but are different phases of health handicapped from a lack of vitalized food, air, water, sunshine, and mind, then truth will flow in, and a proper theory and practice of the healing art will evolve.

The reason why syphilis is so formidable is because the remedies used are allies of the morbid process. When the gentle influences of life-building activities are allowed to develop normally, this supposed-to-be greatest foe to the health of man, which, we are told, taints the human family, will fade like a dream. It matters not if the remedy is called enzyme, vitamin, or life, or if it is called by any other name, or called by no name at all; success does not depend so much on isolating and prescribing "mysterious substances," or administering wonderfully wrought synthetic experiments, such as "606," et al., which are "so indispensable to life," as upon knowing how to help the human body appropriate and accumulate such an amount of enzymes (vitamin-this "mysterious and evasive element") that it may fortify itself against unnecessary decay, which is another name for scurvy, scorbutus, acidosis, scrofula, tuberculosis, syphils, cancer, etc., etc.

Nature is prodigal in furnishing seed--ova and sperm--the major portion of which fall upon stony places and fail to quicken; others spring up, but fail to find a supply of enzymized food; or, as the "North American" editor and his doctors would say, their food fails to carry the vitamin necessary for growth.

Life is a state which oscillates between quickening and decay, between integration and disintegration, between synthesis and analysis, between physiology and pathology. Standing at the head of these two processes are two ferments. At the head of organization is an unorganized ferment, named enzyme; at the head of disorganization is an organized ferment, named bacteria. When the body is dominated by unorganized ferments, growth, renewal of tissue--in a word, metabolism--is poised and normal. When the food supply is short of enzymes--that miracle-working "mysterious substance" which Drs. Funk and Coudiss misname "vitamin"--then the organized ferments gradually gain control; and as the body's stock

of enzymes runs low, diseases of a toxic character--of which scurvy, tuberculosis, cancer, and syphilis are types-spring up.

Drs. Funk and Goudiss use the word "vitamin" where enzyme" can be used more understandingly. Advanced dietitians are beginning to realize that the end of enzymic variety occurs coextensively with cell, tissue, organ, and organisms. All the different digestive secretions are different enzymes. Food, in its travel from the mouth to its ultimate synthesis---cell-development--meets first with the gross enzymes found in the alimentary canal, which disintegrate and bring to solution the food intake. Not only is food prepared for absorption, but it is potentized with life--vitamin. It should be obvious to everyone who has followed the argument that the function of the enzymes is not only to prepare food for absorption, but to prepare the pabulum for the ever-present vitamin, or life, to take up its abode; and as the pabulum becomes more refined at each new enzymic influence, not only is more life added, but the life becomes psychic when cell-development is reached. At every succeeding step, food pabulum meets with a more refined enzyme, until at last it becomes sufficiently vitalized to be born a living cell with mind-potentially. It is the function of enzymes to metamorphose food into living tissue. If the food intake is devitalized--is devoid of enzymes, or Dr. Funk's vitamin--the body's enzymes run out, and then a retrograde metamorphosis begins to appear. The symptoms are a general discomfort--a tired feeling; the bright health glow of the surface of the body gives way to sallowness; the eye shows dullness; the mind is less active; life begins to drag; interest is lost; different organs begin to function badly. From this point, unless the body is served wittingly or unwittingly with enzymes, ill-health will continue to death.

The miraculous transformation in the health of pigeons given the enzymes of the rice is only observed about laboratories. Only the East Indian fakir and his dupes can see trees matured before their eyes, and hills leveled while they wait. There is a lot of credulity or illogical reasoning among many medical high-brows.

It takes a lot of inability to reason to believe that babes can be fed in such a way as to bring on scurvy, or acidosis, and then be suddenly transformed into health by orange juice or an injection of "vitamin." What is that so-called waste--that material which is polished off the rice? A ferment that is to conserve the rice; an enzyme needed by the rice to prevent bacterial fermentation from killing the germ of life when sprouting--when generation is taking place.

No one would think of the gastric secretions as food. Enzyme is not a food; it is a ferment, and its function is to prepare food for absorption and fit it for quickening.

It is refreshing to find a few scientists who are willing to admit that there is something besides protein, carbohydrates, fats, and salts in the process of metabolism. Indeed there is; but it is not vitamin, unless that name is to succeed digestive ferments--enzyme.

In reading the "North American" quotation, kindly substitute the word "enzyme" (digestive ferment) for "vitamin." Mystery will disappear, and the truth win stand out and seem so simple that he who runs may read.

This "vital substance" is made by each organism. Each organism makes enzymes for itself out of the food elements furnished. If all the elements necessary are furnished, and in sufficient quantities, the organism builds itself ideally. If there is a shortage in any, the body will he weakened to just that extent.

For years I have denounced the machine mode of feeding. I have contended that feeding so many calories and so much protein, fat, etc., was fallacious, was a subordinate part of dietetic wisdom, and had nothing whatever to do with dieting the sick. This contention has certainly borne fruit, in that doctors who make diet prescriptions on the quantitative and qualitative plan never cure anyone, and never can.

Good cooking does not consist of flavors, spices, etc., to arouse the esthetic sense, or arouse an unnatural appetite. Good cooking means the simplest cooking possible to retain the normal taste of the articles cooked. A pampered appetite that cannot eat of this simple cooking should be sent to cold storage, and stay there until any natural food tastes well.

The major part of the medical profession is a long way from the Tipperary of a curing understanding of diet.

"Tildenites" have long known how to live, and the present war reform will not change their manner of living.

Just use the word "enzymes" for "vitamin," and mystery disappears.

Therapeutics defined is, in a few words, the science and art of applying remedies to the cure of disease.

"Everybody knows" that there is such a thing as curing disease; hence, when I say that there is no such thing as curing disease, the average individual looks askance and inquires: "If you don't cure anybody, what do you do? What are you teaching?"

There is a therapeutics of doing nothing. For years I have said that it takes more wisdom to do nothing well than to administer all the remedies in Christendom. It takes more knowledge, more experience, more will, more independence, more individuality, to do nothing well, and scientifically, than to apply all the science that has ever been discovered.

Carlyle said:

The profession of healing is a sacred one--the outcome and acme of all priesthoods--divinest conquest of the human intelligence--and will appear one day.

The question is: Did Carlyle build better than he knew? The probabilities are that he believed in some kind of therapeutics, and his highest conception was that there would be a divine remedy, instead of human intelligence, to pilot man out of disease-producing influences.

On the subject of therapeutics--giving something to cure--I am a drug nihilist; I have been accused of drug nihilism for forty years. It has been said that I do not believe in anything; and I am accused of it yet. However, I never have seen anyone who has more beliefs than I have. I have beliefs enough and to spare; and I admit having a lot of unbeliefs. I do not believe in the fixity of states and the unchangeableness of good. I believe in never-changing law and order, and man's ability to adjust himself amicably to nature's requirements.

Whether Carlyle knew what he was talking about I cannot say. But he told one of the biggest truths that have ever been recorded. Now, what did he mean by it? If he meant what is ordinarily understood as sacred, that would indicate that he did not have the right idea of cure--that he did not have the right idea of therapeutics.

Perhaps it would be well for me to say what I mean when I admit that I am a "drug nihilist"--why I talk on therapeutics, and yet do not believe in therapeutics.

All curing is within the body itself. All we can do is to make the sick comfortable by removing obstructions to the normal operations of the body. The tendency of the body is toward health. The tendency of everything on the side of evolution is toward the ideal. The tendency of vegetation is to develop the ideal type; and if it does not develop the ideal, it is because of obstruction. When trees are planted close together, they grow high and very slender, they are not well proportioned, and they always lack vital resistance. A plant that grows ideally must not be obstructed; it must receive the sun's rays, be exercised by the wind, and have enough of suitable nourishment to promote its growth and allow it to develop ideally.

It is the same with the human body. If it has been planted unideally--in a soil that does not represent all the elements--the child cannot grow ideally and cannot represent an ideal human being. Now, the question is: Can a child born in such an environment ever be brought around to an ideal state? To answer this question opens a large field of therapeutics in which I do believe; namely, the adjusting of the individual to the environment, and the environment to the individual, so that he may evolve into as normal or ideal a state as his potentiality will allowhis potentiality is able to assimilate the elements necessary to bring on

ideality.

If man is hampered by being gestated and born in an environment that does not represent all the elements necessary for ideal body-building, and then the mental state of the mother has been one of depression all the way through the gestation period, we have a big job in bringing that child into an ideal state. The question is: Can it be done?

Eugenics is the subject of much talk these days, and a lot of it means nothing. There is too much importance attached to heredity. The possibilities of man making good are as numerous as the rays that radiate from a center of light. This being true, why talk about his being held down by his inheritance? It is his environment that holds him down, more than heredity.

Pausanius was a Greek traveler who lived in the second century. A physician said of him: "He ails nothing." To which he replied: "I use none of your physic." Again the physician said: "Sir, you are an old man." To which Pausanius replied: "That happens because you never were my physician." Long life often means possessing enough sense to avoid all kinds of opportunities to die. Doctors have had to take the jokes of philosophers from right and left; and it is right that they should, for they as often kill as they cure. Why is it that the people are suspicious of the profession today? Why is it that there are more people who do not have the confidence in the profession which they once had?

Because doctors send out a boomerang every little while that strikes back. The most recent is attempting to force state medicine. It shows obvious, even to lay minds, that if regular medicine were all it assumes to be, there would be no other system of healing necessary. To keep the ranks as thin as possible, students must be selected, and entrance to the profession made as impossible as it can be made, so that only young men of leisure and wealth, or of special favor, may enter. This bars many men of strong ideals and inventive imagination and original thought. As the practice of healing requires as much of art as of science, and as long college training kills the art faculties, our present plan of making doctors ends in the construction of a very complicated human machine that has no more independent mental action than the mechanical jumping-jack. This result, however, is exactly as the heads of the profession desire. That is, they think they do; but, being mechanical human machines themselves, they desire the rubber, the elasticity, the fluidity, the adjustability, taken out of students; and they have almost accomplished their desire. The result is that the average medical man is as incapable of making an independent movement as a mechanical toy. A pronounced type of one of these products, engaged in writing health articles, signs his name with an appendage, and often adds the name of his college mother; which, of course, is as it should be, for such a callow olive branch should not get far from his mother's apron string. Raising the educational standard, and making what the schools teach so obscure that students cannot pass examinations, impresses members of collateral professions and sciences with the idea that modern medicine is becoming worthy of all it claims. To make this belief doubly sure, the state and national governments--two automatic entities--lend the power of their influences; all of which influences go far to imperialize medical power; then, when the liberty-loving people feel the autocratic medical power, it turns their former respect into hate. The effort today is to make college professors out of college men who have great learning, but no practical experience. As well undertake to make an expert carpenter without tools. Knowledge wedded to experience builds wisdom.

Franklin said: "God heals; the doctors take the fee." He was not a physician; he was a philosopher. The philosophers know that doctors cannot cure anything--doctors have no curing power. Why is it that people cannot get that idea? If philosophers in all ages have known that truth, maybe I am not far wrong in saying that there is no therapeutics--no curing influence--outside the animal organism. It is preposterous to say that something can be taken internally or put on the outside of the body that will cure.

Optimistic suggestions are good, and may help the sick to health by imparting hope. Anything that makes people hopeful is curative, but the cure is within the individual.

Dryden said:

"The first physicians by debauch were made;

Excess began, and sloths sustained the trade."

Swift said:

"The best doctors are Doctor Diet, Doctor Quiet, and Doctor Merryman."

The immortal Holmes said:

"Folks want their doctors moldy, like their cheese."

The mold need not be from age so much as from lack of use. Holmes was ostracized in 1844 for advocating what the medical fledglings at this writing are discovering in France; namely, that wounds heal when left open--when clean, not medicated!

Heroes, chiefs, gifted men, enthusiasts--the giant minds among tribes and peoples--were named gods, and they were the first physicians. They were recognized as gods; they were worshiped by the simple-minded and those who knew nothing; and the big men administered to them as best they could.

There seems to be a disposition in man to worship anything which he does not understand. That is why individualistic men had, and still have, healing powers. That is why people who think they are enlightened still take drugs. That is why some of our learned medical fledglings, who know how to warble the word "quack" before they can even think, will automatically write a prescription calling for strychnin to be given to a case of infantile paralysis. As well give the remedy to a dead man! Superstition, your other name is modern medicine! Any school of healing, system, creed, faith, pretention, assumption, or declaration, founded on the usual fallacies, and offering cures that do not put those needing them to the trouble of correcting bad habits, proclaimed vehemently enough, can build a following of humanity who will declare their faith in the system.

Every faking system of cure must be accompanied by "sounding brass and tinkling cymbal," and the drawing part of the fakery must be the successful pretentions to charity.

To save the people--for the good of the people--is the strongest card in the hand that is stacked against the people. Nothing can succeed in faking the people that is not run in the name of charity or for the good of the people.

"And though I have the gift of prophecy, and understand all mysteries, and all knowledge; and though I have all faith, so that I could remove mountains, and have not charity, I am nothing." Paul was a doctor of laws, and he understood psychology better than most doctors today.

It matters not what ridiculous cures are offered the stupid, ignorant public, if they are handed out in a capsule of sweet charity, they will be gulped down with avidity and a smile, and the palliation, when there is any, is in the faith generated. Church hospitals are typical shrines; for God blesses the vandalism practiced in them. The bolus--the therapeutic agent--may be determined, but the capsule of charity brings the Balm of Gilead to the hungry soul.

Man is born with a large void in his nature, and that void is aching for sympathy and charity. This void is infinite in capacity, and is capable of assimilating any old junk, if encased or honeyed by sweet charity.

Then, whoever would explore this void with X-ray perception will find in the scrap-pile, hospitals, sanatoria, resorts, shrines, long- and short-haired fakers of all kinds; fakers from the Dives (rich-man) pattern to the Lazarus (ragamuffin) pattern; representatives of "surgical plants" --fake doctors who have vandalized the beautiful human body in the name of charity; blatherskites who cut out parts of the body for nothing, to prove that they are embodiments of charity--who use the cloak of charity to further their surgical exploitations of the human body.

Every curing system on earth, and every cure-all, can be found in this aching void; and there is no hope that it will ever be overloaded. It is well that the capacity is unlimited; for every generation of men will come with its new, elegant, and sublime fakers, with a taking variety of charity.

It is not within the possibility of many men in each generation to be endowed with the perception to recognize the fakers and the faked; hence their endeavors to save the people by imparting a little common-sense will fail to receive enough attention to change the human trend to any great extent.

The hope of a rational system of securing and keeping health will be pushed back, to give place to a therapeutics that can cure without removing cause; and as cause consists largely of bad habits, a remedy that can cure without removing habit will always be popular. The people will always be willing to allow saviors to die for them.

The immediately preceding is a frank statement of the probability that the masses will never be willing to give up bad habits for the promise of health; indeed, most people cannot be made to see that disease is of their own building, and that a correct therapeutics is simply correcting the errors of life. As every child is born. a lump of protoplasm without knowledge, the question is: Will society ever evolve a belief that disease is never anything more than an undesirable state of health, brought on from a maladjustment of man's body to its environments, and that a reasonable amount of care, a knowledge of which is within the mental grasp of all, will make health possible to all who are corrigible and willing to live in a manner necessary to evolve the highest mental and physical efficiency? If this is possible, then children may yet be born with an inherited potentiality for self-control, and ideals that can and will subordinate appetite and passion to a higher development. The present human potentiality at birth is dominated by sensuality, and a morality so perverse as to barter worship of an imaginary Deity for the privilege of indulging in pious types of sensuality.

It is not an evidence of immorality that the masses fake and are faked; no, it simply means that the faker and the faked are still on the unmoral side of life--they are unmoral; they have not evolved into a moral understanding. Much of what we see of human vandalism, as practiced by the medical profession, is not a breach of moral ethics; it is the way the blindly ignorant soul has of finding light. It is the mental urge--the subconscious longing for mental birth.

The worship of gold and position is in keeping with the belief in whatever is up and beyond the understanding. It is the sensual mind's way of seeking light.

The plant, with its urge for light that was potential in the seed, is forced to push its tender shoot around obstructions that its insinuating insistence cannot persuade to part and allow it to proceed more directly to its goal. The clinging, insinuating manner in which the tender shoots of growing plants hug, embrace, and penetrate clods, rocks, and other obstructions, might be described as love and worship--but is it? I think not. It is the plant's way of seeking light. It may have to go a very devious waysometimes backward, then again forward, and from side to side; hugging, embracing, and seemingly evincing much attachment to these associations. But not so. The potential urge for light forces the plant to cling to, and take every advantage of, its environment-not from a love of it. but for self-development--self-protection--self-preservation.

The plant's struggle for light is typical of mind-growth.

We see the undeveloped mind worshipping heroes, chiefs, gifted men, enthusiasts, fanatics, and gods--worshiping position, wealth, influence, and power. Should we not be nearer right if we said that mental urge--the desire to grow--causes mind to cling to all these objects of so-called worship, until it, the mind, develops enough virility to be sufficient unto itself?

Like the plant in its growth, mind must grow around and through obstructions, such as false theories, creeds, and schools--around great men, and gods. It must try the power and might of wealth. The mind must cling to something in its growth upward toward light; and its clinging to the false, in the manner that it does, is nothing more than the survival of the fittest, or its struggle for existence. It is better to cling to the false than not to grow at all. It is this mental urge--this desire to live--that causes mind to tether itself to its environment, seemingly clinging to, its obstruction because of its love for it. But this is not true. Mind is potential in nature, and its urge is toward full development, with truth as its goal. Truth being the goal, mind must grow through or around such obstructions as fixed creeds, great men, and gods. The selfishness of man (it is not selfishness in the vulgar sense; it is a desire to live, to grow; and it dare not let go of one

support until safely annexed to another) causes him to stereotype knowledge, and brand it with his own name, or a name of his choice; and then go to war, if necessary, to prevent change--progress--growth of mind.

What are schools, creeds, state medicine? The disposition of men to fix beliefs so that there will be no progress--no mind-growth. This is the ignorant manner of expression--this is the social understanding; but the truth is that creed is for mind what the rock is for plant; namely, obstruction to growth. But it must cling to it until safely attached to a more substantial support.

The so-called intellectual always impose on the credulous and ignorant. Man must worship something, and it is immensely gratifying to his vanity if he can manage to be the object of worship. The selfishness of man would cause him to stop progress, if in doing so he could become a god; for the word "god" means a finished product. As soon as God is discovered, be he a man, or a deity, one on the outside of the universe, progress ends. As soon as a cure is found, progress stops; and around the little god of cure, or stone of obstruction, every protection is built to immortalize it.

Simple-minded people and the credulous allow themselves to be dominated by those who are selfish. As a result, obnoxious laws and customs are established which prevent progress.

The regular school of medicine is struggling with might and main to saddle on the people its present germ theory, and its corresponding immunization and therapeutics. Which tacitly means: We have arrived at perfection, and it is time to stereotype and ossify.

This is the curse of school, creed, and church. Around and through these obstructions, mind-urge must force its tender shoots. I dispute that it is love or worship that causes mind to cling to heroes, churches, or god. Indeed, they are obstructions to mental growth; but growing mind must cling to them until strong enough to grow independently.

The intellectual have imposed, and always will impose, upon the ignorant and credulous. The medical profession is working largely on the theory that people want to be humbugged; and it is supplying the want.

The priests were the first physicians. Prophets and divines were consulted. Pythagoras, Aristotle, Athenaeos, the early Christian teachers, the mystics of the later centuries, on to the present, not only "instructed in arcane, metaphysics, and general knowledge, but treated disease."

The late Dr. Alexander Wilder declared: "The knowledge anywhere possessed of the art of healing is the measure of the refinement and civilization to which the people have attained." Show me the doctor any family employs, and I will tell you of the intellectual level to which that family has attained. Their beliefs in regard to church, healing, drugs, etc., mark the stratum in intellectual life to which they have attained. This may be a questionable compliment to those who pretend to be intelligent, yet are clinging to childish superstitions.

See people chasing after quacks--chasing after cures that are not cures--willfully helping the physician give a distorted notion about their diseases, so they will not be interfered with in their daily habits! It is obvious to what an intellectual level people have attained when they will take drugs, or are vaccinated, to cure diseases caused by bad habits. When habits are of more importance than health, and when people will struggle in every possible way to secure a healer who will indulge them in their habits, and cure them without requiring them to stop the habits, that cause disease, it is easy to see where they belong intellectually, titles to the contrary notwithstanding.

Man is civilized by social relations. His refinement depends entirely upon the mental attitude of those with whom he associates. Has a man true refinement who will, for the sake of gain, recommend an operation when he is doubtful in his mind as to whether it is necessary--doubtful as to whether any good will come from it? There are a few barbarians who say: "Damn the people! I am not my brother's keeper. We are here to give the people what they want." What kind of civilization is that? And yet we boast of our civilization.

Kindness and charity represent real culture. The only country that boasted largely of its culture before this European war was Germany. Does war represent culture? aaaa

Does the preparedness of a country represent culture? Is that an ideal religion? Is Christendom Christian? Do Christians believe in Christianity? Is Christianity a reliable therapeutic remedy for misanthropy? Does Dr. Christian know how to use Christianity to cure man of his unethical disease?

The art and technique of healing proceed from knowledge, refinement, and culture. The province of intelligence is to investigate and discover the cause and origin of disease. Scientific knowledge and artistic skill are not so much concerned with cure as with the individual himself. It will always be impossible to get rid of the personal equation in formulating a system of healing. So long as systems are formulated with the personal equation of the patient left out, the system must fail. Indeed, the patient must be the doctor, and the present doctors must become teachers. Medicine is an art. Science, when it is used as an art, will help; but when it is taken out of art, science will never give a solution to the problem of cure.

A man may paint a beautiful picture scientifically; he may have planned the picture carefully, laid out the plans beautifully in advance, and prepared formulas for his colors, blendings, light and shade-all correct according to the best formulas. But when the real artist comes along-the one who carries his model in his soul, the creator- he will make a picture of the same subject that will throw the first into the shadow so far that a second look will never be given it. That is the difference between art and science.

Do not jump to the conclusion that I do not believe in science! It is the basis on which we must build; and every man should have as much science as he possibly can get. But if he is going to cut loose from everything else, and have nothing but science, he will make a bungling record.

In a general way, the skilled physician can tell that his patient suffers; but he cannot know anything of the state of emotions, the wants, the longings, the heartaches. The doctor can see the results of appetites and passions, the same as he can see the results of an accident, the cause of which he knows nothing about. There is an element in every disease that the doctor cannot know without the aid of the patient; and there is an element of cure that belongs to the patient, without which the doctor is helpless. It is nonsense to expect cures to be performed on patients whose lives, physical and mental, are not known.

Taking a drop of blood for analysis, or examining the urine, tells but one thing--and that is the state of the blood or the urine; but nothing of how the perverted state was brought about, if it is perverted. A cure must be formulated on the cause, and not on the effect.

Without an understanding of cause, hope for cure must be lost. How can there be anything done toward removing cause without a complete understanding of what cause is?

The divine conquest of the human intellect is made when cause is known. All before that is chaos. Knowledge, religion, ethics, and morality are in a state of chaos until a knowledge of cause comes to set man right. That cause must be known not only scientifically, but artistically as well.

Archaic Medicine

In archaic medicine there was a therapeutics in the form of suggestion. It was in the form of foretelling and divination. There was something in it to help the people. Sick people want someone who can look ahead and give them hope; and hope is one of the important remedies. Suggestive therapeutics is built largely on hope--belief in betterment. We have schools of suggestive therapeutics, and there are many who practice it. They teach people how to suggest themselves out of a belief in sickness. The cure comes from within the individual; and if it happens to be that the individual needs a mental therapeutics, suggestion helps him think a little differently--helps the patient develop a more health-building belief.

In archaic medicine the serpent on the staff is the symbol of medical art. Egypt, Greece, Germany, South America, and North America employ it.

The asp on the crown of Queen Isis was a sign of the physician.

The fire serpent on a sign-post was the sign of an Assyrian physician.

In Mexico and Brazil the rattlesnake is the sign of the profession.

The serpent signifies occult life-principles and power to divine--preternatural power. The seraph on the staff set up by Moses possessed the power to save those about to die. When they were sick they had the belief that, if they could look upon the seraph, they would get well. They were sick in their minds, the same then as now. Fifty per cent of all sickness is mental.

When a person gets sick, the mind gets busy at once. Nearly all people are afraid of tuberculosis. When they have a cough or a pain in the chest, they go to doctors to find out if there is anything wrong with their lungs.

Places of learning were built in cemeteries in the valley of the River Nile.

Herodotus declared that the Babylonians had no physicians. They used the public parks. The invalids would congregate in the parks, and the people passing along were expected to talk with the sick people and ask how they felt. If they themselves or any of their family had had a similar ailment, they would tell the sick person how they got well. It was the duty of the well people to converse with the sick and help them get well according to the methods they had used. This plan, under wise guidance, could become a more perfect system of cure than any of today.

It is not very different in this day. We can always find someone who thinks he is capable of prescribing for all who are not well, notwithstanding, perhaps, the leading physicians of the community are prescribing for them. Such laymen know very well that their prescription is better than the treatment received from the physician. The layman does not realize that all the experience he has had is with himself, while the experienced physician has watched hundreds and should know much more. It shows that people are natural-born healers, all of them.

It was the same in the days of Jesus. The sick came to the road where he was expected to go by, and they expected him to heal them. That kind of healing has come down through the ages.

This method of healing the sick was not confined to Assyria and Palestine; it was in vogue even in Egypt, along with priestcraft and secular physicians.

Placing the sick in the public thoroughfares is alluded to by many of the older historical writers.

Fast-days were one of the therapeutic remedies of the Euphrates countries.

Mysterious rites, incantations, formulas, the secret word, images, symbols, sacred texts, have all served their purpose in exorcising the evil spirits that caused disease.

All the therapeutics, ancient and modern, above referred to, rests largely on the belief that cures must come from without. This is a belief that will bar the profession and the people from reliable health knowledge, so long as it prevails.

Causes must be discovered and removed. A cause is something--in influence--that always acts; not an influence that acts part of the time, and part of the time it does not.

Germs, as a cause, act sometimes, and sometimes they do not.

Germs always act under a given circumstance; namely, when the body is enervated--when resistance is lost. Then, to prevent germ action, the proper thing to do is to keep the standard of health above the point where germs thrive.

What must be the therapeutic agents? Correct eating, correct care of the body, correct sanitation, and a sane, well-balanced mind.

A knowledge that will help man to enjoy health, evolve the greatest efficiency, and save him from driveling senility or early death, is procurable today.

None but the misinformed will go about seeking cures. Cures, like salvation, spring from within, not from without.

Knowledge is the only reliable therapeutic agent.

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INTRODUCTION

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B. PATHOGENY

Instead of microbes being the cause of disease, they are at most only capable of joining with the culture media to develop an affection--certainly not a disease. As cause, bacteria must be classed with the elements and other influences in man's environment which are good or bad for him, depending on his health--resistance.

Efficient cause is anything powerful enough to produce primary disease. There are chemical causes--poisoning--and animal toxins. The poison that can prostrate and kill man must be able to overcome his normal resistance. Nothing belonging to man's normal habitat can break down his normal resistance; hence the idea that germs unaided cause disease is a delusion which the medical world must outgrow, as likewise the idea that serum can antidote germ influence; for germs have no influence except as they join other auxiliary influences and break down resistance.

C. PATHOLOGICAL PHYSIOLOGY

This should not be recognized as differing from physiology. Biology is the same whether the process be normal or abnormal. Law is the same now and forever. Biological laws are the same in health and disease. If a given disease-producing influence is experienced, disease will be established; remove the influence, and the laws, which are always the same, continue to act ideally, and health will return. Death itself is the only way to prevent the ideal working-out of physiological law.

It should be illuminating to those who think of disease and health as distinct entities to be assured that they are states, not entities, and that both are produced by the same laws; that it is within the power of man so to present his body to the laws that the state following will be health, not disease.

Correcting disease must have a limit. Where a disease has been running on until enervation is profound, or until the integrity of a vital organ is far spent, coming back to the normal may be impossible.

A patient complains of pain in the chest. On examination, congestion is found. Congestion not being a disease, on further examination a heart derangement is discovered. The pulmonary congestion is due to heart insufficiency. As there are no organic diseases proper (all organic derangements are reflex or secondary), a cause for the heart disease must be found. There may be a history of an infectious disease suffered years before--typhoid fever, rheumatism, or any of the contagious diseases. In regular medicine the primary cause--say, typhoid fever--is gone. The cause, then, is gone; so treatment is given to the heart, notwithstanding the heart lesion is not considered primary. Heart stimulants are given, which revive the organ for a time; but soon it must give out, for the treatment is stimulation, and the cause of its derangements is stimulation. In the first place, it was overworked by fever, infection, and drugs which left it impaired; then wrong eating and other habits, practiced after recovery from the disease that brought on the cardiopathy (heart weakness), prevented the organ from returning to the normal, which it would have done if it had been left for a few months or years to regain its normal tone.

In making a diagnosis, no consideration is given to daily life by the average physician. Because a patient suffered with syphilis twenty to thirty years ago, and today he has lost his faculty of speech, he must be suffering from syphilis. The intervening years of bad habits count for nothing. If symptoms of tabes dorsalis (locomotor ataxia) present, the best doctors doctor syphilis, even if tests fail to affirm their diagnosis. The past twenty to forty years of sensuality count for nothing; the whole trouble is due to a specific germ that has been hibernating in the tissues of the body.

Indeed, if correct living habits are practiced, no disease can remain in the body for any length of time. The body has the power to renew and purify itself, when given an opportunity; and all the opportunity needed is to receive sane care. There can be no hope of a thorough house-cleaning so long as the organism is taxed beyond a reasonable limit by an oversupply of food, by stimulants, by sensual indulgence, and, neither last nor least, by drugs that cause sclerosis.

Morbific cause is often beyond the reach of our remedies, because we are looking beyond the daily and hourly cause or causes for a cause that will vanish as soon as its support is gone.

In the matter of nutrition, many good and intelligent physicians often treat for the removal of an effect of malnutrition rather than for malnutrition--mistaking the effect for cause. Indeed, nearly all the work done by average physicians is on this order.

D. PATHOLOGICAL ANATOMY

A lesion of any structure when healed leaves a scar. Scar tissue is more liable to undergo degeneration than normal tissue, not because it carries a potentiality of the old disease, but because scar tissue is not nourished so well as other tissue and breaks down much more easily.

An inflammation of the urethra that extend to ulceration will leave scar tissue when cured, it matters not whether the inflammation is specific, or brought on by self-abuse (onanism), or from irritation caused by urine strongly acid from chronic toxin poisoning.

The scar tissue reduces the caliber of the urethra. This partial obstruction prevents self-cleaning. All tubes, ducts, and canals that are partially closed--strictured--fail to evacuate and cleanse themselves thoroughly. Hence, behind the strictured point, irritation and inflamation develop--a catarrhal inflammation which gradually lessens the caliber and finally develops complete obstruction. If the trouble is of the eustachian tube, noises in the head, ringing in the ears, and deafness follow; if of the urethra, slow and difficult urination from obstruction of the urethra and bladder irritation follows, and, as a result, lost coordination is liable to result from reflex irritation. In esophageal, stomach, or bowel obstructions, ulcerations and cancer are liable to follow, with all the evils accompanying partial to complete obstruction.

Primarily there must be a chronic state of toxin poisoning and pronounced diathesis before local inflammations of mucous membranes can take on chronic irritation, inflammation, ulceration, cancer, or syphilis . If a chronic state of toxin poisoning is not developed and maintained by bad habits of life, accidental irritations and nflammations will pass away from lack of support-from a lack of daily fuel supply. The truth of this can be proved at any time by noticing how quickly and well inflammations heal in those who are free from dyscrasia. and intestinal putrefaction. And another proof may be worked out-namely, correct the chronic toxin poisoning, and a stop will be put to all silent, subacute, inflammatory hyperplasia.

I have found no better definition for disease than the following: Disease is the morbid process considered in its entire evolution, from its initial cause to its final consequence; affecton is a morbid process considered in its actual manifestations, apart from its cause.

The so-called diseases, such as heart diseases, rheumatism, typhoid fever, pneumonia--in fact, every disease named in medical nomenclature--are in reality only affections. Real disease is perverted nutrition, caused by toxins generated within or without the organism. It is this chronic state of toxin poisoning that breaks down resistance and allows affections to develop. Such affections as cold --catching cold in the winter time, hay fever in the summer time, and asthma in both winter and summer--are affections resting on a base of diathesis sensitized by toxemia. The more pronounced the diathesis, the less the natural resistance, hence the harder to overcome the disease, which is chronic toxin poisoning.

All affections, commonly called diseases, are "hors de combat without a culture-medium-=a body prepared by chronic toxin poisoning--in which to develop.

E. SYMPTOMATOLOGY

1. The Patient

As it is the physician's business to cure the sick (at least, that is what nearly all laymen, and perhaps ninetynine and nine-tenths per cent of the profession, believe), those who are uncomfortable or in pain place themselves under the care of a physician to be made well, and when the pain is gone a cure is supposed to have been wrought.

The patient presents symptoms, some of which are subjective and a part of which are objective. The subjective symptoms are those about which the patient knows, while the objective symptoms are the changes of the exterior and interior about which the physician knows.

The subjective symptoms are those that have developed in the consciousness of the patient. They may have come on rapidly, or they may have come on very slowly.

The history of disease is that of a coming-on and a going off of discomfort; and on the revolutions--the cycles--made by diseases rests the reputation of all systems of palliation. The patients feel bad, and the doctors of high and low degree, representing schools whose scientific data--theories of cause and cure--are poles apart, and whose therapeutics range from conceit to the fanciful and on to the grotesque, gather around their victims and administer their "dope;" when, behold! as if by the touch of the lamp of Aladdin, the victims are blessed by the remedies, in spite of the fact that these are as opposite in their specific actions as it is possible for them to be. Yet the sufferers are "cured"! Of course, it matters not if the patients are sick again in a week, or a month, or a year, with the selfsame disease--another fanciful "cure" is made, which again our doctors and patients celebrate in the usual way, by telling in scientific terms just how it came about, even the wisest among them being ignorant of the fact that the natural progress of all disease is rhythmical or cyclical--better and worse--until the organism is broken down, and then the patient is better and worse, but never well, until death gives full relief.

It is the history which the patient recites to the physician; and it is the physician's business to weigh, analyze, and criticize what the patient tells him, and, by a physical examination, to determine just what the derangement of body is.

It should be borne in mind that the diagnosis of the exact derangement--discovering just what organ is affected, and determining whether the disease is functional or organic innocent (benign) or malignant--is very far from discovering the primary and insidious cause, without which discovery the treatment must be palliative. There is no cure short of removing the primary or initiative cause. If the initiative cause has passed away, then the secondary cause, which is doing primary work, must be discovered and removed.

The patient may be making his first call upon the doctor. He may be having his first pain or discomfort, or he may have had many attacks of sickness and pain.

The discomfort that caused the patient to seek relief may be a link in a chain of morbid derangements leading back to childhood, or even infancy--not on the order of heredity, for nothing is inherited except a predisposition to be sick in a given way; but if the tendency ever becomes a realization, habits that pervert nutrition must be practiced long enough to break down resistance and start the morbid tendencies to work.

It is necessary to get all the history of the life of the patient, and, when possible, the family history, age, sex, habits, occupation, temperament, beliefs, environments, mode and manner of the care of the body.

It is necessary to know all about the life which the patient is living, and all about the life which he has lived, if he has changed his style recently. It is not only necessary to know the physical habits of the patient, but his mental habits as well; and, in addition, the physician must have the confidence of the patient and know his secret life. The physician must enter into the relationship of "father confessor" with every important case that calls upon him. If he has not the personality to secure this confidence, and draw out the secrets that are hidden in the occult chamber of the individual's soul, he is not possessed of those qualities of character which make for healing. The doctor must have sympathy--not, however, without firmness and sternness, when necessary. The quality of selfishness in a doctor must be covered by a very large coating of politic politeness, or he will not draw patients, and certainly will not be a physician at any time. If his selfishness is pronounced, it is liable to be subconsciously interpreted by the patient, and this knowledge kills influence.

Lost self-confidence, self-respect, and self-control are the psychical elements with which the patient contends in chronic diseases, and which make management of a cure impossible for the selfish, vain, and unsympathetic doctor; for only the sympathetic can draw confessions--and confession is necessary to cure.

It is well, this early, to disabuse the mind of any reader of the idea which he may have that a successful curing system is, or can be, based on a set of cut-and-dried formulas. Indeed not; every case is different and a law unto itself. The only thing that is fixed and unchangeable is the natural laws within and without the patient. It is our attitude before the law that determines health or disease. If our actions agree with the law of our being, or the environment, all is well.

Health results from an agreeable adjustment of the body and mind to natural law and order; and impaired health--a lowered health standard, called disease--comes from disagreeable adjustment of the body and mind to natural law and order.

Diagnosis is determining the symptoms and learning just what is the cause of the morbid process, and its effect on the body.

I practiced medicine in the orthodox manner for twenty-five years. A number of those years were spent in determining just how much my treatment had to do with the recovery of my patients, and how much it did not. Little by little my drug superstition sloughed off. Not rapidly, but little by little, I learned that the physician is a woefully deluded man.

In the first place, it is most unscientific, not to say senseless, for medical colleges to teach clinical medicine, using as subjects men and women broken down in mind and body from years of bad habits, and to use, as a teaching force, medical men who do not consider the influences of the daily habits of mind and body as factors in producing disease. As proof of the folly of such teaching I cite the growth and prosperity of Christian Science, which has proved such a haven of rest for millions that have escaped the barbarous practice of "scientific" doctors who were struggling in a medical way to medicate, vaccinate, inoculate, extirpate, serumize, immunize and demonize patients, but succeeded only in teaching all a large sick habit. Christian Science has always builded better than it knew; but this is one of nature's compensating acts. The regular profession builds in an inferior way with what it knows. Selfishness, snobbishness, and bigotry have blinded the eyes and dulled the understanding of medical schools, as ignorant conceit and religious superstition have blinded the eyes and understanding of Christian Science.

Each system is standing in its own light, and prefers to be wrong rather than to give up its selfish advantages. The medical schools teach without any adequate means of finding out what the habits have been and what part habits play in the evolution of disease. Of course, habits are talked and written about; but, so far as applying the knowledge in the healing of disease is concerned, the subject is a dead letter; it does not enter into consideration, except in the most casual and perfunctory way.

There is but one way to learn of the amount of influence exerted by physical and mental habits--what part they play in a given case--and that is by inducing the patient to give them up, while the physician stands by, keeping hands off, watching nature eliminate and readjust. If the doctor cannot be satisfied to do nothing, except watch nature clean house and see to it that the work is not obstructed by the patient's bad habits or by his medical superstitions, he can never cultivate a dependable working knowledge of etiology; and without such knowledge he must remain in a mentally chaotic state concerning cause, effect, and cure.

Our present scientific teaching leads us through a "fool's paradise" of examinations, using instruments of precision to palpate, auscultate, and percuss; chemically analyze the secretions and excretions; microscopically examine the secretions, excretions, and every fluid and solid of the body; bacteriologically examine the entire body--the exudates, the transudates, and the expectorates; aspirate from every secret chamber of the body, analyze the fluid in every way possible, and then spend weeks in bacterial culture; X-ray every suspicious location, and radiograph the same. After all this examination, the diagnosis is "hung up", and the patient is sent away on suspended judgment, to return again in a few weeks or months to go through the same ordeal. This may be somewhat overdrawn, but certainly not in a few aggravated cases of mania in diagnosis.

What are the real causes of the bodily derangements which send professional gentlemen and their diagnostic specialists and experts through this "fool's paradise" looking for something that is not found in this glorious Eden? What is that elusive something that evades the microscope, stethoscope, test-tube,

analyst, X-ray, and every other instrument of precision, and every analytical, synthetical, deductive, inductive, and seductive diagnostic procedure?

It is life--a state that is commonly referred to as health. It is not an entity--a something to see, hear, taste, smell, or feel.

Health is the meter by which life is measured. When health is below a certain standard, we think disease; we lose the thought that impaired life--the state we call disease--is a lowered health standard, and that there is no such thing as disease.

The primary entities with which the physicians have to do are man and his environment. These are both good and adapted to each other, or they could not exist together. Man did not evolve until his environment evolved him. I assume that, inasmuch as nature never stultifies herself, man and his habitat are suited to each other and are potentially ideal, and that, if the unideal evolves, it is because of a maladjustment which is easy of readjustment.

I further assume that it is the doctor's duty, if he would be a physician, to throw his whole power of intellect into the study of why an environment that produces man also destroys him--why benign and life-imparting influences become malignant and life-destroying influences; and I invite any medical man to try successfully to refute my declaration that there is not one influence in man's environment which is not for his good, if he (man) is properly adjusted to it.

What should etiology be? Learning all about the influence of everything that affects man's body and mind. In this study we find that everything necessary to life, liberty, and the pursuit of happiness may be enjoyed to excess, and that, when it is, it enervates--lowers the standard of health; which means that functioning is impaired and self-poisoning takes place by retention of excretions. When this state is brought about, man loses his normal adjustment and every environmental influence has an exaggerated effect upon him.

If he has lowered his resistance from overeating, overwork, worry, fear, overindulgence in any of his physical or mental pleasures, every influence to which he was once normally adjusted affects him uncomfortably. If he undertakes to eat as formerly, he suffers from indigestion; if he works or undertakes to indulge himself in previously enjoyed habits, he is made uncomfortable and to suffer. One to three cigars distress him, whereas once a dozen could be smoked without any apparent subjective symptoms. The hopelessness of this situation lies in his remembrance that he once could smoke, drink, and otherwise indulge his sensual nature without discomfort, and in his belief that if he can find a doctor to "cut out" his disease, or cure it by some scientific means, he may return to his old flesh-pots. He knows very well that he could once indulge; he is quite sure he may again, if a cure can be found; and on this fool's errand he can find doctors and healers galore to accompany him. We have "perhaps the largest surgical plants in the world" just for the purpose of cutting out disease, so that the victims will not be put to the inconvenience of cutting out their bad habits.

The enervated man cannot indulge himself with any of his former sensual pleasures without being thrown into a state of discomfort. He and the medical expert go rummaging through the dump-pile of primary, secondary, and tertiary symptoms--a few of which are: impaired blood, functional and organic changes in various organs of the body, deranged secretions and excretions, etc.--hoping to find cause. Certainly a fool's errand, when, if they would reflect, they should notice that after every enjoyment the sick man is made worse, and after every disappointment in gratifying appetite and passion he is made better.

In this connection it may be well to give a few of the bulletin reports of the scientific activities of the doctors in their treatment of one of the world's most distinguished patients, showing how innocent the profession is of the grotesqueness of its scientific conceits:

> "The queen is sinking. She is unable to take nourishment. Her medical attendants declare that she can last but a few hours." At the expiration of twelve to twentyfour hours: "The queen has rallied, and is able to take nourishment. The doctors declare that there is a chance for her

recovery, barring complications."

What complication or complications could spring up? What causes complications? In this case the complications were obvious enough to any mind not under the spell of medical science.

Complications usually come from the treatment and nursing.

> "The queen is sinking. The rally of this morning was followed by a sinking spell, and she is again unable to take nourishment. Heart tonics given hypodermically keep what little life there is from ebbing away. Only the superhuman skill of the doctors prevents death from claiming the great woman as its bride."

"Verity, every man at his best state is altogether vanity. Selah." Superhuman conceit killed the good woman before her time.

> "During the night the doctors watched at the bedside of the distinguished patient, watching with bated breath the ebb and flow of the declining energies. Once or twice the family was aroused to view the grand queen and mother of the greatest empire on earth, while there was still a little life left in her body. All efforts at keeping life in the aged queen was abandoned at midnight." Next morning: "Most extraordinary, the unexpected happened! The queen rallied, and at this cabling is taking nourishment. The doctors fear, however, on account of the queen's great age and the weakness of her heart, that the rally will only be temporary. Sir John Blatherskite, an eminent heart specialist, was called in consultation, and he favors strychnin for the heart. This heart tonic will be given in place of digitalis, which has served long and well."

If we of the profession could see how childlike and silly much of our boasted science is, we could then see how like grandstand acting are

The queen did die--not, however, until these disgusting medical bulletins were repeated often enough to have put the whole world "wise" to the stupidity of medical science as practiced, and the shallowness of medical thinking, if the world had been capable of cutting loose from precedent and doing a little bit of independent thinking.

The profession is so used to looking to the unusual, the mysterious, the occult; to finding a cause for disease, instead of recognizing the fact that there is no disease per se--only a normal, supra-normal, or infra-normal state of health, and that these different states are brought about by different degrees of environmental stimulation.

All that can be discovered by examination, be it superficial or scientifically elaborate, is the effects of influences or causes which have passed out of existence, or which are still existent, or which have caused secondary causes before passing out. Scientific medicine spends its force on effects; the real causes are left undiscovered.

For example: A subinvoluted uterus, or a misplaced uterus, may be crowded by intra-abdominal pressure, causing a misplacement and perversion of circulation. The return circulation may be sufficiently impeded to cause a passive congestion and an enlarged hyperplastic state to develop; and the larger the growth, and the more constriction and impeding of the circulation, the larger the tumor (fibroid--for that is the character of this morbid differentiation), until restricted by the pelvic walls. This resistance to growth restricts the size and hardens the tissues. If, however, the tumor drags the uterus into the abdominal cavity, it will then, being freed from restraint, take on new and more rapid growth, sometimes filling this cavity equally to the size attained at full-termed pregnancy.

In this case the primary cause may be a catarrhal inflammation at an old placental site; or a catarrhal inflammation of the mucous membrane of the virgin uterus, due to exposure during menstruation, may take on hyperplastic growth, causing an enlargement of one side of the walls of the uterus. This causes a flexion, and a flexion always impedes the circulation, and a fibroid growth follows. All growths are the result of impeded circulation. When the circulation becomes so mechanically obstructed as to bar the

entrance of oxygen and an exit of waste matter, degeneration takes place--malignancy carries off the patient. The cure must be restoration of the return circulation by removing all pressure that causes misplacement.

2. Appearance of Patient

The patient's appearance will tell whether or not he is able to meet the requirements of existence. He looks able to carry on his work--his particular occupation- or he does not. If he does not, he will give the appearance of being sick with either acute or chronic disease.

At the bedside the patient may look robust, sick, collapsed, bluish or cyanosed, thin, fat, with thick and short neck, or long and slender; he is on his back with legs extended, or with the legs drawn up; or on the side with legs drawn up against the abdomen.

The patient may be unable to give a history or describe his symptoms.

Decubitus (Lying Down).--The manner of lying is significant. On the back means exhaustion. This is the position when a patient has lost consciousness.

In a faint or anemia of the brain, the head drops; in congestion of the brain, the head must be supported on several pillows; in asthma of the lungs, bronchi, or caused by the heart, the patient must have much pillow support.

In heart disease the patient lies upon the right side. A normal person can lie on either side equally well.

When heart disease is advancing to the fatal state, the position is sitting, with head and shoulders supported by pillows.

Pain in the abdomen will cause the sufferer to press upon it, or lie on a pillow. Pressure gives some relief. When the pain is intense there will be twisting and writhing.

In peritonitis, appendicitis, cystitis, gallstones, cancer of the stomach and bowels, the tendency is to draw the legs on the abdomen. In peritonitis, the patient will usually be on the back, with legs drawn up.

In gastric ulcer, when suffering with pain, if the ulcer is in the front wall of the stomach, the patient will lie on his back; if the posterior wall is the location of the ulcer, the patient's position will be lying on the abdomen; or upon the right or left side, if the disease is of the right or left side. These positions relieve pressure on the ulcer.

In tubercular meningitis, the child lies on the side, with legs strongly drawn up against the thighs.

Facial Expressions.--Disease as expressed in the face and posture.

Facies cardiac (heart): An anxious expression seen in the early stages of chronic valvular disease.

A purple or bluish appearance of the face, especially about the eyes, temples, and ears, with veins showing on the nose and sometimes on the cheeks, intensified by lying down: Caused by high blood pressure and an approaching dangerously plethoric state of the body.

Hepatic face: An earthy appearance; yellow tinge, jaundice.

Hippocratic face: Indicating rapid approach of death--pinched nose; hollow temples; eyes sunken; ears leaden and cold; lips relaxed; skin livid, and if the skin is pinched it returns slowly to the plane from which it was pinched or drawn.

Ovarian face: Features emaciated and sunken; anxious expression; forehead furrowed; eyes hollowed; nostrils open and sharply drawn; lips full and compressed; angles of mouth drawn and wrinkled, puckered but protruding"fish mouth."

The stupid face is that of typhoid.

Gastric face in children: A white line around the mouth, extending up by the side of the nose, shows irritation from improper feeding. Add to this sign pungent breath and vomiting, and the child has gastritis.

Gastric face in adults: Chronic irritation of the stomach in adults is indicated by a dragging-down of the comers of the mouth. Add to this drooling or driveling of saliva, and the indication is of starch poisoning; and if there is a broad, pallid tongue, the evidence is strong for overeating on starch.

Hysteria is marked by staring and an ecstatic expression.

Epilepsy is marked by a stupid face after an attack.

Protruding eyes and expressionless face in Graves' disease.

They lypermaniac has sadness written in his face. In general paralysis the countenance is composed and satisfied. The enebriate has trembling bps and a wandering expression.

The child with enlarged tonsils and adenoid growths has a stupid expression; the mouth is open, the lips hanging; the nose is expressionless.

The red nose, enlarged veins, bluish lips, cyanosed cheeks, and puffiness of face of the drinking man are called the mitral face. Where the aorta is diseased there is intense pallor. In Bright's disease the face is swollen and white.

The signs of croup are well known, but the type of disease is not so easily told. There are coughing and suffocating when a foreign body is in the air-passage.

Expiratory disturbance is marked by flushed face, puffed and bluish; the eyes are suffused, and the veins stand out.

In marasmus the features are drawn, the furrows deepened, the neck hollow; emaciation is marked, and, when profound, the whole appearance is that of the monkey.

The consumptive appearance is that of emaciation; protruding, flushed cheeks; pinched nose, with flaring nostrils; short, quick, jerky breathing; halting speech, and more or less suppressed voice.

When the face looks smaller--shrunken--and the nose is thin, long, and drawn, the bones prominent, the skin pale and covered with cold sweat, and, when drawn or pinched, the fold remains for some time, this is the facies of peritonitis, intestinal obstruction, renal and hepatic colic.

Fainting: The heart stops; the patient turns pale and falls motionless, but there is no distortion of the face; breathing is suspended.

Apoplexy: The patient is motionless and lies on the back; all animation is suspended; only breathing and pulse continue; the breathing is noisy, and gradually grows more stertorous. If the patient does not react and improve, the breathing and heart action gradually decline, the skin becomes drawn, the nose thinner and longer, the eyes dull, partially closed, glassy. The breathing stops, starts and continues, until it finally ends with a slight bodily convulsive movement.

Physical appearance must be noted--all deviations from the normal mean something.

Deformities, such as rickets, shorten the stature and cause the head to appear too large; the spine is incurved, the pelvis is deformed, the limbs are curved, the ribs project forward.

When the muscles become atrophied they cause general deformity.

Alterations of the heart or lungs cause deformities of the chest.

The bowels are often too large and distended from gas, fat, or ascites; in fevers, from tympanitis and inflammations.

Enlargement of the liver or spleen causes a large abdomen in the upper region; in the lower abdomen, enlargement may come from tumors, distended bladder, or a gravid uterus.

A large swelling at the base of the great toe, with the toe pointing outward, indicates a bunion. This deformity usually means that there is a slight rheumatism. Deformity of the third joint of the fingers--nodes of Heberden--means arthritis deformans. The nodes of Bouchard on the second joints of the fingers indicate dilation of the stomach--a disturbed nutrition from overeating of the carbohydrate foods. Joint distortions indicate gout, rheumatism, or injury; not infrequently they mean all of these. Frequently injury is complicated by rheumatism.

Hippocratic fingers (clubbing of finger-tips, with incurving nails) indicate heart or lung disease--scrofulous diathesis.

Skin.--A straw-yellow hue is found in cancer cachexia.

Paleness may be from anemia, dysemia, leukemia, amyloid degeneration, or Bright's disease.

Articular rheumatism is marked by paleness, and profuse sweats with strong acid odor.

Anger, fear, and jealousy cause paleness. The cause is vascular spasm. Fainting causes pallor.

Plethoric people are too red in color. A florid complexion means the sanguinous temperament and does not mean too much blood.

Unconsciousness may be from syncope (fainting). The face is pale; either no pulse or very light; the breathing very low and quiet. There are no signs of distress; the face is usually composed.

Cerebral Derangements.--If unconsciousness is preceded by spasm, the cause may be kidney disease--uremic coma. Symptoms may be headache, and flushed face with veins standing out. This means congestion of the brain.

A diagnosis--a decision as to the character of a disease and its cause--requires a close examination into the social life of the patient; the family history; the history of previous disease, and the diseases of the family as far back as possible; the history of the present disease; the history of family habits as well as the habits of the patient. It is necessary to know all about the personal habits of the patient, secret as well as open. The eating habits must be known--even to knowing exactly what is eaten at each meal daily. The sex life must be known--the early abuses, as well as those coming later in life.

A diagnosis, so far as determining that a certain organ is affected--for example, that the kidneys are diseased, that the patient has diabetes or Bright's disease--is far from conveying to the physician's mind an idea as to the true cause of the disease. It is true that the physician sees in his mind's eye hepatic insufficiency, or a failure in the dehydration of glucose in the walls of the intestines. But as to what has caused the malnutrition, in what way the patient has brought on his enervation, and what are his habits, the physician knows nothing from the test-tube, which only tells him that there is sugar or albumin in the urine. The diagnosis, so far as naming the diseases is concerned, may be correct; but no information is conveyed to the mind of the physician as to the primary cause of these diseases. Even when germs or parasites are given as cause, this manner of diagnosis throws no light on the question of why germs and parasites do not cause disease in all whom they infest.

Analysis of symptoms, examination of all secretions and excretions, and palpation and auscultation of all organs, amount to a scientific examination of effects; but a positive diagnosis throws no light on cause. Causes must be found and associated with effects before a curing knowledge can be possessed.

Diagnosis may be very correct, so far as effects are concerned; but cause of effects must be known.

It is necessary to know a healthy man. What are the signs of health?

The eye and the skin are clear. The outlines are normal. Those whose lines are obscured by fat are not healthy. Women who weigh over two pounds to the inch in stature are too heavy. Men who weigh more than two and a half pounds to the inch of stature are too heavy and are diseased.

Women and men who weigh much less or much more than the standards named are diseased. By diseased I mean that they give down early; they have not the resistance they should have; they age rapidly; and come to a premature grave.

A healthy body will desire only normal, natural, and simple foods.

Normal health is rare indeed. This being true, is it so very strange that so few live to one hundred or one hundred and twenty years of age-the normal lifetime of a human being?

A Normal Person--Hunger

A feeling of contentment after eating, and no discomfort.

A desire for fresh uncooked fruits, vegetables, and little, if any, seasoning, or thirst for water. Hunger is always moderate.

Urine amber, clear, and with a pleasant bouquet. Heat and acids have no effect on it. Passed with comfort.

Bowel movements should be brown, molded, but not hard; not offensive, and regular.

Skin should be soft, warm, moist rather than dry, and smooth. No disagreeable odors.

Hair is full, long, and possessed of sheen.

Lungs do their work without discomfort and through the nose.

Sleep is long, quiet, and refreshing.

Work and play are pleasurable.

When trouble comes, when disappointments and losses come, they are soon brushed aside and poise is regained with a resumption of interest in life.

Is not envious, jealous, spiteful, nor given to irritability or temper.

Mind is bright, alert and quick to learn. All attention.

Is honest, truthful, generous, kind, forgiving, economical, and philanthropic.

When sick, recovers more quickly because optimistic, and submits more gracefully to the chastening rod of correction; endeavors to get the benefit of the misfortune by reflecting on the cause, and endeavors to avoid a repetition by correcting the life.

An Abnormal Person-Appetite

A desire for more; dissatisfaction and a feeling of discomfort; gas and belching; acid stomach.

A desire for highly seasoned foods, alcoholics, tobacco coffee, and tea. Appetite is always driving; much thirst.

Urine cloudy, full of sediment, bloody, dark, odorless or rank of odor. Passed too often and with discomfort.

Bowel movements are green, gray, yellow, or white, and form into scybala (lumps). Or they are watery, bloody, wormy, and offensive to smell.

Skin is moist to wet; hands and feet cold and clammy. Always wet under the arm. Disagreeable odors from the perspiration under arms and feet.

Hair is thin, lusterless, and dry.

Lungs show asthma, cough, expectoration.

Sleep is fitful, restless, dreaming, and leaves tired on waking up.

Work is disagreeable and tiresome; no pleasure taken in recreation.

Worry, worry, worry, without much excuse. No interest in life. When trouble comes, the life is devoted to worrying.

Is very irritable, spiteful, revengeful, jealous, envious, quick to lose temper.

Mind is dull, slow, and learns with difficulty. No power of attention. Inclined to sleep, yet insomnia at night.

Is dishonest, deceitful, stingy, selfish, unkind, wasteful of other people's property, even when selfish and miserly with his own.

Recovers slowly because mental attitude is that of irritability and impatience. The abnormal person does not learn from experience. Everybody is to blame for his misfortunes, except himself. He is incorrigible.

A very good standard for health is the ideally beautiful--beautiful in body and mind.

Those who would know a sick man should study art. The artistic represents health, both of body and of mind. Then, to know the sick, contrast them with the normal--the ideal.

Post-mortems tell nothing except how terribly the body may be abused before it dies. Yet the dead organs can tell no tale; they cannot stand up and accuse their traducers, nor tell the manner of abuse.

The modern, popular idea of beauty and health is that the body should be incumbered with fat. Stock shows furnish a type of beauty that fits the modern sensual conception of what beauty consists of. Sensuality dominates everything in modern life. Even medical science, in catering to modem sensualism, has won the everlasting gratitude of Bacchanalians and gluttons, by offering the germ as the cause of disease, and tacitly freeing them from all restraint and giving them license to do as they like. Of course, this will be disputed, but I back my statement by referring to the patients themselves.

3. Pain

The evidence of pain. The patient complains of pain, and directs to its location by placing his hand on the part, or as near to the part as he can.

How much pain has the patient? He may be sensitive, imaginative, and inclined to exaggerate; or he may be frightened. On the other hand, he may be reticent and fail to tell the truth about his suffering. Again, he may be too ignorant to give a clear account of himself.

These are a few ways of learning of pain:

(a) Facial expression and bodily movements;

(b) As described by a friend or nurse;

(c) Results, such as weakness and emaciation from long suffering;

(d) Arterial pressure.

When a patient's face is contorted and his body writhes, doubles up, or stiffens, we have good evidence; yet he may be malingering (acting). However, the experienced physician will not be fooled long. It may take a little watching when the patient thinks he is alone. If he really suffers, he will suffer alone as well as when someone is near.

Many are sorry for themselves and make more complaint than necessary; others complain to secure sympathy. The real physician will discriminate, while the doctor is never anything but an amateur. The former cures his patient by imparting assurance; the latter adds to the disease by first discouraging and then operating.

When a patient who looks well declares he has been suffering for months, and he has not lost weight, and there are no objective signs, such as impaired circulation and heart action, and no tumor at the point where the pain is said to be located, it is safe to treat him as a malingerer or a self-deluded individual.

If nervous, imaginative, and self-deluded patients, describing their suffering as "awful ... .. fearful," "I liked to died last night," "I thought I was a goner," etc., are examined for patellar reflex, this movement will be found greatly exaggerated. This proves that they are very sensitive to pain, and should be questioned regarding eating; and it will be found that they eat much starch, and use coffee and other stimulants. Many will be found to have toxin poisoning.

Women bear pain--prolonged pain--better than men. The reason for this is that they are more self-controlled than men. Man is more self-indulged, hence less able to stand pain.

Types of Pain.--There are many kinds of pain; namely: boring, tearing, lancinating; a feeling of pressure, of heat, of cold, of hunger; a feeling of all-goneness, fullness, emptiness.

Colic is distinctive. It is rhythmic--the patient does not suffer all the time. It begins gradually, and increases to a climax; then subsides, to repeat again. Such pains are characteristic of canals: the intestinal, urethra, ureters, uriniferous tubules, bile-duct, eustachian tube, uterus, and fallopian tubes. An inflammation of these tubes and canals is accompanied by rhythmical pain.

Throbbing Pain: Pain that rhythms with the heart and pulse is caused by hyperemia. Headache and toothache are types. Any inflammation that is accompanied with enough swelling will have a rhythmic pain.

Precordial Oppression: This is a feeling of constriction. Angina pectoris is a type of this pain. This pain is of the heart. Affections of the pleura or lungs give no such pain. Asthma is a feeling of suffocation. It differs from oppression in the fact that it is difficult to draw air into the lungs, whereas in heart oppression there is no difficulty in getting air into the lungs, but it appears difficult to extract the oxygen, and the patient feels that he will die of suffocation.

Reflex Pain: When reflex pain is from angina in the lungs or abdomen, resembling indigestion, rheumatism, neuralgia, or neurosis, it may be relieved by rest, but not with the usual palliatives.

Shooting pains are usually neuralgic.

Relationship of Pain to Other Facts Connected with Disease.--Time of recurrence: If regular in time-say, every day or every other day-the cause may be malaria. Pains that are worse of a morning and wear off during the day are nervous headaches and joint inflammations. Pains accompanied with fever and infections usually grow worse toward evening. Fever always runs higher in the evening.

The position of the body: If the legs are drawn up against the abdomen, the pain may be in the bladder, the uterus, the bowels, the gall bladder, or may be due to pyloric disease, ulceration, or cancer of the stomach.

Inflammations of the organs in the abdomen and pelvis are made worse by standing or walking. Lying

down relieves.

When the bowels are distended with gas, or there is an accumulation of fat in the abdomen, such derangements as misplacements of the womb, piles, pelvic tumors, and cystitus (inflammation of the bladder) are all made worse by being on the feet.

The pains peculiar to chronic joint diseases and muscular rheumatism are made worse by staying in bed.

Pain produced by taking food indicates gastralgia, gastritis, ulcer, cancer, obstruction of the pyloris, gallstones, etc.

Enteritis, obstruction, and appendicitis are made much worse by eating. A few sips of milk will start peristalsis, and when obstruction or appendicitis exists, the patient will be thrown into great distress. Pain that is not made worse by eating is not caused by obstruction.

Pain that is frequently mistaken for appendicitis is caused by colitis, constipation, proctitis, ovaritis, neuralgia of the spermatic cord, strictures of the urethra, and gallstone or gall bladder disease.

Relief from drinking or taking food indicates gastric irritation caused by taking fluids too hot, eating too rapidly, overeating, the use of coffee, tea, tobacco, alcoholics, eating between meals, or gum chewing.

Damp weather, by chilling the surface of the body, causes those who are rheumatic to have pain and stiffness of different parts of the body.

Those who foretell storms and changes in the weather are human barometers, made so by a state of acidosis of the body. They have been using a preponderance of foods belonging to the acid producing class, and cooked foods which have had their enzymes killed by heat. Those who suffer headaches--even migraine sufferers--are made worse by meteorologic changes.

Headaches that occur on bright, sunny days, or when the earth is covered by snow, or on train or water trips, are probably due to eye strain.

Sea- and train-sickness is caused from abuse to the stomach by overeating, eye strain, or reflex irritation. Gas in the bowels, pressing on the ovaries, will cause sick stomach. Any neurosis is liable to be aggravated by train or sea voyages. Anything that enervates such subjects will cause them to be bad travelers.

Vomiting that relieves does not indicate that the stomach is diseased, any more than a cough that relieves indicates that the lungs are diseased.

The effort at vomiting shocks and produces reaction, which relieves pain in any part of the body. Pain produced by gas pressure, gallstone, or pain in the kidneys, womb, ovaries, spermatic cord, and testes, is relieved by vomiting. Heat and cold relieve pain. The patient must decide. Heat is more logical.

The sick habit has become a reality in these piping times of great medical discoveries. The habit of thinking sickness, talking sickness, acting sickness, and being coddled and operated upon, has developed an army of people who have become expert in complaining.

The sick habit and the drug habit are products of the medical profession. One of the principal causes is that the doctor must live, and it is to his bread-and-butter interest that every patient applying to him be very sick, or in imminent danger of dying unless operated upon at once.

The average professional calamity howl set up when a patient calls on "the best physician" in the community is quite enough to terrify, shock, and draw the patient's attention to himself and set up a morbid introspection. Once started, the introspection habit builds mountains out of mole hills; and surgical science has developed to such a state of perfection that it can extirpate every symptom of disease, except the disease itself, which is a large sick habit.

Pain Explained.--Every part of the body is supplied with nerves. Nerves, when pressed upon, give out a sensation of discomfort, and discomfort warns that something abnormal is taking place. The worm squirms away from it; the animal runs away from it, as did man in his early development. Man in his ratiocinative state is supposed to reason on the cause, and to remove it; but no, he runs to a mysterious individual, who administers a mysterious remedy, or cuts out an effect; and all concerned are satisfied, and the cause continues.

Nothing but reason, however, will direct man out of the way of harm and help him to understand cause.

When man reasons, he must know that there are two general types of causes for pain--namely, extrinsic and intrinsic. The outside causes, when understood, may be disposed of. The inside causes must be understood from inductive and deductive reasoning.

For example, when we learn that no one will develop angina pectoris who does not use tobacco, coffee, or tea, then man will know how to avoid such an affliction. When man learns that overindulgence in eating meat, or animal proteids, will slowly but surely set up a general lymphangitis and favor the development of catarrhal diseases, from nasal catarrh to tuberculosis and syphilis, he will know how to avoid such diseases. When those suffering from stone in the kidneys, gall bladder, or urinary bladder learn that these diseases follow the neglect of eating eliminating foods, and refusing to eat mineralized foods and drink mineralized water, man can avoid these painful diseases, and become his own physician.

Inflammations in the different organs create pain, heaviness, and fullness in the organs; pain, if the inflammation involves the surface; a dull, full, and heavy feeling, when the disease is of the body of the organ.

A persistent pain at or near the umbilicus is an indication of obstruction, partial or complete, somewhere in the intestine.

Radiation pain may start from an indigestion which causes gas; the gas presses upon an ovary, and the pain in the ovary causes vomiting. The nerve impulse starts in the ovary, goes to the spine, and from this center is sent to the stomach, producing vomiting. The eye strain on a railroad or sea voyage causes vomiting.

Any theory that all pains must be radiated from the spine, or from organs to the spine and from the spine elsewhere, must be limited. The truth is that pain must be taken care of in the storehouses of the nervous system--the ganglia, which are the inhibitors and dissipators of pain, as the lymphatic glands are the repositories and suppressors of toxins.

If it were not for the ganglia, which act as storage batteries for the distribution of surplus energy, the body would be killed from shock, which, under the system of storage batteries, is absorbed and the body is saved the shock.

When a locality of the body is under the continuous stress of irritation, pain must be felt in quite remote parts, because of the transmission, storage, and radiation.

When the batteries of the body become charged to full capacity, radiation or elimination takes place.

Headache results from this overflow. Its elimination causes pain.

The elimination of surplus energy is marked by pains of all kinds, and fevers. Colds and fevers are the unloading of pent-up energy.

Nerves accompany arteries. When much energy is conveyed over nerves, arterial spasms are experienced. Continual overstimulation of the arterial system ends in arteriosclerosis.

If the current of irritation is caused by envy, jealousy, or anger; or from the toxins of alcohol, tobacco, coffee, tea; or from daily decomposition of food in the intestine, with absorption of the toxins or acids or sepsin; or if the shocks come from lascivious thoughts, onanism, or excessive venery, the continual

overstimulation of the arterial system must end in hardening of the arteries, loss of coordination or tabes dorsalis, apoplexy, paralysis, etc.

It is well to remember that pain it not always located at the site of injury or lesion.

When a nerve is compressed, pain is not always found at the point of compression, nor at the nerve's termination. Epilepsy and convulsions generally have a peripheral origin. To be exact, most cases of epilepsy primarily originate in intestinal indigestion, with toxin poisoning; then one or more organs become affected, these affections transmitting their irritations to the central nervous system.

Affections of the spinal cord may manifest at any point other than at the cord. Infantile paralysis is a spinal affection. Its syndrome is impaired nutrition from food devoid of unorganized ferments and basic elements, and the consequent enervation. Resistance is so impaired that extraordinary thermic changes, or depressing physical changes, cause a giving-down of the nervous system, favoring central lesions--cerebral spinal, and meningeal inflammations. The gastric, darting, and girdle pains of locomotor ataxia are peripheral symptoms of a central lesion, and the lesion is caused by toxins.

Headaches are seldom symptoms of head lesions.

Causes of Headache: Anemia, fatigue, hunger, bad air, alcohol, morphine, lead, blood pressure, arteriosclerosis. The headache of old people frequently comes from hardening of the arteries. If examination is made, however, there will usually be found a kidney lesion; but even that and blood pressure belong to the syndrome of arteriosclerosis. Headaches come often from indigestion, constipation, eyestrain, beginning of fevers, brain tumor, and syphilis. A common headache is known as rheumatic headache. It is characterized by spots of "induration," or sensitive spots. This is without doubt the coffee and tea headache, and can be cured by stopping the use of these table beverages.

Refrigeration is said to cause this headache, but coffee and tea make their victims susceptible to cold.

Rachialgia (pain in the back), at the beginning of fevers, smallpox, and the backache complained of by most women are of no value with reference to the location of a lesion. Constipation and uterine disorders often cause much backache.

A common cause of coldness--a feeling of chilliness that cannot be gotten rid of by the heaviest clothing and warmest rooms--is intestinal indigestion; in which case clothing and hot houses are only fuel added to the fire--or, rather, cold added to the chilliness.

I have often told patients suffering in this way that if they would eat more--much more--and put on a half dozen more suits of underclothing, they would stand a good chance of freezing to death.

Neurasthenics usually complain of heat when their hands and feet are cold.

Those who have paralysis agitans are usually too warm.

A pain at any point in the body may be the aura of epilepsy.

A very sensitive state of the abdominal wall, without gas distention, or with a moderate amount of gas present in the bowels, indicates a neurosis. The real derangement may be intestinal indigestion and catarrh of the uterus,

When deep pressure in the abdomen causes no more discomfort than a light touch, the patient is of a nervous type, and should not be subjected to an operation just to relieve her of the notion that she needs an operation.

Hysteria is a hypersensitive state. The hysterical zones are at the top of the head, in the dorsal spine, at the nipple in man, and under the left mammary gland of woman; in the ovarian region, the spermatic cord and testes, and in the patella. It is not uncommon for the knee to be treated for rheumatism, when the disease is of the ovary.

Many men and women are being operated upon today, in our leading "surgical plants," because of pain in the various hysterical zones.

4. Examination of the Patient

In examining a patient, the family history should be obtained; for this gives a clue to predisposing causes and family habits which lead to specific derangements. Then the patient's personal life and habits, mental and physical, must be reveiwed. This information, with analysis of the objective and subjective symptoms, leads to a knowledge of what the patient's illness is; for diseases are the result of broken health laws.

If the patient has pain, this directs to the part of the body affected. It must be determined if the pain is local or sympathetic.

A patient may be sick at the stomach, and be vomiting; yet the real derangement or cause may be of the brain or uterus. If the stomach is treated, the treatment must fail.

Spinal disease may manifest in the joints of the feet and legs. If the physician foolishly treats the pain in the legs for rheumatism, he must fail to benefit his patient. I have met with a case wherein a boy had been treated for rheumatism of the left knee, when his disease was preputial.

Palpitation of the heart comes from stomach derangement oftener than from other causes.

Pulmonary tuberculosis often presents symptoms of heart derangement; and mitral stenosis will cause much coughing, and even hemorrhage of the lungs, which symptoms are secondary to the heart derangement.

(a) Organs of Special Sense

Only the general symptoms are of importance in eye derangements. The special belong to ophthalmology. Photophobia (dread of light) may be due to hysteria, a brain lesion, or an inflammatory disease of the eye.

Ulceration of the cornea is often an index to the state of the blood--often indicates heavy meat-eating, with consequent toxins in the blood.

Dropping of the upper eyelid may mean paralysis of the third pair.

Protrusion of eyeballs, with heart symptoms, indicates exophthalmic goiter. If but one eye protrudes, it indicates a tumor behind the eye.

Long vision, with lost accommodation of light, means ataxia or paralysis. This is the Argyll-Robertson sign. A bright spot before the eyes (scotoma), with loss of power to contract the pupil before a light, may indicate optic neuritis or tabes. If no other symptoms of tabes can be found, it is an eye lesion.

If a person, deaf in one ear, can hear a watch tick, or a tuning fork, placed on top of his head, equally well with both ears, the disease is not central.

When taste and smell are diminished, it is probably due to toxin poisoning, including tobacco, alcohol, coffee, and tea.

A headache is rare indeed that will not get well after the patient corrects his eating and other habits.

A crisis of tears differentiates a hysterical from an epileptic paroxysm.

Purulent ophthalmia is often an indication of gonorrheal infection.

Halos of light, or scintillations passing from a light, indicate indigestion in children.

There are many eye lesions that will pass away when all stimulants are given up. Toxin poisoning must be overcome by eating in keeping with the digestive power. Venereal abuse brings on enervation of the eye and brain, and, unless corrected, no cure can be made. Adopting glasses for many eye defects caused by excesses in sensuality is the height of nonsense.

When noises disturb and prevent concentration, in those who are trained to concentrate or give attention, the nerves are on edge, and the cause is overstimulation--overeating, coffee, tea, tobacco, alcoholics, excessive venery.

If, by applying the ear or stethoscope to the patient's ear, the physician can hear a crackling sound when the patient swallows with his nose and mouth closed, it indicates that the tympanum is intact.

Taste and smell are often much impaired by catarrh.

It can be said that all the special senses are more or less impaired by a style of eating that builds toxin poisoning.

(b) Vasomotor

Sudden redness of the cheeks indicates meningeal inflammation.

The well-known cheek flush of tuberculosis should not be confounded with nervous flush.

Red cheeks of teething children will be accompanied with other signs of teething.

Red cheeks and a white line around the mouth and nose indicate irritation of the stomach; in children, gastric fever, if there is vomiting. These symptoms may precede the eruptive fevers.

Cold, blanched feet and hands indicate vasomotor constriction and have intestinal putrefaction as their cause. When this condition becomes pronounced, it is called syncope of the limbs. The patient may have "dead finger"--a finger or fingers without feeling--and there may develop points of gangrene; or there may be the opposite state--venous congestion or cyanosis, such as occurs in asphyxia--oxygen starvation. The source of toxin poisoning must be discovered and removed, or this state cannot be overcome.

Acute vasomotor disturbances cause hyperemia of the breasts in women. It is too common to amputate the mammary glands, the surgeon diagnosing fluxions as cancer. The careful physician will find an accompanying uterine disease, which, if cured, will do away with the periodical hyperemia of the breasts.

In severe and advanced stages these hyperemic hemorrhages take place in the skin, mucous membrane of the bowels, urethra, ureters--bloody tears, bleeding from nose, lungs, or kidneys. There may be organic diseases, but hysteria should be suspected. Too often the physician is willing to believe the worst--that the disease is cancer.

Dry mouth may be caused by fear, anger, or fever. Salivation (flow of saliva) may mean mercury poisoning, nervousness, neuralgia, cancer, or may be the forerunner of epilepsy.

Sweating is suppressed in neuritis, neuralgia, and brain disease.

Increased urination may be due to polyuria, diabetes, excessive drinking, nervousness, indigestion, hysteria. Fear, anger, and suppression from kidney disease may cut down the amount far below the normal.

In tabes dorsalis there may be hypersecretion of digestive fluids. Hysteria should be suspected. The neurasthenic is inclined to have exaggerations and suppressions of all the secretions and excretions.

(c) Heart

The normal apex beat is a little below and to the right of the nipple. Lying on either side may change the

location slightly either way, A strong impulse should be inquired into; for the reason should be known. The apex beat may be displaced down, or to the right or left. The apex beat must vary in its location. In women the breast development prevents the nipple from being a landmark. In fullness there may be enlargement, and there may be effusion.

By palpating, any undue dullness can be discovered. Pressure over the heart that causes pain indicates either myocarditis or pericarditis. This should not be confounded with intercostal neuralgia or rheumatism, which is strictly local, on or between the ribs.

Percussion.--In examining the heart, there are two zones--namely, a superficial, which corresponds to a lung-dull sound, and means that portion of the heart covered by the lung; and a heart-dull sound, which is triangular- shaped and flat. The lung-dullness is bounded by a line extending along the left border of the sternum, at the lower border of the second rib, and extending by an imaginary curved line reaching the apex of the heart. Then draw a second line from the border of the second rib to meet the end of the imaginary line at the apex, curving it to the left somewhat. The two lines leading downward from the second rib may be called the right and left arms of an irregular triangle; the point where they meet at the top may be called the apex of the triangle; and the line connecting the right and left arms at the apex of the heart may be called the base of the triangle. The flat or heart-dull sound begins at the level of the fourth rib and terminates at the apex of the heart.

The flatness (heart-dullness) of the base of the triangle may be confounded with liver-dullness; but the physician will follow the outline of the liver and make his deductions as to liver and heart sounds.

It is to be understood that the area of dullness and flatness may vary in health, and the variation must be greater in disease.

The principal modifications are:

First, in hypertrophy of the left ventricle, the apex is pushed downward and outward. The flatness is slightly above the nipple.

Second, in hypertrophy of the right ventricle, the apex is pushed outward, and the flatness is slightly above the nipple and to the right of the sternum.

Pericardial Effusion.--If the accumulation is slight, the flatness extends below the apex beat. When the effusion is great, the flatness extends over much more of the chest wall.

Auscultation.--The most important mode of exploration of the chest is by auscultation. It requires a good ear to be educated into reading symptoms by sound.

Location of Sounds.--The aortic orifice is in the right second intercostal space. The pulmonary orifice is in the left third intercostal space. The mitral orifice is at the apex beat. The tricuspid orifice is at the xiphoid appendix.

The Normal Heart Sounds.--There are two sounds: The systolic, or first, sound is caused by contraction of the ventricles. Then there might be a short silence, followed by the diastolic, or second, sound, which is caused by the closing of the semilunar valves on the arteries. These sounds may be represented graphically as follows: The first sound (venticular) may be represented by the following figure: "u" . Then there is a brief silence, followed by a second sound, which is diastolic and longer, and may be represented by -- Then silence, and the sounds are repeated.

The attention must be educated to distinguish slight variations in these sounds. Many normal hearts must be examined to become familiar with the normal sounds. The first deviation from normal may be said to be that of emphasis on the sounds--they are more pronounced. To get the sound, have someone with a normal heart exercise vigorously for a few minutes; then, if the ear is placed to the heart, the sounds will be louder and faster. When this occurs without exercise, it must be caused by stimulation. The stimulation may be from fear or some other emotions, or from the use of stimulating foods or drugs.

An increase of the second sound may be heard at the pulmonary orifice (left third intercostal space), indicating nothing more than a disturbed circulation in the lungs.

A weakened sound may be caused by an accumulation of fat in the thorax, and it may be due to weakness of the heart. If so, it is the first sound that grows dull and finally disappears. This symptom is not so significant as a weakening of the second sound.

When there is an effusion in the pericardium, the heart sounds are muffled and sometimes extinguished.

Disturbed Rhythm.--There are two types of rhythms described by some authors; namely, intermittent rhythm and arrhythmia (irregular, lack of rhythm). Intermittent rhythm is where the pulse beat is suspended, or misses a beat occasionally. These missed strokes are usually followed by a more pronounced systol (contraction). The cause is enervation from stimulation. Perhaps, if there is one class of stimulants, more than another, inclined to produce this state of the heart, it is the coffee-and-roll or toast habit. It means a preponderance of food of acid potentiality.

Arrhythmia is marked by irregularity in the succession of pulses. Then there is a type presenting a prolongation of one of the heart beats or of one of the silent periods. Arrhythmia is also marked by cardiac bigeminate (double), and trigeminous (treble); which means the production of two or three beats, one after another, followed by a natural pause. Then there is the alternating pulse--one strong beat followed by a weak beat; then there are two short strong strokes followed by two weak strokes. The weak ones are not perceptible at the wrist.

There is the fetal rhythm, in which the two beats become similar, and the frequency is augmented so as to convey to the ear the sound given out by the heart of the unborn child.

The fetal rhythm is of unfavorable prognostic significance. lt develops in some cases of arteriosclerosis. Murmur of recall is a modified second sound which is divided into two short sounds. This occurs in a disturbed pulmonary circulation, which modifies the action of the valves, and is found in mitral stenosis.

Galloping murmur is found in two places. One place is at the left heart, a little above the apex beat, and means myocarditis or rheumatism of the heart. A second location, less frequent, is found in the right heart; this can be heard at the end of the sternum, and accompanies gastric and hepatic derangements, especially gallstone.

A murmur that accompanies normal heart sounds is of less gravity than one that replaces them.

Friction murmurs mean friction of the pericardium. They sound like the creaking of leather.

A blowing murmur is a sound like that of bellows. When accompanying the first heart sound, it is called systolic blowing; when with the second sound, it is called diastolic blowing; mesosystolic, when it occurs in the silence between the regular sounds of the heart; presystolic, when occurring before systole; in this case it may be called auricular systolic.

Heart murmurs that disappear on holding the breath are cardio-pulmonary, not endocardial.

Murmurs accompanying the radial pulsations are systolic; those that precede the pulse are presystolic; those following are mesosystolic. The diastolic murmurs accompany the second sound and are more quiet.

During the systole the ventricles contract. If the murmur is at one of the auriculo-ventricular orifices, it indicates that the blood flows backward from ventricle to auricle. This means insufficiency or incompetency of the auriculoventricular valves. When the sound is at the arterial orifices, it means stenosis of the aortic.

When the murmur is diastolic, it Corresponds with the second sound, and means that the blood flows back- ward from the arteries to the ventricle. This is aortic insufficiency. The rolling murmur heard at the apex means stricture or stenosis of the auriculo-ventricular orifice, usually the mitral.

Reduplication of sounds indicates that valve action is not simultaneous and that there is heart strain present, or high arterial tension, as in stenosis or kidney diseases.

Mitral insufficiency often gives out a whistling, musical piping sound. Aortic insufficiency is a mild, soft, and blowing sound. Mitral stenosis is a rolling sound.

When the murmur is heard outward or inward from the apex, or at the left border of the heart, it may be said that it is functional; when in the aortic area to the right border of the sternum, it is organic. Murmurs along the left border of the sternum are organic.

Before it is safe to say that a given murmur is organic, an apex murmur must be heard in the axilla and in the back, and basic murmurs must be heard through the vessels originating from the affected orifice or along the sternum. When aortic incompetency is suspected, the stethoscope may be applied to the femoral artery, and in these subjects to the abdominal aorta.

Ile following are graphic sounds of the heart:

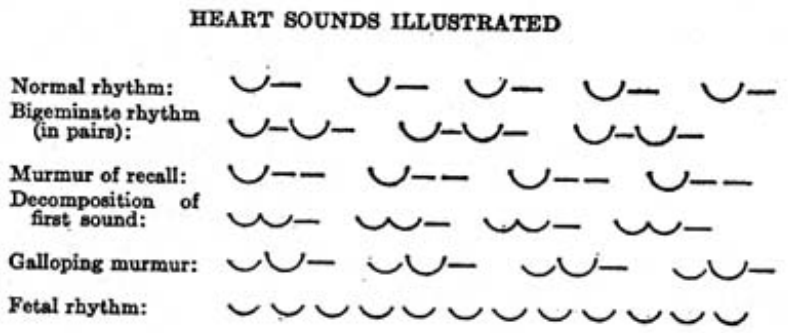


TABLE OF HEART SOUNDS, LOCATION, AND SIGNIFICANCE

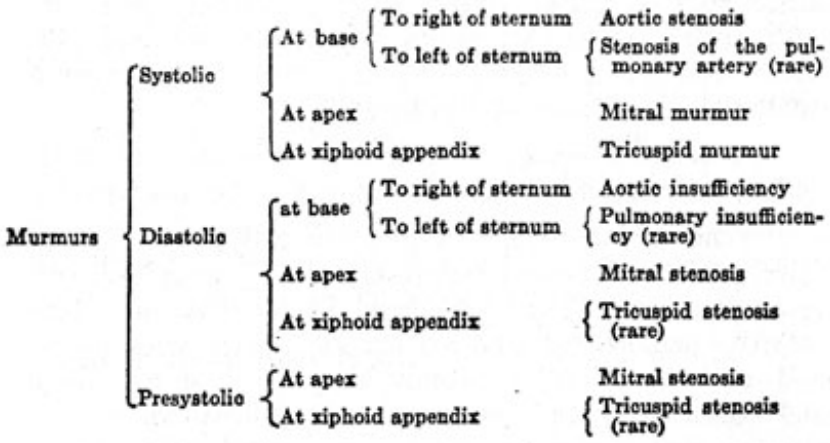
First Sound	Short Silence	Second Sound	Long Silence
Ventricular systole. Heard at apex--apex beat. Felt at radial pulse. Systolic blowing murmer heard at this point.	Mesosystolic. Blowing murmur.	Closure of the semilunar valves between heart and arteries.	Diastole, or auricular systole. Presystolic murmur.

At the first sound, the ventricles close (systole). If there is a murmur at one of the auriculo-ventricular orifices, it is because blood flows back to the auricle. This means insufficient closure of one of the valves.

When the murmur is heard at one of the arterial orifices, it indicates that the blood does not flow through so easily as it should. This means a diminution of caliber. Stenosis is the cause.

Diastolic murmur coincides with the second sound, and means that the blood regurgitates or flows back from the arteries to the ventricles. This means aortic insufficiency--occasionally pulmonary insufficiency. This murmur is heard at the apex and has a peculiar character--namely, a rolling, rather than a blowing or purring, sound. It means stricture of one of the auriculo-ventricular orifices, more often the mitral. Presystolic murmur means the same.

The following table describes the location of the murmurs:



Mitral insufficiency is often a whistling, musical, or piping sound.

Aortic insufficiency is mild, soft, and blowing.

Mitral stenosis is like a rolling sound.

Congenital malformation is marked by a systolic, forcible, vibrating murmur, heard at times in the center of the chest, not accompanied by purring, and heard best over the fourth dorsal vertebra.

Mitral murmur should be looked for in the left axilla; also behind, under the angle of the scapula.

Murmurs of the pulmonary orifice are conducted toward the left clavicle; they stop before reaching the bone.

Aortic murmurs extend toward the right clavicle, and often reach beyond even in the neck.

The diastolic murmur of the aorta passes along the sternum to its end, the xiphoid appendix. The murmur is a soft, blowing sound. There is accompanying this murmur a jerking pulse--a throbbing or dancing pulse.

To sum up: In a weak heart, when both sides are affected, there is observed venous stasis, with functional disturbance of lungs, liver, kidneys, stomach, and brain, with their various symptoms: dyspepsia, dyspnea, local pain, vertigo, palpitation, etc.; with, as termination, dilation and collapse of the heart.

A valvular defect is important as regards accommodation, whereas a dilation has a very serious importance.

Venous stasis from dilation presents cyanosis, turgid veins, with and without pulsation of the jugular and other veins, cardiac asthma, hyperemia of the liver and lungs, catarrh, hemorrhage and edema of the dependent parts and cavities. Cardiac asthma may be due to swelling and stiffness of lung substance from congestion.

Heart weakness may be due to muscular or valvular insufficiency, or both. It may be primary or secondary to other derangements which obstruct the circulation. The liver and kidneys must receive attention.

Congenital Heart Defects.--Potency of the foramen ovale, ductus arteriosus, defects of the ventricular system, and lesions of the pulmonary orifice. Prematurity is the usual cause of these defects.

Symptoms: Cyanosis (blue child-not always present), dyspnea, cough, convulsions, edema, and restlessness.

(d) Respiratory Apparatus

The larynx must be examined with special instruments. The bronchi and lungs present pain in the side, chest cough, difficult breathing, and expectoration. Difficult breathing and dyspnea may be due to either lung or heart affection. It may be reflex; if so, any of the organs may cause it.

Cough may be lung cough, or it may be reflex.

Respiration and pulse normally have a ratio of about one to five.

Cheyne-Stokes respiration belongs to cerebral or meningeal lesions, At first it is rapid and superficial, and gradually becomes more profound. This is followed by a diminution, with a final arrest; then a short period, followed by short, shallow breathing, gradually becoming faster, with a repetition of the former sounds.

Diabetic coma is characterized by abrupt and deep inspiration, followed by a pause; then a quick expiration, and a pause. These types of breathing are due to medullary derangement-possibly toxin poisoning.

Rales are of three types:

Dry or sonorous rales are called rattling when they have a grave pitch; sibilant when acute. They indicate bronchial inflammation or catarrh.

Crepitant rale is like rubbing a lock of hair between the thumb and finger close to the ear. It means pneumonia.

Moist rale has a bubbling sound. When high, it indicates tuberculosis, when of fine bubbles, capillary involvement.

A blowing sound, when heard between the shoulders, indicates bronchitis. It is tubal when it has a slightly metallic or whistling character. The pleuritic murmur has the sound of "i" spoken in a whisper through the closed fist as an ear trumpet. The sound will be modified in keeping with the amount of effusion.

In empyema (pus in the pleura) the percussion dullness will be flat like the liver sound. If the patient will count "one, two, three," while the ear is placed on the chest, the sound conveyed will be far distant-removed; whereas the voice will come to the ear when there is no accumulation.

Egophony.--While the patient is speaking, if the voice comes to the ear with a tremulous murmur, this is called egophony, and is indicative of pleurisy or splenopneumonia.

(e) Digestive Apparatus

The teeth should be inspected--the entire mouth, lips. tongue, and throat. Many stomach derangements are cured by keeping the mouth and teeth clean. Pyorrhea begins with neglect of cleanliness, and starch and sugar poisoning. Scurvy and mercury are leading causes.

"In diabetes the second lower molars are affected, and their alteration serves as guide to diagnosis."

Premature loss of teeth indicates failing nutrition from wrong eating (too much starch and sugar, and not enough raw fruit and vegetables).

The tongue is somewhat of an index, but altogether too much is made of it, as likewise of the temperature of the body, by most physicians.

A broad, pallid, thick tongue indicates too much starch eating. A long, pointed tongue denotes irritation of nerve centers. A small tongue indicates insufficient nourishment. A red tongue, with enlarged papillae ("strawberry tongue"), means great irritation of the stomach. This is the scarlet fever tongue.

Ulcerations on the tongue often mean injuries from teeth. Continual tongue irritation and ulceration should be investigated by a dentist; if not corrected, nocturnal epilepsy should be suspected.

The throat, when abnormally red, indicates irritation of the stomach, tobacco or alcohol poisoning. The throat is an index of the stomach. Treatment of the throat is very far-fetched. The throat will not go wrong unless the stomach or bowels go wrong--no, not even the tonsils. Tonsillitis is symptomatic of wrong eating--wrong combinations.

Many derangements start with an angina; but I insist that all diseases--yes, the eruptive and so-called contagious diseases--get their infective agent in gastro-intestinal putrefaction, and that without this cause they can have no existence. Hence, to cure any and all of these diseases, correct the generation of toxins. To do so is not only curative, but preventive. All so-called contagious diseases are autogenerated. This truth may require years to become popular--be accepted by the profession--but it will come.

Stomach derangements are brought on by abuse at the table. Heartburn means overeating, or too much starch or sugar eating, or all three causes.

A fullness after eating means overeating, or wrong combinations, or too rapid eating, or too much fluid with meals.

Flatulency.--Gas means overeating, or waterlogging with too much fluid intake. Navy beans, peas, sweet potatoes, apples, and other foods cause gas. Apples and other fresh fruits cause gas in those who are starch-poisoned. The habit is built by much water drinking between meals. Constipation is built by gas distention and too large fluid intake, forcing the kidneys to do the eliminating for the bowels. The present universal habit of water drinking to overcome constipation is another medical fallacy.

The tired feeling of a morning means food poisoning--toxemia. The physician should know the influence of food taken in excess, the influence of wrong combinations, and the influence of all mental and physical habits; then he can prescribe intelligently.

Vomiting.--In case of indigestion the vomitus is usually acid. It is alkaline in cases of catarrh and cholera.

Vomiting may be watery, alimentary, bilious, fecal. hemorrhagic, or purulent.

Aqueous vomiting is often viscid and soapy because of the presence of mucous. It is seen in alcoholic gastritis, ulcer, cancer, sick stomach, and cholera.

Alimentary vomiting is of food recently swallowed. Bilious vomiting shows the bile in the ejected matter.

Fecal vomiting is of the contents of the bowels, and means obstruction.

Blood vomiting may be hemorrhage of the stomach. If bright red, it means ulcer; when dark and like coffee grounds, it indicates cancer.

False membranes, and long casts of mucous, are sometimes passed. These indicate muco-entero-colitis.

White, jointed, tapelike appearances may be tapeworms. If found, watch should be kept for a few weeks. If there is really a tapeworm, portions of it will pass almost weekly.

Stomach

Deformities are often produced by corsets. The organs are pushed down; then there is compression from the liver being forced against it. Indeed, the stomach may be pushed in all directions by corset pressure, causing difficult breathing, palpitation, etc. A high stomach means hearty eating; a pendulous abdomen means debility and visceroptosis (falling or prolapsus of the viscera). Medium enlargement in the upper part indicates enlargement or dilation; and dilation means overeating, fermentation, and gas distention.

Depression at the pit of the stomach, when the patient is turned on the side, indicates inanition--great weakness. A bulging at this point means distention of the stomach. Flattening below the navel, with protrusion below, means visceroptosis.

Palpation discovers sensitiveness. A general sensitiveness to touch, without fever, indicate a general toxin infection from gastro-intestinal decomposition of food. In these cases there are usually constipation, colitis, catarrh of the womb, piles, etc.

To palpate the abdomen successfully, the patient should lie on the back, with legs flexed on thighs and thighs flexed to a right angle to the abdomen. The hands of the examiner must be warm; otherwise contractions will occur.

The sloshing sound or clapotage (a sound like that obtained by shaking a bladder half filled with water) should not be heard six hours after eating. When it is, it indicates dilation, ptosis, slow digestion, cancer of the stomach, etc.

Pyloric thickening, or cancer of the pylorus, is felt as a hard lump or tumor at the right of, and two or three inches above, the navel. If this lump is found, and there is vomiting, every two or three days, of ingesta (previously eaten food) that were eaten, one, two, or three days before. and there is clapotage six or more hours after eating, and this sound can be elicited at all times, except immediately after lavages, or until heavy vomiting takes place in advanced cases, the ejecta will present blood of a grumous character. This symptom, with cachexia, means cancer. All cases can be cured by lavage and restricted diet before this stage is reached. Surgery will not cure after this stage, and it is not necessary before. If performed, it will handicap and inconvenience the patient for the remainder of his life. These cases are non-cancerous at the start, and, if properly treated, should recover.

No case should be pronounced cancer until everything has been done that can be. The surgeon is an advocate of his calling, and will declare that surgery is the only cure. Indeed, it is never a cure, except when it fortunately removes a cause.

The stomach should be washed out daily, and the patient properly dieted. If attended to carefully, many cases pronounced cancer can be saved.

A dilated transverse colon may give out the peculiar clapotage sound; but there is always more tympanitis with the colonic affection, and the sound is farther below and at the points marked by the ascending and descending colon.

A tumorous state of the pylorus and the great curve of the stomach--the left of the stomach--can usually be palpated, while it is more difficult to discover tumifactions of the cardia or esophageal orifice.

Intestine

Many mistakes are made in examining the intestine. Constipation with accumulation is often diagnosed as floating kidney (a very rare affection), appendiceal abscess, ovarian enlargement, uterus tumor, pregnancy, tumor or cancer of the intestine. It is true that such mistakes are ridiculous and do not occur often with skilled diagnosticians, but first class professional men do make these mistakes often enough to cause laymen to seek confirmation of a diagnosis before submitting to an operation. It is not proper to seek confirmation by calling upon a physician selected by the physician in charge; for he will pick one who will agree with him. Either call a physician, and do not allow him to know that a diagnosis has been made, or call a rival of the one making the diagnosis. At all costs, try to eliminate the subterfuges of medical ethics, which means all things to doctors, even if it spells ruin to patients.

Professional ethics is a medical Potter's Field where the mistakes of doctors are interred without publicity. Consultation is where two or more professional men gather together to enjoy a private smoke and to discuss the mistakes of Moses or anyone else who haplessly is not present.

A painful point in the intestine may be caused by inflammation, impaction, gas, tumor, or cancer.

If inflammation, there will be mucous with the stools, and an accumulation of fecal matter will cause pain from pressure, and gas will cause pain from distention. A pain at McBerney's point indicates inflammation, gas, or constipation. Colitic pain is peri-umbilical, or in the right or left iliac fossa. In dysentery the pain is in the left flank and extends to the anus.

Fecal Matter.--When dry and covered with mucous, it indicates constipation and colitis. When of rank odor (putrid-smelling), it means overeating of animal proteids. When sulphureted in odor, it may be due to sulphur or sulphate of magnesia taken to relieve sluggish bowels.

The consistency may be hard, soft, liquid, mucoid, or bloody. If watery and mucoid, it indicates diarrhea and catarrhal inflammation of the mucous membrane.

When the stools are small, and largely mucous, with much bearing-down pain, the disease is probably flux or dysentery.

When the stools are of peculiar form--small and round, ribbon-like or pencil-like--there may be stricture.

Dark color may be from food or drugs; green, from spinach or other vegetables; or, in infants on milk, it means acidity and indigestion from overfeeding. Green, mucoid stools, studded with white curds, indicate overfeeding. and unless a fast is given, followed with a cutting-down in quantity, the child may be very sick.

Light color, if not from an exclusive milk diet, means lack of bile secretion and sluggish liver.

Blood in the stools may be from piles, ulcer, or cancer. When red, it indicates that it comes from the lower bowels. A local examination should discover whether the bleeding is of the nature of piles or local fissure, ulcer or polypus.

Black blood from the bowels must be considered in connection with other symptoms. Give the patient the benefit of the doubt as to the disease being malignant.

Bismuth may color the stools dark for some time after its administration has ceased.

Typhoid discharge, when the patient is fed, is yellowish and nauseous in odor.

Whitish stools indicate fat; fatty stools indicate that the pancreatic juice is unable to emulsify, or that the juices are cut off.

Sand or gravel in stools indicates that stones in the gall bladder have disintegrated and passed out--a natural form of elimination.

Abdominal Pain and What It Signifies.--Sudden abdominal pain diffused, or in the umbilical region, will in a few hours become localized in the region of the affected organ. Deadening drugs should not be given, for they will mask the affection and obscure diagnosis, Sudden abdominal pain, with vomiting, is indicative of peritonitis. The cause may be volvulus, invagination, internal or external hernia, extension of septicemia, rupture of ectopic pregnancy, or rupture of an abscess into the peritoneum. The abscess may be typhlitic, perityphlitic, appendicular, tubal, pelvic, subperitoneal, cellulitis, perforations of ulcers, ulceration caused by biliary or renal calculus, etc. An operation at once, with drainage, should save most cases. Delay means death. Unfortunately, advantage is taken of this truth to urge people with intestinal indigestion, gas pains, uterine and other pains, to have an operation at once.

Absolute quiet, frequent copious enemas, and abstinence from food, is a safe "watchful waiting." To use cathartics is unnecessary under all circumstances, but to give them where any of these symptoms exist is positively criminal ignorance.

In peritonitis the pulse is of more value than the temperature. The pulse is rapid and small (120 to 150); the temperature may be normal, subnormal, or high; the breathing is costal and rapid (30 to 40); the urine is usually highly charged with indican. Collapse threatens early. The face is anxious, the skin cold, and

the mind clear. Often the intoxication is so great that the patient talks and acts as if there were little the matter. This, however, depends on the cause. Puerperal cases are liable to act in this way. I have seen cases dying; yet they were hopeful and believed in an early recovery. When the organ involved in causation is the liver, pessimism is present.

Pain that precedes or follows bowel movement indicates rectal disease, hemorrhoids, fissure, ulceration, cancer.

If pain recurs with menstruation, the reproductive organs should be examined.

Sudden pain experienced for the first time should be analyzed carefully. If the same character of pain has been experienced before, time may be taken, if necessary, to find the cause. If pain follows exertion, it may be from hernia, rupture of tubal pregnancy, rupture of peritoneal adhesions with hemorrhage, volvulus, rupture of cystic tumor, or twist of tumor on its pedicle. Pain following trauma may be from rupture of the bladder, stomach, intestines, or other viscera.

Pregnancy, with threatening abortion, may be the cause of pain. Horseback, or rough riding, of any kind, followed with pain, is suggestive of calculus. Repeated abdominal pain due to painful peristalsis in the uterine, fallopian, biliary, ureteral, urethral, intestinal, spermatic, and other ducts, is not often recognized. If it could be, many mistakes would be overcome.

I have seen neuralgia of the spermatic vessels diagnosed appendicitis, and, after the appendix was removed, the pain that came back was diagnosed adhesions. It is no uncommon thing to have the appendix removed, then the right ovary, then operations for adhesions, then operation on the gall bladder, because of genital affections; namely, spermatorrhea, ovarian irritation, endometritis with stenosis of the neck of the womb (a very common cause of abdominal pain in nulliparous women), or urethral tenesmus.

There are many gall bladder operations because of painful peristalsis caused by gastro-intestinal indigestion, and irritation and inflammation of the viscera. After hernial operations, pain may continue because of adhesive bands. I know of one death caused by obstruction from adhesions at the internal ring of partial hernia.

Women of menstrual age should be examined for affections of the genito-reproductive organs.

Sudden abdominal pain in anemic young women should cause the physician to suspect perforating ulcer of the stomach or duodenum. In children, abdominal pain usually means gastro-intestinal derangement, such as gastritis, enteritis, twist, invagination, colitis, appendicitis.

In those past middle life, particularly in old age, cancer is the common cause of abdominal pain

The character of pain should be noticed. In perforation the character of the pain is the same in all viscera.

In invagination the pain is paroxysmal and periodic, due to peristalsis. Strangulation is generally intense and periodic, due to peristalsis; later there is aching and dragging. In appendicitis the pain comes on suddenly, and is intense in fulminating cases. There is a type which comes on slowly, and is easily controlled by fasting and quiet. A sharp, lancinating pain, continuous in character, is possibly due to perforation. A continuous, agonizing pain spells diffuse peritonitis, and means death unless immediately relieved by operation and drainage.

Pain caused by obstructed peristalsis is periodic, and will subside if no food or drink be given. In appendicitis the patient will remain comfortable, but in obstruction from a twist or invagination, discomfort and pain will not leave, the pulse will run high, and the face becomes anxious.

When a stone is passing, the pain will be periodic. When it comes on, it will be excruciating. Between agonies (which means between the rhythms of peristalsis) there remains a feeling of soreness--a tolerable aching, which, contrasted with the greater pain, is insignificant, but which would in time become intolerable, if full relief could not be found.

Pain from stone lodged in any canal--appendix, enteron (intestine), colon, biliary, pelvis of the kidney, ureter, urethra, etc.--is very excruciating, and food increases the pain,

Gastric ulcer is inclined to give out pain when chilled with cold drinks or ice cream. When it is fully developed, pain may be caused by the ingestion of solid foods.

In coming to conclusions regarding an affection, pain is a guide; hence it should never be suppressed by drugs, nor ignored or disputed.

Pain on palpation may be caused from radiation; hence the hands of the physician should be warm, and the temperature of the room should be warm. It should not be forgotten that the personality of a physician may be such as to cause pain. Such surgeons find much excuse for operating.

Facial expression, position of body, tension of muscles, all may manifest pain.

On account of the number of organs and the complexity of the nerve supply, the great variety of functions, etc., the abdomen sends out the greatest variety of pains.

The gastric crisis of locomotor ataxia presents paroxysmal vomitings and severe gastric pain, lasting several hours or several days, which may recur after days or weeks. Other symptoms of tabes dorsalis will clear up the diagnosis, and save a foolish and unnecessary operation for some abdominal affection which happens to fit the particular insanity of the surgeon called. If there were not such senseless operations performed, I should not make such disagreeable statements.

Nephritic crisis (kidney crisis) is caused by a dislocated kidney. The nerves and blood vessels are twisted more or less, and the ureter is flexed. This axial rotation may cause serious strangulation. Where the right kidney is misplaced, the symptoms are nausea, vomiting, pain in the back and thigh; excessive or defective secretion in the bowels, causing indigestion and similar disorders in the renal secretions.

Gas in the bowels frequently causes pain. The gas produces the pain by stretching the peritoneal covering.

Pain at a given point does not always signify that the cause of the pain is located in that region. Absence of pain in regions is often significant,

Pain at the navel is not diagnostic; yet it often signifies appendicular, fallopian-tube, or invagination affections, cancer of the stomach, etc.

If, when pressing the abdominal wall, there is one spot that gives out pain or discomfort, and no other point is sensitive, it is reasonable to believe that the disease is located. When the whole abdomen is sensitive, the pulse is quick, and there is an anxious expression of the face, the disease is peritonitis. If the patient is bright and all attention, and the symptoms appear within a week after confinement, the disease is puerperal peritonitis. When there is no fever, and the pulse does not vary very far from the normal, yet the patient complains at every touch. and the bowels are disturbed with gas, the case is that of trauma, or stretching of the peritoneal sheet, which is made sensitive by toxin poisoning from gastro-intestinal decomposition. This is an affection that is turned aside by a class of physicians as hysteria. Because the patient complains of pressure on one part as much as on another, the doctor decides that there is nothing the matter--just hysteria. Another class will diagnose the case according to the delusion that happens to possess them at the time of examination. It may be fibroid tumor (such cases are liable to have a fibroid); and, of course, the tumor is the cause, and it must be removed. If the doctor's delusion runs to the appendix, gall bladder, floating kidney, enteroptosis, displacement or prolapsus of the womb, etc., etc., the operation selected will be in keeping with his delusion. Is this statement of mine a delusion? I wish it were. These delusions are created and propagated at medical societies. Two or three leading men force their delusions on the rank and file. Medical societies should be suppressed; for they are a menace to society. For a few months after the A. M. A. meetings there is an epidemic of operations, ninety to ninety-five per cent of which are inexcusable, except for the delusions inoculated at the last meeting of the association. Of course, this statement will be pooh-poohed by those whom it fits; but if proof of insanity is desired, surely the inmates of an insane asylum should not be consulted regarding their delusion.

An accumulation of fluid in the abdomen will, on palpation, show flatness at the most dependent point, and resonance at the highest points; whereas an ovarian tumor will show the reverse. In a vaginal examination, with a finger on the vaginal roof and the hand upon the abdomen, the transmitted movements will be felt if there is a tumor; if dropsy, there will be no sensation transmitted. Advanced pregnancy should not be mistaken for tumor or dropsy; yet this mistake has been made by "first class" surgeons.

Arterial pulsations in the epigastric (stomach) region are seldom due to aneurism. To keep from making such an awkward mistake, patients with tension and severe throbbing of the abdominal aorta should be examined daily, and kept on a fast for a few days. If the condition is high blood pressure, the throbbing will soon pass away, and will not return unless overeating or improper eating be indulged in, or sensuality in some form be practiced. The symptom is often found in habitual coffee drinkers.

Obscurity of Abdominal Symptoms.--Reflex pains often get physicians into trouble. Operations on the abdomen have been performed by wise physicians for reflex pains in pneumonia; the symptoms being pain, tenderness, gas distention, temperature, frequent respiration, but lacking the pulse of peritonitis. Extensive intercostal neuralgia may be mistaken for abdominal affection; also for lung disease. The intercostal nerves end in the abdominal wall.

Abscess in the wall of the abdomen may be mistaken for peritoneal disease. More than forty years ago a case of abscess of the abdominal wall came into my hands, after several good physicians had named the disease peritonitis and given an unfavorable prognosis.

Volvulus (Twist in the Bowels).--This is a rare obstruction, constituting about one-fortieth of an intestinal obstructions. Men are said to have this affection oftener than women. The cause is probably an extra-wide mesentery. Invagination is probably made possible from the same cause.

Volvulus symptoms are tympanitis; great peristatic pain; inability to have an action from the bowels after the segment below the obstruction is emptied with enemas.

At first the pain is periodic. It gradually increases and becomes more constant. If no food is given from the start, pain will not be so marked. Vomiting will be a more or less constant symptom. Symptoms must vary to agree with the temperament and excitability of the patient.

The disease is so rare that a diagnosis will be made after an operation. Any case presenting symptoms of obstruction with symptoms of profound prostration--giving the appearance of being on the verge of collapse--should be opened up, and whatever is found should be righted as quickly as possible. Such cases do not stand the shock of prolonged operations well.

Robinson declared that the chief etiology of volvulus sigmoid (this furnishes about sixty per cent of the locations) is elongated sigmoid, possessing a narrow foot, accompanied by inflammation caused by vigorous action of the left psoas muscle, which injures the sigmoid, inducing migration of germs or their products through the coats of the bowels, inciting plastic peritonitis. Adhesions follow, favoring the development of this mechanical obstruction. The cause back of all causes is intestinal decomposition, with infection by toxins. Man pays and pays for lack of control in eating--for food drunkenness.

Volvulus occurs in subjects over forty years of age. Marked tympanitis, or meteorism, or gas distention, is first located in the left iliac fossa. This may be remembered as a small, but not dependable, diagnostic point.

Liver

Hypertrophy of the Liver.--A fullness is observed under the ribs on the right side. Tumefaction of the spleen co-exists. When it does, there is tumefaction of the upper half of the abdomen. This is especially noticeable when the patient stands. The liver is more developed in children than in adults.

To determine the amount of enlargement, place the patient on his back with legs flexed, and begin the palpation and percussion on the lower abdomen, gradually going up toward the ribs. In enlargement the

dull, flat sound will be found anywhere below the ribs, depending upon the amount of enlargement. Under normal conditions the flat sound begins two fingers' breadth below the nipple, and terminates at the costal border (border of the ribs).

The liver is prolapsed when the flatness is below the points mentioned.

The border of the upper line of the liver is on a line drawn from the right border of the sternum at the level of the sixth costal cartilage. It then follows the sixth rib to the right mammary line, and reaches the seventh rib on the axillary line, the ninth on the scapular line, and ends, at the spine, at the eleventh rib. Strong percussion is needed above to bring out the dullness, but light percussion is sufficient below.

Normally the lower limit of the liver may be confounded with kidney flatness at the axillary or the scapular line. The liver extends from the eleventh rib, following the costal border midway between the ensiform cartilage and the umbilicus, and terminates in the left side at the level of the apex of the heart. Liver flatness is diminished when there is emphysema of the lungs, gas distention of the stomach or bowels, or distention from ascitic effusion.

Atrophy of the liver occurs in cirrhosis and yellow atrophy.

General hypertrophy occurs in alcoholism, and the enlargements occasioned by liver and heart derangement brought on from excessive eating of starch and sweets,

(f) Urinary Apparatus

Lumbar pain is an accompaniment of all derangements of the pelvic viscera. The lay mind associates backache with kidney disease; but backache may mean rheumatism, constipation, piles, fissure, prolapsus of the womb, endometritis or endocervicitis, enlarged prostate, stricture of the urethra, etc. Too much attention is given to lumbar pain or backache in connection with kidney affections. Indeed, severe kidney disease may be developed without much discomfort in the back.

In nervous diseases, pain in the bladder is felt in urinating, especially at the expulsion of the last few drops. In urethral irritation it is the first urine that causes discomfort. Hysterical women are very prone to have urethral irritation. Hysterio-cysto-neurotics are usually subjected to so many operations that they are ruined, but never cured.

In this connection I wish to chronicle an observation that I have made: In all cases of tabes dorsalis I have found granular inflammation and great sensitiveness of the urethral mucous membrane, and almost invariably stricture. I have made a practice of using the olive-tipped sound and rubbing away the granulations, and at the same time dilating any stricture that may be present. I have found this treatment a valuable adjunct to the general treatment.

Of all influences leading to the development of tabes, venery stands first. Hence a successful treatment of tabes dorsalis must keep in view the need of remedying the sexual neurosis.

In locomotor ataxia, and in some cases of arteriosclerosis, desire for urinating is lost. The subject must use his reason and attend to this function at stated interval. The urine is sometimes voided without consciousness, and unless the subject sees it pass he will not know it.

Frequent desire to urinate may be wholly due to nervousness; or it may be due to stricture, granular inflammation of the urethra, irritation and inflammation of the bladder, gravel or stone in the bladder, polyuria (hypersecretion of urine) due to drinking overmuch, or eating sloppy foods--soups.

In urethral stricture the stream is often divided, the length and volume of the stream is diminished, and a few drops will be passed after leaving the urinal. This is also true of prostatic enlargement. When the urine stops suddenly, it indicates stone in the bladder. Pain at the end of the penis is another sign of stone in the bladder.

Retention of urine is where the urine is held in the bladder without power to empty it. This demands

catheterization. Partial retention is the habit of carrying residual urine--a small or large amount may be retained after all is passed that can be passed. This in time causes a filthy bladder, and consequently bladder disease. Catheterization and washing out the bladder with tepid water will give great relief. Enlarged prostate, stone, and partial paralysis are the causes of this affection.

Anuria is suppression of secretion, and the bladder is found empty.

Examination of Urine (see tests in medical dictionary).--Urine varies in quantity. When below 1,200 grams (38 ounces), oliguria (scanty urine) is said to exist; when above 1,500 grams (46 ounces), polyuria exists.

It is necessary to note the amount of urine voided in twenty-four hours. Make a note of the time of urinating, and throw the first urine away. Then save all voided, including that which is passed at the close of the last hour in twenty-four. If there are about thirty-eight to forty ounces, with no symptoms of kidney derangement, such as sugar or albumin, all is well.

Note the color, transparency, consistency, odor, filaments (threadlike appearances), substances in suspension, sediments, and always the reaction and density.

When the urine is turbid, its cause must be known. This condition is due to the presence in it of mucous, pus, uric acid, urates, phosphates, etc. Mucous precipitates by adding acid; pus forms a curdle by adding ammonia. Uric acid and urates are dissolved by heat; phosphates become soluble by adding acetic acid.

The cause for change in color should be determined. A reddish or brown appearance is caused by the presence of blood. However, certain drugs cause this appearance (coal-tar remedies in certain subjects). The microscope reveals the red corpuscles. Hemoglobinuria, requires the spectroscope; also urobilinuria. An intense color indicates bile pigment. (See test table in medical dictionary.)

The most important tests are for albumin and sugar. A simple test for laymen to determine the presence of albumin is to boil urine in a test tube, or a spoon if a tube cannot be procured. If the urine becomes milky or cloudy, add a few drops of lemon juice. If the urine clears up at once, there is no albumin. When suspicious of albumin, the patient should consult his physician and have the urine thoroughly examined.

Normal urine has a peculiar, well-known odor. When urine gives out an ammoniacal odor (smells of ammonia), it indicates bladder derangement, retention of urine, or possibly it may come from eating raw vegetables. Fecal odor indicates a vesico-rectal fistula--an opening from the bladder into the bowels.

In diabetes the urine, like the breath, may have a sharp, pungent, metallic, or ether smell. This odor is an unfavorable prognostic sign. It indicates a threatening diacetemic coma (diacetic acid in the blood). When this odor is present, the urine should be tested with ferric chloride, which gives off a burgundy-red color.

In dyspeptic coma, related to diaceturia (diabetes), diacetic poisoning, the principal symptoms are: a sharp epigastric plain (stomach pain); an increasing wandering or beclouded state of the mind, which gradually terminates in coma; then comes the final state, which is marked by a characteristic breathing, described by Kussmaul as follows: "The breathing is divided into four stages; namely, a brisk inspiration, a pause, a brisk expiration, and a pause," This syndrome (aggregate symptoms) is liable to be precipitated by anything that will produce fatigue. A journey is liable to precipitate the symptoms. I have noted that diabetic subjects, on coming to Denver from low altitudes, are liable to do themselves harm through their desire for sight-seeing--they are inclined to walk overmuch and overdo in many ways.

Before the ending referred to develops, there may be detected a peculiar odor of the breath and urine; namely, a strong ether odor, in some cases very pungent. This odor from the breath of diabetics is not characteristic; for I have met with it in children suffering an attack of gastritis, also in fasting to overcome various morbid affections. This peculiar breath develops in those suffering great anger, and from other excessive emotions.

It is said this odor is caused by the development of acetone in the blood. Rheumatism--the arthritis-deformans type--is especially marked by the development of acetone (vinegar) in the blood.

It is thought that diabetes is more probably caused by the development in the blood of a ptomain. I have found that gastro-intestinal decomposition is invariably a precursor of diabetes. When digestion is reduced by dietetic abuse, and the nerve energy is broken because of enervating habits, power to digest the carbohydrate foods is lost, when they are ingested, acetous fermentation must take place. Just what syndrome is set up will depend upon the physical state and the personality of the patient. A diabetes may develop; some form of rheumatism may be the manifestation; insanity or crime may be the ultimate result of the morbid process.

Where this state of the blood or urine is suspected, the following test should be made: Place urine in a test tube. Allow a drop or two of perchloride of iron to trickle down one side of the test tube. The iron, being heavier than the urine, falls to the bottom of the tube. If there is sugar present--if there is ethyl-diacetic acid present--the perchlorid turns the urine brownish. This coloring is not characteristic, for the same color can be obtained if the patient has taken antipyrin. The use of the drug should be suspended until the sugar test is made, and then the drug should be abandoned by those who would like to get well. Anything that depresses the body will prevent recovery.

Turpentine, onions, and asparagus impart a disagreeable odor to normal urine.

The consistency of urine varies. Sometimes it is thick, and viscid. It may froth easily. This should lead to examination for albumin. If a spot of urine on the clothes attracts flies, sugar should be suspected--which, of course, suggests diabetes.

The color of urine varies. It may be very light-colored in diabetes, inflammation of the kidneys (interstitial nephritis), nervous polyuria, and at crises--which latter means at the time when symptoms of disease decline.

The color is deep when disease is intense; for the excretions are scanty. The urine then is a reddish or brown color, due to bile. When the urine is very red, blood should be suspected. If in women, menstrual discharge may account for it. If the blood is from the urethra, it will pass when not voiding urine. When from the kidneys, the blood is more uniformly mixed with the urine. Carbolic acid imparts to urine a blackish-brown color; rhubarb, logwood, and senna color the urine red; santonin gives it a greenish yellow appearance.

Chyluria.--Instead of urine being clear, it becomes turbid when containing chyle (emulsified fat) or pus.

An excessive flow of urine--a temporary polyuria--may be caused by eating freely of vegetables, soup, fruit, and salads. Besides, there may be a slight urethral and bladder irritation, produced by the excessive alkaline intake. Coffee and oranges, or other fresh fruit eaten for breakfast, exclusive of other food, will often cause an excessive flow of urine. Watermelon causes an extra secretion of urine, and should not be eaten by those of a constipated habit, because it diverts fluid elimination by the kidneys. Any foods inclined to stimulate the kidneys to extra action should not be eaten by those with an established constipation habit. Thirst should be endured; for it is a demand for fluid in the gastro-intestinal canal, and unless supplied by drinking or using an excess of fluid furnishing foods, the eliminatng organs will yield to severe demand (thirst), and the necessary amount of fluid to supply the thirst will be forthcoming from the blood for normal secretion, and excretion will be established by the bowels; which means that the vicarious work of the kidneys will be given up when elimination by the bowels has been reestablished.

Scanty secretion of urine--anuria--may be caused by diarrhea or obesity. In the former case the bowels have taken up vicarious work for the kidneys. In the latter case the tissues of the body take the place of a lavatory. In unmasked language, the victim of this physical state urinates into his own tissues.

One of the very necessary states of the body for maintaining health is the proper disposition of water in the system. When constipation exists as an established habit, swilling the stomach with water fails of accomplishing the desired end--causing the bowels to act. On the contrary, it waterlogs digestion, causing fermentation, diluting the enzymes, and flushing them out of the body by way of the kidneys, leaving the bowels as dry as Sahara.

Bladder.--When the bladder is distended, a hand laid over it will feet a globular swelling, which gives out a dull sound on percussion.

(g) Genital Organs

Sex power should be examined into. At the beginning of nervous diseases the power is often increased, but it diminishes as the disease advances. Anaphrodisia is viewed as unfavorable in diabetes, Abuse of this function hastens old age and old-age diseases. A natural lack of this power indicates inefficiency, lack of ambition, and low resistance.

Masculinity is necessary to accomplish work. Sex neurosis must not be mistaken for power. Lasciviousness means mental weakness and lack of discipline. Drunkenness cannot be said to be thirst or a desire for water.

Empire-builders and great men are those who use their power for self- and world-building and not for self- and world-destruction.

Disease from sexual abuse brings on paranoia sexualis or primary monomania--a delusional insanity confined to the sex subject. 'Those in this state are given over to physical and mental abandonment, to satyriasis (excessive venereal desire). In women the disease is named nymphomania (excessive or furious desire); other names are hysterio-mania and furor uterinus. As the name implies, there is an affection of the womb and ovaries, bringing on the sex excitement.

The mental state of the sex neurotic is beyond the influence of moral suasion. Physical and mental training may overcome the disease. Local diseases must be corrected. Urethral irritations, inflammations, and strictures must be overcome; uterine irritations, hyperemia, inflammations, enlargements, and ovarian affections must be corrected. Constipation should be attended to first, and morbid appetities must be corrected. Candy, cake, and ice cream eating is injurious. The mental state must receive special attention; for all derangements of a sex nature are more mental than physical.

Lasciviousness is a bad mental habit which is easily. enough overcome before the habit is fully formed. But like all bad habits, it requires all the power, and in man; cases more than the power, which the sex neurotics have, to throw off the disease.

Self-abuse appears to be universal; but the better class abandon the disgusting habit early in life. The harm comes from lost self-respect and the curtailment of efficiency. Men are handicapped in every race in life. The silver-tongued orator barters brain power for sex pleasure, and forty-five years of age finds him no more interesting than he was at twenty-five. Man, to be interesting, must continue to grow as long as he lives. Only the sensualist retires and is satisfied with half-achievements.

When the sex power is utilized in self-development, man never ceases to grow mentally. This is the reward of self-control. All men who have made history have done things-have actually lifted themselves by their own mental boot-straps. They have been strongly sexed, and have not dissipated their energies lasciviously.

Women who allow themselves to develop lasciviousness lose their color early. They become nervous, irritable, and shrewish. Old age comes too soon. They may attract by giving their personal appearance much attention; but their aura sexualis attracts satyrs who are lust-drunk, rather than those who are looking for loyal friends. A nymphomaniac--a woman whose psychology is pronouncedly hysterio-maniacal--cannot find satisfaction in the love of one man. As a rule, there is one for whom she would lay down her life, but loyality is not in her make-up. Promiscuity is one of the features of monomania sexualis. Voluptuaries, if ever cured, must eat properly, take the proper care of the skin, and be very busy in a work that will occupy every hour. lf such people have one idle hour, it will be spent in disloyalty to self, friends, and family in unlicensed liberties.

A man may have but one bad habit, and that habit in time will ruin him. There is but one safe life to live for man or woman--namely: be busy, cleanly, and constantly on guard in resisting the formation of bad habits; for everyone who builds bad habits in time is mastered by them.

Fortunate, indeed, is the one who is mastered by good habits.

Children should be examined for tight prepuce. Circumcision is seldom necessary. Simple dilation with dressing forceps is sufficient. Then, if there is adhesion, the foreskin may be rubbed or pushed back.

Little girls often are troubled with leucorrhea. The cause is acid poisoning. The acid comes from gastrointestinal fermentation. The treatment is cleanliness and proper diet.

In examining adult males, scars on the penis point to soft chancre. The hard chancre does not leave a mark, unless it has been subjected to severe cauterization, which is unnecessary in either form of chancre.

Eruptions, eczema, herpes, syphilitic papules, etc., are often found. Too often herpes will be treated for syphilis by someone who is either ignorant or knavish. The greatest harm to the victim of such treatment is the developing of syphilitic mania--syphilophobia.

Varicocele (enlarged veins in the scrotum) is known by the sensation of a bag of worms. Surgery for this derangement is malpractice, the same as operating to remove varicose veins of the legs. Venereal abuse, self-abuse, lasciviousness, are the causes, along with digestive abuse. Eating in a way to generate toxin poisoning is a live second to venereal abuse. The cure must be the correcting of bad habits of mind, body, and eating. All cases can be cured, if properly treated early.

Hernia is easily diagnosed. There is a history of a small tumor that comes on standing and coughing, and goes away on lying down.

Enlarged prostate may be discovered by introducing a finger into the rectum. About three inches, or from two to four inches, anterior, a round, hard, tumor-like body will be felt. This is the prostate gland. Much injury is done this organ by massaging it--a treatment that is quite a fad among a certain class of medical men. This treatment is often as far-fetched as giving digitalis or strychnin for an already jaded heart, or morphine for a restlessness brought on from oxygen starvation in pneumonia, or for precordial oppression when the heart is enervated, or for headache due to hyperemia of the brain. There is a difference in the results, however. The drugs used in such haphazard fashion often cause death, while the massage cultivates an enlargement of the prostate; or perhaps I should say that the massage becomes an ally of venery, coffee, tea, alcoholics, tobacco, sugar, meat, and starch in hastening a senile tendency.

Manipulating the prostate is one of hundreds of nonsensical professional inanities. The average human being is inexcusably gullible toward the title-decorated profession; and the professions, being made up of the same common clay, do not hesitate to park their wants on a common so succulent.

The mass of humanity--the high, the low, the rich, the poor--nearly all are educated to stand for useless professional service amounts to--are superfluous and have in palliating or extirpating symptoms or effects (affections)--and this is what ninety per cent of present-day professional service amount to--are superfluous and have no excuse, except that the people are unwittingly educated into an officious impertinence which would be criminal if the acts were not covered by the ethics of social custom--which is only another name for the dogmatism of convention.

There is but one other as tragical parallel in civilized life, and that is war. The ethics of war allows those connected with it to commit crimes so impossible and atrocious that hell weeps at their enormity.

Custom is a refuge for inhumanity; and in the matter of healing, the sins committed in the name of professional science, charity, humanity, and skill--expert service--are equaled only by our present World War.

Such a small affair as massaging the prostate gland is professional impertinence practiced by those who look enviously on those intrusted with larger impertinences, such as removing the appendix or ovaries, operating on the gall bladder, and all other internal organs, with no more excuse for the crime than that professional ethics and human gullibility permit it.

Impotency may be a symptom of nerve-center derangement, excessive venery, auto-suggestion, or

mental worry.

Priapism is a sex neurosis brought on from abuse of the grand passion, eating overstimulating foods, and "going the pace" until the body is desperately enervated. It is a sign of sex exhaustion.

Only the olive-tipped sounds are fit for diagnosing and successfully treating stricture.

The examination of women should begin with an inquiry into the function of menstruation--its regularity, if painful, quantity, etc. Painful menstruation may be due to inflammation of the mucous membrane--catarrh--flexions, versions, ovarian engorgements. The primary cause of all uterine and ovarian derangements in young or single women is infection of the pelvic lymphatics from intestinal putrefaction. Correcting the dietary, mode of living, and care of the body will soon correct the worst forms of pelvic affections of single women. In married women--especially those who were married suffering from pelvic-lymphatic infection--all sorts of evils will follow confinements. In the first place, labor will be longer and more painful than it should be; injuries will not heal kindly; slight septic infections will be experienced, which will cause a perversion of the milk, followed by sick children; and mothers Will be left with enlarged wombs, with an impetus in the line for building uterine or ovarian tumors, and, in time, with chronic toxin poisoning and some form of cancer.

Uterine hemorrhages in virgin women may be due to ovarian and uterine engorgement, brought on from lymphatic infection, lascivious habits, idleness, reading of trashy literature, and picture show suggestions,

Hemorrhage in married women is due to three causes, aside from puerperal hemorrhage; namely miscarriage or abortion, submucous fibroid, or cancer.

Leucorrhea.--A slight discharge before and after menstruation does not mean anything except an acidity from overeating or eating improperly--eating candy or too much sweets.

A thin, catarrhal, albuminous discharge, greenish, yellowish, or white, means catarrh.

A muco-purulent and copious discharge is indicative of venereal disease. A fetid odor may mean an incomplete abortion, or cancer.

Abortion Habit.--It is generally thought that repeated abortions are due to syphilis. I have not found this true. I have found that there are temperaments that establish habits very easily. Such people, when they meet with one miscarriage, are liable to have others follow. Correcting life and habits will cure.

Enlargement of the lymphatic glands in the groin (adenopathy) often indicates an ulcer or chancre in the vulva. Where there is enlargement of these glands, and they feel like bird- and buckshot under the skin, this condition indicates toxin infection from putrefaction in the bowels. This is true of men as well as women. An infection with syphilis under these conditions is favorable, with the usual treatment, for developing a very formidable type of disease. These glands enlarge in cancer of the womb or rectum.

Inflammation and suppuration of the glands of Bartholin, situated on either side of the lower part of the vagina, indicate gonorrheal infection. Unless such cases are treated carefully, systemic infection may spread, break down the health, and cause death.

(h) The Nervous System

The facies (appearance) of paralysis is quite pronounced, and understandable to those acquainted with the various expressions.

Paralysis and its deformities are many. Any part of the nervous system may be involved. The muscles and organs to which the nerves are distributed must become atrophied, and the opposing muscles are rendered rigid and spasmodic. The intellect must be affected, and the countenance becomes an index.

Action or motility must be observed.

Motion--voluntary motion--is lost. The amount of paralysis must be in keeping with the amount of lost power.

Monoplegia is where one limb is paralyzed. **Hemiplegia** is where one arm and one leg are involved. Where the face of one side and the limb of the opposite side are involved the name of **crossed** or **alternate paralysis** is given.

When the two upper or two lower limbs (which is rare) are affected, the name of **paraplegia** is given. Where the paralysis is confined to less than one limb, or to a part of the extensor, or part of the contractor, muscles of one limb, the paralysis is named **partial paralysis.**

Where the limb is entirely paralyzed, it is readily recognized; for it is devoid of all motion and cannot defend itself at all. When raised, it falls as dead, if allowed, if burned, it cannot get away from the torture.

Where the paralysis is of a muscle or two, the auxiliary and opposing muscles undertake to do vicarious work. Where this condition is pronounced, deformity must develop; for the muscles which are doing extra work are unduly developed, and those which are paralyzed go into a state of atrophy. The two extremes in a limb cause the limb to be deformed. If the strengthened muscles are extensors, the limb is forcibly extended, and vice versa.

A paralyzed side of the face is smooth. This contrasts very greatly with the opposite side, which is overdrawn and contracted because of losing the counterpoising effect of the paralyzed opposite side.

If the patient attempts to whistle, spit, or put out the tongue, the movements mark the change that has taken place. The movements lack uniformity.

The orbicularis palpebrarum (the muscle that closes the eyelids) is paralyzed when the cause is peripheral (external); but when the lesion is central, this muscle is left intact. When this muscle is paralyzed, the eye remains open, and the dust settling in it is a source of much annoyance as well as discomfort.

Where muscles are relaxed, the paralysis is said to be flabby; the opposite is contracture.

Where there is contracture or rigidity of muscles, the upper extremity hugs the side, while the lower extremity extends. The arms stick to the side; the forearm is bent at a right angle; the hand is flexed and pronated (palm down). The toes of the extended leg are flexed toward the sole.

Contractures may be hysterical or functional; but often they are due to organic change, caused by an inflammatory state brought on from toxin poisoning or a traumatism (injury). Atrophy of the brain, spinal cord, or membranes accompanies or causes paralysis. All permanent lesions end in contracture. The reason for this, as stated before, is overdevelopment of opposing muscles and atrophy of the paralyzed muscles. A time comes, however, when there will be a wasting of even the muscles not paralyzed, because they become so contracted that they have no other movement than that of contraction. The effect is that of inactivity, nutrition fails and the whole limb withers.

Much of this sort of deformity follows infantile paralysis. The disease is central. Where the paralysis is of vital organs, the children die. Where the paralysis is of one extremity, complete, there will be no contractures, hence no deformity. Where the paralysis is partial of one limb, or partial in two limbs, there must be contractures, hence deformities.

Much unnecessary financial burden is placed on the parents of paralyzed children. In many instances the burden is too great, when the end is, or should be, known to the medical adviser. The end of all treatment must be contracture, which means deformity. Possibly the cutting of tendons to correct a very inconvenient or unsightly deformity may be advisable; but if the object is a cure, or holding out a hope of cure, it is cruel to parents to give hope where there is none to be given.

All lesions sooner or later end in contracture, and mean degeneration. Of brain diseases it may be well to mention: inflammation, hydrocephalus, tumors, hemorrhages, traumatism (injury), degeneration,

medullary diseases (diseases of the white substance of the brain), myelitis, sclerosis, tabes, and meningitis; for the latter disease has contractures among its symptoms. Indeed, it is reasonable to believe that infantile paralysis is cerebro-spinal meningitis.

Gait.--Where the contracture is not too great to prevent locomotion, the following symptoms appear: In flabby hemiplegia, or hysteria, the leg drags (helcopode). The sole of the foot drags or sweeps the ground; or the movement may be circular (helicopode), and the foot comes to the ground on the toes.

In flabby paraplegia the step is short, the legs are apart, and each limb is alternately dragged without clearing the ground. The hips incline and rotate while walking.

Paraplegia with contracture is marked by short and slow steps. It is difficult to lift the foot, and only the toes touch the ground. There is a tendency for the feet to cross each other; the knees touch, and the thighs are held close together. The body reels as in balancing. This gait is called "cross-legged progression."

In paralysis agitans there is the added feature of an irresistible propulsion, which gives the patient the appearance of falling forward. Those unacquainted with the gait will have a feeling that the patient is putting on, or otherwise he surely must fall; yet such patients will walk for blocks, pitching forward as though they must fall.

"Steppage" is the gait of tabes dorsalis. Paralysis of the extensor muscles, especially of the anterior and external muscles, of the leg allows the toes to drop. This necessitates the lifting of the leg high (a stringhalt lift), so as to swing the foot which hangs, and the toes strike the ground first.

There is a pseudo-tabes of alcoholic, lead, and other toxin poisoning. Its gait is different from that of locomotor ataxia. The latter gait is not from paralysis; there is lost power for coordination (directing movements). When such patients close their eyes, or undertake to walk in a dark room, they cannot take a step.

It requires a close observer to detect the early symptoms. In the early stages the patient is awkward in turning back abruptly or standing on one foot.

Combined sclerosis--namely, posterior and anterior lateral hardening of the cord-is known by spasmodic rigidity of the extremities and a tabes--spasmodic gait--an exaggerated tabes gait.

There is another incoordinate gait of mixed tabes dorsalis--namely, that of the drunk man--in which the patient straggles and strays from a straight course. He sways and staggers, regains his equilibrium, to again lose it and then reestablish it, etc. In this case the patient holds his arms extended in the manner of balancing. This gait should not be confounded with chorea.

Convulsions.--Convulsions are readily recognized. The symptoms are characterized by a series of abrupt, involuntary contractions, which at times last long enough to keep the affected part in a set position for a while. These are named tonic convulsions. At other times the contractures follow each other rapidly--an intermittent contraction. These are called clonic convulsions.

Convulsions are general or local. In children, convulsions are common as a result of toxin poisoning. The earliest cause of convulsions in childhood occurs in the first month, and sometimes the first week, of life--namely, septic poisoning. The mother receives a laceration, or a bruising, which sloughs off, allowing absorption of more or less septic material. The only symptoms experienced by the mother are a slow getting-up, a slight fever, pallor (septicemia), and slowness in returning to normal. The septic state may be due to imperfect womb drainage. Rarely septic poisoning may be produced by a putrescent cord resting on an excoriated surface at the umbilicus. The convulsions from septic poisoning range from a slight one or more, to seizures repeated every twenty to thirty minutes for days.

Several years ago I was called to see a child, two weeks old, who, I was told, had been convulsing for eleven days. I watched it for an hour, and it had four during the hour. The spasms were short, not lasting more than two minutes. Recovery followed by proscribing the mother's milk. Another case comes to mind. This child, a bright boy a week old, had severe convulsions for twenty-four hours, which put his mentality

in statu quo. He lived an idiot, and died at twenty-two. Now I am told that his mother is dying of cancer of the womb, twenty-five years after the birth of that boy--undoubtedly due to lack of proper attention to the injury received at the birth of that child. This woman was a Christian Scientist at the birth of her child, and is yet, so far as I know. Nature moves on ideally or not, as she must; faith, backed by intelligence, ends well, but, when backed by fanaticism, it ends in disaster and ruin.

Convulsions in children, coming from irritation in the bowels from fermentation, and toxic poisoning from decomposition, are of daily occurrence. Convulsions starting in this way come and go. The child may outgrow them--whatever that means; but the epilepsy of after-life takes its origin in childhood convulsions.

Jacksonian epilepsy is a partial or sympathetic convulsion confined to one-half of the body. The herniplegic type, which belongs to the epileptic type, involves progressively the two limbs of one side. This type of convulsion is not accompained by loss of consciousness at first or in the beginning of the seizure. The patients watch their own paroxysms. This form of epilepsy indicates a lesion of the brain on the opposite side.

There are abrupt, involuntary contractions of one or several muscles of the face. The cause is neuralgia; and the neuralgia is caused by toxin--coffee, tea, tobacco, alcoholics, or gastro-intestinal decomposition.

Trembling or Tremors.--A motor disturbance. There are three varieties: (1) rapid rhythm-eight to twelve per second; (2) that having from five to five and a half to seven and a half per second; (3) slow, having four to five to the second.

One variety stops during voluntary movements (paralysis agitans); the other begins with the movements and grows more violent as the end approaches (multiple sclerosis). Then there is a type confined to one limb--the hemiplegic type.

Chorea belongs to children's diseases. It is an indication of bad care--lack of poise. Rest and correcting the manner of living, is the proper treatment.

F. NOSOLOGY

Nosology is naming and classifying disease; but as there is but one disease--namely, **Toxin Poisoning**--the names given to the organs affected are really nothing more than naming and classifying affections. Real disease may be likened to a string or cord on which affections are strung as beads. Break the cord, and the beads are lost--correct the toxin base, and affections must scatter. (See "Crises.")

II. Diagnosis

Diagnosis is a mystifying subject, because, unless great care is used, affections will be mistaken for primary disease, and treated as such until the organ takes on such pathologic changes as to become organically changed. For example, irritation of the stomach, kept up long enough, ends in cancer.

Inasmuch as mistakes of this kind are being made all the time, and not alone by mediocre professional men, too much caution on this subject cannot be preached.

When tumors are removed without even a thought of their cause, it is time to get busy on cause.

When gallstones are removed, when the appendix and ovaries are removed, without a thought being given to the cause of the derangements, we think of lack of etiological efficiency in high places.

Bacteriology is to blame for a great deal of shiftless laziness on the part of average physicians.

There are several orders of phenomena to be noticed in every disease; namely, direct cause, and reactory effects. A morbific cause starts up a physical or mental derangement; then follow organic affections. For example: Excessive eating brings on indigestion; indigestion causes gas distention of stomach and bowels. The pressure from gas on the diaphragm causes thoracic symptoms, such as dyspnea, oppression, heart

palpitation; eructating gas causes irritation of the throat. In time a sensitive throat and catarrh, enlarged tonsils, adenoids, and all the diseases peculiar to the mucous membrane of the nose and throat, will in turn be added.

The gas distention kept up by heavy eating causes distention in the lower bowels causes displacement of the stomach and bowels, and constipation. Constipation causes colitis, typhlitis, appendicitis, and inflammation of the lymphatic glands from absorption of putrefaction. Gas distension in the lower bowels causes displacement of the pelvic organs, interfering with the pelvic circulation, causing prolapsus, tumors, etc. The bladder also suffers from pressure; and in males this pressure produces irritation of the neck of the bladder and prostatic enlargement. The rectum becomes involved; piles, proctitis, and prolapsus develop. While these and many minor and obscure affections are in process of development, the nervous system is being affected; enervation is established to such a degree that resistance to disease-producing influences is lost; the environmental influences, which once were passed unnoticed, affect profoundly. Digestion and assimilation are profoundly affected. At this stage, germs become a complicating cause. This is the stage in this vicious pathological circle where tuberculosis and glandular involvement show up. In all this morbid circle, germ influence is an after-consideration; for in about a year and a half after tuberculosis has started in the lungs, germs are discovered, and it is said that the germs are not found earlier except in cases that progress rapidly. Man, like an apple, resists decay until resistance is lowered. Germ decay follows a bruise to the apple. In man, germ influence follows enervation.

Epidemic, infectious, and contagious influences get their work in after mankind's resistance is lowered by a thousand-and-one influences that break down resistancethat enervate.

The graphic picture of affections following the single cause--namely, overeating--must vary in keeping with the peculiarities of the patient. This vicious circle may be established in a child or adult who looks well to the unprofessional eye. Yet he is inflammable, so to speak, and only waits for the fulminant, which may be a germ of diphtheria, scarlet fever, measles, or some other external morbific agent.

After enervation, the affection follows the cause--overeating; then germ or contagious and infectious influences become secondary causes.

When a pathological chain of causes and reactions, as described above, is once started, it is obvious how very impossible it would be to fit a satisfactory nomenclature to it. Nomenclature forces too much attention to names, and so-called diseases are nothing more than affections set up by morbid sympathies. A nomenclature has, however, been evolved, and it is safe to declare that, instead of its being a benefit to the profession, it is a hindrance to right thinking; for it is almost impossible to find two expert physicians who will agree on a diagnosis.

Much to the disgrace of the profession, it is generally known that, if a score of physicians are consulted, the patient, when through with his last counselor, will have from ten to twenty different opinions.

Why is this? No doubt there are many reasons that could be given of an irrelevant nature; but only one reason is necessary, and that one is that all these different diagnoses are right and they are all wrong.

The rhinologist finds adenoids and bony growths in the nose. His diagnosis is right! The throat specialist finds catarrh, enlarged tonsils, and follicular inflammation. He is right! The heart specialist finds an overworked heart; if the disease has been running on long enough, he will find a heart lesion. He is right! The stomach and bowel specialist finds ptosis of the stomach and transverse colon, retarded digestion, and retention of food in the stomach. He is right! The gynecologist finds inflammations, prolapsus, fibroid tumor, maybe an ovarian cyst. He is right! The abdominal surgeon finds appendicitis, ovaritis, tumors, misplacements, etc. He is right! The genitourinary specialist discovers an enlarged prostate, and a foul bladder from retained urine. He is right! The kidney specialist finds albumin or sugar in the urine, and his diagnosis is Bright's disease or diabetes, He is right! The syphilophobiac finds a positive Wassermann test, and his diagnosis is syphilis; and he is right!

All other specialists find something relating to their specialty; and they are all right, and, as stated

before, they are all wrong. Their failure in curing the case is proof positive that they are all wrong. Of course, more or less palliation is given, but no cures need be expected; for all these so-called diseases are affections--sympathetic derangements--and, to get rid of them permanently, the cause must be removed. Such patients are better after taking the prescriptions of one doctor, and worse after taking the advice of another; but the ebbing and flowing, or the oscillating between better and worse, is the legitimate and characteristic progress of toxemia or intoxication, and the getting better or getting worse after taking a given treatment is simply coincidental. In this fool's paradise some doctors are made famous and others are ruined. It is largely a game of chance, except when social favoritism loads the dice. (Read in this connection chapter on "Crises.")

III. Prognosis

To foretell the evolution of diseases without a comprehension of real cause is attended with delusions--mental mirages.

There is such a thing as classifying experiences based upon the habits and customs of society, disease-building though they be, enabling those who become expert in the science to diagnose and render aid, without the priests of the system having even a conception of what a change of habits and customs would do for their theories built on the sands of error.

For illustration: Physicians who are adjusted to a clientele that uses alcoholics, tobacco, coffee, and tea would be professionally lost in a society of abstainers. A science of palliation based on debauchery will ill fit one based on normal habits or sobriety.

Cause of disease can never be discovered in those who are abnormal from debauchery. Health, and what it takes to maintain it, is the only way to find a correct diagnosis and prognosis. When cause is found and removed, therapeutics is superfluous. (See chapter on "Therapeutics.")

IV. Therapeutics

Therapeutics is that branch of medical science which considers the application of remedies as a means of cure.

The drug idea is to relieve and cure. In the very nature of man, the drug-and-relief idea is bad; but if man is one thing more than another, he is a habit-forming animal, and if his habits are bad and work for his destruction, he will accept relief rather than stop his habit, which is a natural cure--if to stop a disease-producing habit can ever be considered in the sense of a remedy or cure.

Drugs, or anything that will relieve without removing cause, is a questionable good, and certainly an outrage and a crime where the remedy blinds the physician as well as the patient to the need of searching for cause and removing the same.

To illustrate: Today 1 received a letter from a gentleman who wrote me concerning his wife. He declared that for the past twelve years his wife, fifty years of age, had enjoyed very good health, with the exception of occasional slight indispositions, which were quickly cured by ----- a drugless physician. He then so graphically described symptoms which had made their appearance within the past month that it left no doubt that his wife was far advanced with cancer of the womb. Should such tragedies happen? Never! They are the fruits of a fallacious system's understanding of the cause of disease. A physician who was not in bondage to a creed-bound etiology would have discovered this woman's perverted nutrition in time to save her.

There is no excuse today for systems of healing which ignore the truth that there can be no cure without righting errors of nutrition, and there can be no errors of nutrition the causes for which cannot be found in the mental and physical habits of the patient, and the patient's attitude toward his or her environment; for be it known that we attract what we have.

To relieve a pain with drugs, by manipulations, by ignoring, by suggestion--in a few words, to relieve in any way without knowledge of the true cause--is a crime against the patient, against society, against

morality, against ratiocination, and tends to bind man hand and foot below his possibilities.

Discomfort and pain are educators. If man could not find palliation, he would be forced to seek the cause of his discomfort and remove it; and, in doing so, he would discover himself and his God--which is the object of being. Know thyself!

First of all, man seeks thrills and shocks, after he has dulled his sensations on the commonplace--after abusing his privileges. When he takes to the toboggan because the travel on the plain has grown monotonous, his pace will soon force him to seek relief. It is at this stage of man's career that he flounders in reliefs.

What is a saloon? A place to secure relief from discomfort. What is a cigar store? A place to find a new sensation--relief from discomfort. What are midnight lunches? Means of finding relief from discomfort. What are bawdy-houses? Homes for lost souls seeking relief from discomfort. What are doctor shops and drug stores? Places for seeking relief from discomfort and pain. The same is true of hospitals and sanitariums, resorts of all kinds, including globe-trotting, sight-seeing, etc., etc. And, neither last nor least, what are churches? Places for those who are uncomfortable in mind and body--palliation.

After a glimpse at a few of man's institutions for seeking relief from suffering, it is well to think over the question of whether all this restless seeking after relief is necessary. Yes, anything that is, is necessary, and will remain until something better can take its place, The relief which man seeks is in keeping with his development, and his development must be held down to the horizon of his sensations.

Those who are looking for a better plan to secure mind, heart, and body ease would do well to read this first volume over and over; it should be found a rational way out of discomfort. It is not a doctor, a healer, a drug, a formula a diet chart, some peculiar exercise or bath, that man needs. He needs to know what causes his discomfort; and then he can become his own physician, as soon as he proves the truths of the book in his own life. When man learns to know how and why he fell, he can lift himself up.

The day for healers and saviors should be past. Teach man to be his own healer and savior--then civilization can reorganize on a rational basis. So long as it is man's duty to save the world, the world will not be saved; but when man learns to save himself, without any intermediary, then the world is saved.

We need no therapeutics--no remedy; we need knowledge of life. Instead of the professions being a good, they are a curse. The world would be better off in a hundred years from now if they could be blotted out; for they are a menace to progress; they are palliatives; they cater to man's appetites and passions; they keep him in ignorance of his best interests; they keep him enslaved to his passions.

Nature can take care of herself; and, as man is a part of nature, he can take care of himself, if obstructions which have grown up about him are removed.

Nature's Plan as Concerns Utilization of Building Material

Birth and death are activities always present in man's body. Every minute cells are born, and every minute cells die.

The process going on is building up and breaking down. This process means that new material must be brought in and made into new cells, and that the old cells must be broken down and removed. To accomplish this, **Two Ferments** are required; namely, unorganized ferment (enzyme) and organized ferment (bacterium). The organized has received attention in a previous chapter.

It is my desire that the readers of this book look upon bacteria as beneficial rather than as enemies to man.

At the very genesis of this process--namely, bringing food to a state of solution, fitting it for absorption--there must be some plan for preparing material for cell building; and there is. The material must be dissolved, and from the time food enters the mouth until it is a living cell it is accompanied at every step

of its progress by refining elements called enzymes. The enzymes--from those in the mouth, stomach, and bowels to those that kiss life and mind into a finished brain cell--are graduated and fitted for their special purposes; and so subtile and varied are they in their work that they are a constant surprise to medical scientists. To show how the learned men of the profession are surprised at the mysterious subtilty of some of the finer ferments, enzymes, I take pleasure in reproducing one of my recent articles from "Philosophy of Health":

Vitamin--What Is It?

Vitamin ("vita" = life + "minum" = small)--small life. We talk much about life; we see where it is, we see what it does, we see it manifest all about us, we know that there is life; yet we cannot see it, we cannot feel it, we cannot analyze it. We cannot live without it. We know that it is, because we see how matter acts under its influence, and how it acts when life is removed from it.

Life is, or it is not, an entity. If it is an entity, it is much too microscopic for man's extended senses (instruments of precision). If it is not an entity, then it must be the "summa summarum" of a physiological synthesis. If it is an entity, then it must be a something that is ommipresent, and at the same time so subtile, subsensorial, and elusive as to sidestep the chemist and all his analytical wiles. Yet it adds the missing link to a synthesis that becomes an animate being.

It is difficult to conceive of life as not present. As in the case of air, light, and electricity, we must assume that it is; or otherwise analytical reasoning becomes void. Nature--the great artificer, the chemist par excellence--and the associational, or social, nature of elements, cause the latter to assemble and unite in just the right proportion to make a compound--a synthesis--attractive for the everpresent life, which at once enters, and the inanimate becomes animate.

Would not life--animal life--be exceedingly precarious if omnipresent life itself were not ever present? Suppose a supply of air, which is a coarse substance compared with life, should have to be gathered, or material for its supply should have to be discovered and purposively supplied--would not life be so precarious that being would scarce secure a hold, and that to remain in being for years, as man does, would be impossible? As it is, man dies for lack of air. The lungs and blood fail to exchange gases, notwithstanding the fact that air is ever present and man's body is submerged in it continually. Let us assume a simile for life: Suppose that a living being were compelled to discover just what foods contained life--vitamin--and he were compelled to provide himself with enough or die, is it thinkable that the world would be populated with beings? Every little while the medical profession discovers something which "God forgot" that is necessary for man's continuance in life! Oh, wonderful man! Wonderful doctor! Wonderful mind!

We must not forget that, in seeking knowledge, a little wisdom should not be despised. The medical blend of knowledge and wisdom is not good. A little more wisdom and a little less knowledge would help some.

Life is not dependent upon procuring a food that has a mysterious property, but upon knowing how to care for the body in such a way that life will flow in and take up its habitation therein.

Iron is needed in our bodies; without it we cannot extract the oxygen from the air. Why do we at times lose the power to appropriate iron from the food consumed? Because assimilation is injured by toxemia, and toxemia is developed by living in a manner to cause intestinal decomposition. The toxin overstimulates and enervates; and enervation causes sluggish elimination. The retention of excretions injures the life of the blood, so that it renews itself badly; then it fails to appropriate the iron from the food intake. And as this is true of iron, so is it true of every other element. At times all elements are refused; namely, minerals in the food, oxygen from the air, and, neither last nor least, life--vitamin--from the living presence.

A physiological synthesis must be made up of just the required elements to attract the absent--which is ever-present--life. Then, when the elements in the synthesis become quantitatively disturbed, this subtile element departs and the synthesis disintegrates.

Vitamin is a new name--a misnomer--to describe an element that may or may not be found in food. It may be refined out of food, as in polished rice and white flour; it may be rendered inert by cooking; and it may be antidoted, as we can prove at any time, by the use of iron, alcohol, tobacco, coffee, tea, narcotic drugs, mineral poisons, toxin from decomposition, and, neither last nor least, by depressing and discouraging thoughts, fear, envy, hate, etc. This element is as old as life--as old as creation--and is known as enzyme. Digestive ferments have been known for many years, but not known in their most subtile forms and obscure developments.

No wonder that the subtiler forms of enzymes are mistaken for life--vitamin; for they are so closely linked to the genesis of being that one appears as necessary as the other, and the action of one may be confused with, or mistaken for, the action of the other.

If there were some way to extract the enzyme from an egg, it would not--it could not--hatch. Of course, we know that the egg must be fertilized, or it cannot take on quickening--the vitamin, the little life, cannot be attracted. The last step, however, in the synthesis of being is fermentation, and coincidently quickening. The most refined, unorganized ferment is the last element before life-vitamin--adds itself to an organized compound of elements, which I call a synthesis of being.

Enzymes range from the coarse solvents--namely, ptyalin, amytopsin, trypsin, steapsin, pepsin, et al.--to those within the blood, and those whose subtilty fits them for cell-building and becoming the all-important key to life in the formation of new beings. It is these bodies--it is one or more of these subtiler enzymes--that have been discovered and named vitamin. How do I know? By analogy. It is unthinkable that life (vitamin) is an entity that can be destroyed, or that can be extracted from vegetable or animal beings, bottled, and given out "ad libitum" to those who have forfeited theirs in riotous living.

The description of the substance said to be vitamin tallies exactly with what we know, and can conceive, of the action of a refined and subtile enzyme.

The description of the substance said to be vitamin discovered by Dr. Funk, misnamed vitamin, and which substance he declares is indispensable to life (how can life be dependent on a little life; how can electricity be dependent on the electric light or any other manifestation of itself?) does not fit any conceivable description of life. Life is as old as food itself-an element as old as creation. It is the breath of life that quickened man. It is the word made flesh--the subtile presence that quickeneth all things.

"The word 'vitamin' has not found a place in the dictionary yet;" and it is scarcely defined and barely understood by its discoverers.

It is said that Dr. Casimir Funk, a Russian chemist now of New York, invented the name to fit "certain mysterious substances in food," which have been demonstrated by a Scandinavian chemist as substances which apparently are not food, yet necessary to its utilization. Isn't this the description of a digestive ferment--an enzyme? Certainly, food cannot become food until acted upon by a ferment.

It is said that Dr. Funk has isolated those substances which he says are "indispensable to life;" and since his announcement "other scientists have added to the meager sum of knowledge."

Digestive ferments have been taken from the hog (pepsin) and from the chicken (ingluvin--pullus gallinaceus). Would it be so very strange if chemists should analyze out of every organized structure (plant or animal) a ferment, or the genesial elements out of which ferments are made? So important an element as ferment must, like life, be present, either in form or potentiality, everywhere.

In the olden time, and up to the very recent present, the perpetual-motion discoverer was abroad in every land, and was always just about ready to demonstrate its discovery to the world. But, alas, the world waited in vain; for no announcement ever came. And now the perpetual-motion explorers are out of business forever--put out by the electric discoverers.

Electricity is a power that is elusive to the chemist, and beyond our senses; yet it can be sent over a wire half as large as the little finger, silently and unobjectively, in such quantities and with such power as to move a train. This has awed the perpetual-motion crank into silence. When we know that electricity is

made up of electrons (units) so small that a pane of glass allows them to pass through its pores as though it were a coarse sieve or not at all present, we can understand how a cyclone of fifty thousand volts can pass through our bodies as an open door, leaving no trace of its coming or its going.

Yet electricity is probably so coarse, compared with the subtilty of life, that there is not much hope of a Russian, or any other chemist, gathering or isolating it. If, however, "these substances," which are "indispensable to life," are what I insist they must be, they are not vitamin, but ferments--enzymes, and are indispensable to life. Yes, indeed; for "this mysterious substance," which they call vitamin, is without doubt ferments, and in the evolution of beingevolution of cells, quickening of fertilized ova--stands next in importance to life.

The human mind is yet so coarse in its thinking that it alludes to the subtile and universal manifestation of life as "mysterious substances," and talks of gathering or isolating these substances. Certainly we are far, far away from its discovery, so long as our imagination and ideals are so coarse.

Dr. C. Houston Goudiss, editor of the "Forecast" magazine, declares: "Not the wisest man living can tell us just what vitamin is. While these substances appear not to be food, they do appear to be essential to the digestion and assimilation of food; for their withdrawal, suppression, or absence, from whatever cause, results in disease and death of the animal or man fed on such food." Dr. Goudiss unwittingly describes exactly the attributes of enzymes. Probably the name "vitamin" confused him. Any "wisest" physician should tell us just what an enzyme is, even if he balks at life.

In a crude way, vitamins--enzymes--have been known for many years. That there is an enzyme constituent in every cell, in every being, animal or vegetable, in animate nature, is as true as reason. Why? Because it is necessary for reproduction. It has been known that scurvy--a disease newly named acidosis--is caused by living on foods deprived of enzymes; and it is as widely known that uncooked vegetables and fruit, taken in abundance, will cure scurvy, or scorbutus, or acidosis, by supplying the ferments--enzymes--necessary to attract life. The secret of the raw-fruit-and-vegetable cure is that scurvy, or scorbutus, or acidosis, means that more food has been taken than can be appropriated by the body, and the body, like a machine, has become choked by waste products and debris to the extent that decomposition exceeds recomposition; and when enzymes fail to maintain asepsis, and toxin gains the ascendency, disease is brought on and death is threatened; for toxin destroys enzymes, and, as the enzymic power weakens, life power weakens, since not enough life can be appropriated out of the living presence to perpetuate the life of the body.

By using succulent fruits and vegetables in scurvy, or acidosis, much distilled water is furnished the body with which to flush out the accumulated putrescence. Fruit and vegetables contain over ninety per cent water. The salts are antiseptic; they antidote the toxins that have been generated by the decomposition resulting from the oversupply of food devoid of vitamin (?)--no, enzymes--which brought on the scurvy. Bread, meat, cakes, pies, puddings, sugar, etc., etc., are mostly food formulas that are artificially prepared and refined to the extent of excluding the enzymes, hence are not in keeping with nature's formulas. Therefore they are not ideal foods--they are short on enzymes; and, when they are eaten, the body is furnished too much nutriment, and not enough enzymes to keep a digestive and assimilative equilibrium. When this style of eating continues, a time comes when the chemistry of the body is perverted by acid fermentation to such a degree that it fails to attract the ever-present life--vitamin--and it must crumble into decay.

Such diseases as pellagra, hook-worm, tuberculosis, scrofula, syphilis, and many others, are directly and indirectly caused by a dietary--foods--that has had its chemistry tampered with. The chief element--namely, enzyme, not vitamin--has gone out of it, allowing decomposition to become established. This far-reaching and not generally known truth can be demonstrated at any time. When a treatment is based upon this truth, syphilis becomes easy to manage.

Those who attempt in any way to explain what vitamin is, do so in something like the following fashion:

> "We have learned that there are vitamins that promote growth, vitamins that prevent scurvy, and vitamins without which the baby will soon become rickety. Some of them are destroyed

by cooking, but cannot be dried out, while others are not appreciably affected either by heat or drying. "--Goudiss.

In the same way a multiplicity of attributes may be credited to electricity. We might say that there are electricities which promote different lights--white, red, green, yellow, etc.; electricities that run trains and cars and motors, kill criminals, etc.; electricities that warm the feet and hands, cook food, iron clothes, etc. Electricity is the same yesterday, today, and forever. It is the motor power for all these manifestations, and a world of others. Then shall we speak of it in a plural sense? Life, according to common understanding, is not plural. It is not quite obvious that there is a different kind of life in different kinds of animals; that the monkey, man, and all other animals and vegetables known to have individual existence, are possessed of different kinds of life.

It is not true, yet it is pertinent to the argument, that it requires a different yeast (bacterium) to raise 'bread, cake, doughnuts, puddings; to cause apples to sour into vinegar, grapes into wine, malt and hops into beer; to cause carbohydrates to ferment in the stomach and bowels, causing acid stomach, rheumatism, etc., or to cause proteids to decompose and develop a toxin that, directly or indirectly, is responsible for all the septic or zymotic diseases. It is as unreasonable to contend that there is a distinct organized ferment (bacterium) for every disease, a distinct unorganized ferment (enzyme) for every tissue that is built, as to declare that there is a different life for every animal and plant, or a vitamin (a little life) for every phase of life.

The tendency apparently is for the educators to compound, complicate, and comminute all knowledge, until it is a wilderness so entangling that there is no show for a John-the-Baptist to come out of it and teach the people how to make the paths of their thinking straight. It appears that everything in life of mental value must be mystified and complicated, or it is not considered worthy of attention.

We are told editorially by the "North American" for September 13, 1917, in commenting on what Drs. Funk and Goudiss have to say on vitamin:

Ten or twenty years hence we will know more about them. Wider knowledge may reveal mistakes in deductions which at present are little more than guesswork. But certain facts long established by usage and now approved by science so firmly uphold Dr. Funk's description of the vitamin as an indispensable attribute of life, that people should know all there is to be known on this subject.

For instance, it long has been known that orange juice is the best preventive of scurvy among babies. It also has been common knowledge--though until lately ignored by science--that the potato not only is a most nourishing food, but that since its introduction into Europe whole countries formerly ravaged by scurvy have been almost free from this distressing ailment.

Now science vindicates the experience of "ignorance" by showing that orange juice and potatoes are notably rich in anti-scurvy vitamins. And in these two instances, heating even to the boiling point does not injure the vitamin content. On the other hand, the vitamins of milk are sensitive to heat. Even the low degree required for pasteurization seems to affect them, while sterilization appears to destroy them entirely.

Beriberi is a disease of the nerves which for many years had wrought widespread ravages in our Farthest East possessions. Early in 1910 a severe outbreak of this malady was speedily and completely checked by the substitution of unpolished rice for the polished product, which constituted the chief food among the sufferers. Subsequent tests on men and animals proved that beriberi not only is caused by a diet consisting chiefly of rice from which the outer coat or pericarp has been removed, but that it can be cured by the substitution of whole unpolished rice, or the administration of the so-called "waste" which results from polishing.

By isolating from these polishings a crystalline base which cured fowls that had developed a disease similar to beriberi after being fed a diet of polished rice, Dr. Funk was led to his discovery--one which yet may rank with Harvey, Pasteur, and Lister.

Subsequent experiments of like nature by other scientists proved the case beyond doubt. Now we know it is the absence of this vitamin from polished rice that causes beriberi. Just how the vitamin in the rice grain affects the human system; just what it does, or where are its fields of operation, we do not know.

That it must play a vital part in the maintenance of health is well evidenced by the fact that pigeons fed on polished rice until paralyzed with beriberi will revive almost instantly when the anti-beriberi vitamin is injected, and in a day's time be fluttering about as though they never had been ill.

> "This almost miraculous transformation can be due only to the presence of the injected vitamin," said Dr. Goudiss; "and the minuteness of the quantities used supports the view that the vitamins are not foods in the usual sense of the term, but have some obscure connection with the production of internal secretions which are essential to assimilation."

He further says:

> "No longer can we regard ourselves as properly fed because our meals show a scientifically correct balance of protein, carbohydrates, fats, and mineral matter; for without that evasive element which in some mysterious manner gives the word to the forces of the body to digest and assimilate these nutrients, we might as well eat sawdust. For a time, it is true, we may get on very well, for the body stores vitamins against the time of need; but these cannot last long, and without a constantly renewed supply, disease and death inevitably await us."

In addition to beriberi, recent investigations have led to the belief that other deficiency diseases are caused by lack of vitamins. Chief among these is pellagra, so alarmingly prevalent in many of our southern states and which, curiously, is found chiefly among those whose diet consists almost wholly of corn meal ground in the modern way, with the germ and hull of the grain removed.

In localities where the old-fashioned "whole-ground" corn meal is used, pellagra is almost unknown. This has led scientists to assume that the outer coat of the corn grain contains a vitamin which will prevent its development, even when corn is the sole article of diet. When used in a mixed diet, as is the case in most instances, the employment of whole-ground corn meal becomes a matter of secondary importance; for the needed vitamins will be supplied by other foods in the menu.

It also has been shown that a diet consisting solely of white wheat bread will produce a disease not unlike pellagra; and here again science is forced to conclude that in wheat, as in corn and rice, the vitamin inhabits the outer coat of the grain. It is not yet known where this vital substance secretes itself in fresh fruits and vegetables, but science is sure of its existence in nearly all such articles of food.

Thus far, the foods found rich in vitamins include raw milk, or milk just brought to a boil; the yolk of egg; meat juice and broths; fresh vegetables and vegetable soups; fresh or cooked fruits and their juices; whole grains, slightly broiled meats, and cod-liver oil.

Those apparently deficient in this element are sterilized, preserved, or cooked milk; white of egg; sterilized meat extracts; dried fruits and vegetables; highly milled grains; soup meat and preserved meats; and bread raised with soda without the addition of sour milk.

We have dwelt on the details of this subject because it concerns a matter no one can afford to ignore. However easy it once may have been for some persons to dismiss the subject of food as relatively unimportant, no such attitude is tenable today. And at present we face food conditions which demand not only the practice of strict economy, but application of every help science can offer.

This newspaper could not consistently omit its utmost in the dissemination of such knowledge. For during the last seven years, with the aid of Mrs. Scott, we have so emphasized the value of a varied diet, and one which includes fruits and green things, that we could not overlook such sanction of our course. In this connection, we wish to quote from a recent editorial from the "Journal of the American Medical Association":

> "The discovery of the vitamin has emphasized the value of those elements of food which,

> although present in minute quantities, exercise a determining influence in the utilization of the ordinary articles of diet. As Garrod says: 'The immense practical importance of these hitherto unknown factors is in the fact that once the missing element -the vitamin-is discovered, a specific remedy for the disease has been found.'
>
> "That the nutritive value of a diet does not depend wholly on its calorific value must be admitted. The importance of flavors, spices, and of the preparation of food so as to arouse the esthetic senses-in other words, the nutritive value of good cooking--has been pointed out by Sternberg, of Berlin, who insists that the science of cookery is not merely the application of chemistry and physics, but rather an application of the physiology of the senses, applied psychology and esthetics. The spices and flavors used by the cook, Sternberg suggests, may be closely allied to the vitamins, if not identical with them. They may stand in the same relation to loss of appetite and health in general that the specific vitamins do to particular diseases."

Thus is the vitamin closely linked to our present needs. The war is forcing us to a food situation which will necessitate particular attention to diet. Its insistence on no waste will compel us to eat foods and parts of food hitherto little used.

Instead of being a deprivation, this may prove an immeasurable benefit. For it may force us to become acquainted with the power of vitamins to protect our bodies against invading hosts of disease which still are unconquered.

It is rather doubtful if the orange-juice cure so "long known" is really understood. If it is not, it may lead to wrong conclusions. The facts are that orange juice in the treatment of babies is not a very old remedy, and as yet not a widely used one. When there is indigestion and poisoning from the decomposition of fats--cream--in young babies and children, orange juice, which is potentially alkaline, antidotes or neutralizes the acid of decomposition; and it is just possible that scalding the juice does not entirely inhibit this action, but it certainly does weaken it. To say that a vitamin in the orange juice did the curing is working the imagination overtime--it is simply assumption If what is claimed for vitamin be true, all one needs to do to prevent decomposition, or prevent stomach and bowel derangement, or cure all types of diseases, is to extract a little vitamin from some favorite food, and use this "mysterious substance" in abundance. Another cure-all! Another way to prevent diseases! What about germs as a cause? And the specific antidotes made from the specific germs? Indeed, when there is so much known of cause, cures, and immunization, is it not strange that there is any sickness at all? The laboratory struggle still goes on in search for specifics that will out-specific all other specifics. Professional asininity is obvious all the time to the discerning.

One of the most necessary things to do for the victims of scurvy, scorbutus, or acidosis is to rest from food for a while; then start the eating on fruit; and then select a proper diet--fresh fruit, vegetables, etc. Those who are very much poisoned on carbohydrates and proteins combined, because of eating to excess, complain that they cannot eat fresh fruit; that it distresses them--which it does, and will continue to do until there is a decided lettingup on overeating and improper mixing.

Regarding rice: Much is made of the rice story. Indeed, that story is worn to a frazzle by every novice in dietetics. It has become a professional platitude. In spite of it, however, polished rice is still eaten, as is white flour. Both are eaten in preference to the less refined grain preparations--and it is perfectly all right for those who supply the necessary enzymes by eating freely of fresh fruit and salads.

It is doubtful if there has been a test made where no food is eaten except rice. Until that is done, no one can tell what a mono-diet of rice will do. I should expect a race of people to go down on such a diet, even if only unpolished rice were eaten; for rice is not an all-around food. Fruit for one meal, rice and fruit for another meal, and meat, fish, cheese, nuts, or beans, with salad, for another meal, will supply all the food and enzymes--vitamin--needed to attract all the life--energy--required.

It takes more than one dietic error to bring man to grief.

There is much to the chemistry of food--far too much to make a cure-all of enzymes, misnamed vitamin; or to make the lack of enzymes--vitamin--the cause of all bodily derangements.

Fermentation is the important process that stands between food and body-building. It is a question of which ferment will be given the right-of-way--unorganized (enzyme) or organized (germs, bacteria).

An ordinary lay mind can understand that the stomach glands must secrete digestive juices, furnish enzyme, or unorganized ferment, or food cannot be brought to a state of solution, fitting it for absorption. A solution is not all that the ferment (enzyme) accomplishes. A property of resistance is imparted to the food pabulum by the enzymes that acts the same as is claimed for vitamin. This is necessary, and for the purpose of resisting the influence of organized ferments (bacteria or microbes), which are everywhere present, ready to "do their bit" in preparing food for elimination which resists enzymic fermentation because of its unfitness as a food, or because the intake is beyond enzymic (digestive) power.

The food that is acted upon by the unorganized ferment (enzyme) attracts life; the "mysterious substance" of Dr. Funk is a subtile enzyme; it is this mysterious element that brings about the fermentation necessary to cause the egg to hatch, the nut and seed to germinate. Ah, it is this element in the cell of living flesh (animal tissue) that enables the animal to live and reproduce itself--that enables the cell, the unit of the body, to produce a successor. And this quickening element, this mysterious enzyme, starts the fermentation that attracts life, It is then that vitamin flows in and being begins.

This mysterious element, enzyme, appears to be subject to the law of summation--of accumulation and dissipation. In the nut and the seed this element lies dormant, and under favorable conditions may remain ages, retaining the power of fermenting and starting the quickening process. After quickening begins, maturation depends upon whether the environment in which the resurrection takes place contains elements of nutrition potentized with enzymes sufficient to attract the vitarnin--life--necessary for cell proliferation.

Individual life is a state that must vary in keeping with the environment. If the nourishment contained in the environment is potentized with enzymes, then vitamin (little life) will be added; for it is the ever-present link, it is the ever-present immanence--the bridge leading from inanimate to animate.

The air must be vital. I do not mean that it must contain oxygen; for all air--that in the mountains and that in the valleys, in the basement, in the cluttered room, or on the wide-open veranda--is of the same composition. But not all air is potentized with life-vitamin. Sewer air does not differ from mountain air in the amount of oxygen and nitrogen which it contains, but it does differ in the amount of vitamin. The mountain air is potentized with vitamin; the sewer air, the air in closed houses, in closed bedrooms, in dark closets, etc., is dead air. Bottled water, stagnant pool water, boiled water, distilled water, are dead waters. Cooked foods are dead foods. That "mysterious substance"--life, vitality, resistance, vitamin--always eludes the chemist. In the laboratory, it is or it is not in the test tube. It cannot be found except by mental analysis--through the power of deduction. Life, energy, vitality, vitamin, is found--it is in the air, the water, the food, the sunshine, or it is not. We must find out by mental deduction. We have learned from observation that air and water are potentized with life (vitamin), or they are not. We know that where these elements have an opportunity to renew themselves from the world's great storehouse, they contain vitality--vitamin; but when they are confined they become poisonous; not from a lack of basic elements, but they become toxic; for life (vitamin) is always supplanted by toxin when life, or vitamin, fails to be forthcoming from the source of its generation.

Life--vitamin--is cumulative and dissipative. We in our daily lives are either building resistance or we are not. If we persist in supplying our lungs with the air that is vitalized--that contains vitamin; if we persist in supplying our bodies with food that is potentized with enzymes (raw fruit and vegetables), and if we supply our minds with mental food that is vitalized with vitamin, we are building power--resistance. It is well to remember that vitamin--life--is not subject to the rules of the laboratory, and is not confined to substances as coarse as that used in laboratory experiments; but it potentizes thought as well as material food for body-building. And it should not be forgotten that all elements which are to enter into the development of being must be potentized with enzyme. Without the enzymic torch to light the way for vitaminic transfusion, animation fails to appear.

Vitamin will never be bottled; hence the medical mind that looks for a cure-all which can be applied with a hypodermic syringe is doomed to disappointment. Modern medical mind has not got away from its ancestral idea of cure. Enzymes may be extracted and used to bring about fermentation, but vitamin--life--will not be attracted, and scurvy, or acidosis, will overtake the victim of laboratory extracted enzymes and such food as malted milk and artificial foods in general.

It is not cure that we need. It is knowledge of how to adjust our bodies so that the ever-present vitamin will flow into us. We must know how to make a vacuum of our bodies that will attract life, energy--vitamin.

Dead thoughts (old theories that have failed) will not be potentized by clothing them with new-fangled notions. A right theory must be based on fundamentals--on eternal verities. If it is, then the false all around us becomes truth. Truth always must have a potentiality of fallacy; and whether we get the truth or the false depends upon our development--what we are developed for or attuned to. Is our mentality potentized with the enzyme of truth? It it is, then the false can be evoked into life. Vitamin will be added; for it is ever present.

There are dead thoughts. There are thoughts that are languishing, because that on which they feed is devoid of the enzyme of truth. And there are live thoughts--thoughts pregnant with vitamin.

If we clothe our bodies in such a way that our skin is supplied with life (vitamin), and that air can get to it, we shall cumulate energy--we shall store our bodies with vitamin. But if we breathe air, drink water, eat food, think thoughts, that are devitamined--devitalized; if we keep vitamin away from the surface of our bodies by improper clothing; if we drink dead water, eat dead food, think dead thoughts, we become devitalized, and toxin takes the place of enzymes; sickness and death take the place of vitamin--life.

Life, as stated above, is cumulative and dissipative. Such diseases as scurvy and all so-called blood diseases, scrofula, syphilis, tuberculosis, et al., are wholly dependent for their continuance on a lack of enzyme--a lack of food that carry enzyme into the body. Hence the body cannot attract vitamin or life. Consequently disease follows. This is demonstrable. When the profession and the people generally give up dernon-worship--give up their belief that what is called bad, disease, devil, evil, has an existence, and are able to see that these supposed entities have no existence per se, but are different phases of health handicapped from a lack of vitalized food, air, water, sunshine, and mind, then truth will flow in, and a proper theory and practice of the healing art will evolve.

The reason why syphilis is so formidable is because the remedies used are allies of the morbid process. When the gentle influences of life-building activities are allowed to develop normally, this supposed-to-be greatest foe to the health of man, which, we are told, taints the human family, will fade like a dream. It matters not if the remedy is called enzyme, vitamin, or life, or if it is called by any other name, or called by no name at all; success does not depend so much on isolating and prescribing "mysterious substances," or administering wonderfully wrought synthetic experiments, such as "606," et al., which are "so indispensable to life," as upon knowing how to help the human body appropriate and accumulate such an amount of enzymes (vitamin-this "mysterious and evasive element") that it may fortify itself against unnecessary decay, which is another name for scurvy, scorbutus, acidosis, scrofula, tuberculosis, syphils, cancer, etc., etc.

Nature is prodigal in furnishing seed--ova and sperm--the major portion of which fall upon stony places and fail to quicken; others spring up, but fail to find a supply of enzymized food; or, as the "North American" editor and his doctors would say, their food fails to carry the vitamin necessary for growth.

Life is a state which oscillates between quickening and decay, between integration and disintegration, between synthesis and analysis, between physiology and pathology. Standing at the head of these two processes are two ferments. At the head of organization is an unorganized ferment, named enzyme; at the head of disorganization is an organized ferment, named bacteria. When the body is dominated by unorganized ferments, growth, renewal of tissue--in a word, metabolism--is poised and normal. When the food supply is short of enzymes--that miracle-working "mysterious substance" which Drs. Funk and Coudiss misname "vitamin"--then the organized ferments gradually gain control; and as the body's stock

of enzymes runs low, diseases of a toxic character--of which scurvy, tuberculosis, cancer, and syphilis are types-spring up.

Drs. Funk and Goudiss use the word "vitamin" where enzyme" can be used more understandingly. Advanced dietitians are beginning to realize that the end of enzymic variety occurs coextensively with cell, tissue, organ, and organisms. All the different digestive secretions are different enzymes. Food, in its travel from the mouth to its ultimate synthesis---cell-development--meets first with the gross enzymes found in the alimentary canal, which disintegrate and bring to solution the food intake. Not only is food prepared for absorption, but it is potentized with life--vitamin. It should be obvious to everyone who has followed the argument that the function of the enzymes is not only to prepare food for absorption, but to prepare the pabulum for the ever-present vitamin, or life, to take up its abode; and as the pabulum becomes more refined at each new enzymic influence, not only is more life added, but the life becomes psychic when cell-development is reached. At every succeeding step, food pabulum meets with a more refined enzyme, until at last it becomes sufficiently vitalized to be born a living cell with mind-potentially. It is the function of enzymes to metamorphose food into living tissue. If the food intake is devitalized--is devoid of enzymes, or Dr. Funk's vitamin--the body's enzymes run out, and then a retrograde metamorphosis begins to appear. The symptoms are a general discomfort--a tired feeling; the bright health glow of the surface of the body gives way to sallowness; the eye shows dullness; the mind is less active; life begins to drag; interest is lost; different organs begin to function badly. From this point, unless the body is served wittingly or unwittingly with enzymes, ill-health will continue to death.

The miraculous transformation in the health of pigeons given the enzymes of the rice is only observed about laboratories. Only the East Indian fakir and his dupes can see trees matured before their eyes, and hills leveled while they wait. There is a lot of credulity or illogical reasoning among many medical high-brows.

It takes a lot of inability to reason to believe that babes can be fed in such a way as to bring on scurvy, or acidosis, and then be suddenly transformed into health by orange juice or an injection of "vitamin." What is that so-called waste--that material which is polished off the rice? A ferment that is to conserve the rice; an enzyme needed by the rice to prevent bacterial fermentation from killing the germ of life when sprouting--when generation is taking place.

No one would think of the gastric secretions as food. Enzyme is not a food; it is a ferment, and its function is to prepare food for absorption and fit it for quickening.

It is refreshing to find a few scientists who are willing to admit that there is something besides protein, carbohydrates, fats, and salts in the process of metabolism. Indeed there is; but it is not vitamin, unless that name is to succeed digestive ferments--enzyme.

In reading the "North American" quotation, kindly substitute the word "enzyme" (digestive ferment) for "vitamin." Mystery will disappear, and the truth win stand out and seem so simple that he who runs may read.

This "vital substance" is made by each organism. Each organism makes enzymes for itself out of the food elements furnished. If all the elements necessary are furnished, and in sufficient quantities, the organism builds itself ideally. If there is a shortage in any, the body will he weakened to just that extent.

For years I have denounced the machine mode of feeding. I have contended that feeding so many calories and so much protein, fat, etc., was fallacious, was a subordinate part of dietetic wisdom, and had nothing whatever to do with dieting the sick. This contention has certainly borne fruit, in that doctors who make diet prescriptions on the quantitative and qualitative plan never cure anyone, and never can.

Good cooking does not consist of flavors, spices, etc., to arouse the esthetic sense, or arouse an unnatural appetite. Good cooking means the simplest cooking possible to retain the normal taste of the articles cooked. A pampered appetite that cannot eat of this simple cooking should be sent to cold storage, and stay there until any natural food tastes well.

The major part of the medical profession is a long way from the Tipperary of a curing understanding of diet.

"Tildenites" have long known how to live, and the present war reform will not change their manner of living.

Just use the word "enzymes" for "vitamin," and mystery disappears.

Therapeutics defined is, in a few words, the science and art of applying remedies to the cure of disease.

"Everybody knows" that there is such a thing as curing disease; hence, when I say that there is no such thing as curing disease, the average individual looks askance and inquires: "If you don't cure anybody, what do you do? What are you teaching?"

There is a therapeutics of doing nothing. For years I have said that it takes more wisdom to do nothing well than to administer all the remedies in Christendom. It takes more knowledge, more experience, more will, more independence, more individuality, to do nothing well, and scientifically, than to apply all the science that has ever been discovered.

Carlyle said:

The profession of healing is a sacred one--the outcome and acme of all priesthoods--divinest conquest of the human intelligence--and will appear one day.

The question is: Did Carlyle build better than he knew? The probabilities are that he believed in some kind of therapeutics, and his highest conception was that there would be a divine remedy, instead of human intelligence, to pilot man out of disease-producing influences.

On the subject of therapeutics--giving something to cure--I am a drug nihilist; I have been accused of drug nihilism for forty years. It has been said that I do not believe in anything; and I am accused of it yet. However, I never have seen anyone who has more beliefs than I have. I have beliefs enough and to spare; and I admit having a lot of unbeliefs. I do not believe in the fixity of states and the unchangeableness of good. I believe in never-changing law and order, and man's ability to adjust himself amicably to nature's requirements.

Whether Carlyle knew what he was talking about I cannot say. But he told one of the biggest truths that have ever been recorded. Now, what did he mean by it? If he meant what is ordinarily understood as sacred, that would indicate that he did not have the right idea of cure--that he did not have the right idea of therapeutics.

Perhaps it would be well for me to say what I mean when I admit that I am a "drug nihilist"--why I talk on therapeutics, and yet do not believe in therapeutics.

All curing is within the body itself. All we can do is to make the sick comfortable by removing obstructions to the normal operations of the body. The tendency of the body is toward health. The tendency of everything on the side of evolution is toward the ideal. The tendency of vegetation is to develop the ideal type; and if it does not develop the ideal, it is because of obstruction. When trees are planted close together, they grow high and very slender, they are not well proportioned, and they always lack vital resistance. A plant that grows ideally must not be obstructed; it must receive the sun's rays, be exercised by the wind, and have enough of suitable nourishment to promote its growth and allow it to develop ideally.

It is the same with the human body. If it has been planted unideally--in a soil that does not represent all the elements--the child cannot grow ideally and cannot represent an ideal human being. Now, the question is: Can a child born in such an environment ever be brought around to an ideal state? To answer this question opens a large field of therapeutics in which I do believe; namely, the adjusting of the individual to the environment, and the environment to the individual, so that he may evolve into as normal or ideal a state as his potentiality will allowhis potentiality is able to assimilate the elements necessary to bring on

ideality.

If man is hampered by being gestated and born in an environment that does not represent all the elements necessary for ideal body-building, and then the mental state of the mother has been one of depression all the way through the gestation period, we have a big job in bringing that child into an ideal state. The question is: Can it be done?

Eugenics is the subject of much talk these days, and a lot of it means nothing. There is too much importance attached to heredity. The possibilities of man making good are as numerous as the rays that radiate from a center of light. This being true, why talk about his being held down by his inheritance? It is his environment that holds him down, more than heredity.

Pausanius was a Greek traveler who lived in the second century. A physician said of him: "He ails nothing." To which he replied: "I use none of your physic." Again the physician said: "Sir, you are an old man." To which Pausanius replied: "That happens because you never were my physician." Long life often means possessing enough sense to avoid all kinds of opportunities to die. Doctors have had to take the jokes of philosophers from right and left; and it is right that they should, for they as often kill as they cure. Why is it that the people are suspicious of the profession today? Why is it that there are more people who do not have the confidence in the profession which they once had?

Because doctors send out a boomerang every little while that strikes back. The most recent is attempting to force state medicine. It shows obvious, even to lay minds, that if regular medicine were all it assumes to be, there would be no other system of healing necessary. To keep the ranks as thin as possible, students must be selected, and entrance to the profession made as impossible as it can be made, so that only young men of leisure and wealth, or of special favor, may enter. This bars many men of strong ideals and inventive imagination and original thought. As the practice of healing requires as much of art as of science, and as long college training kills the art faculties, our present plan of making doctors ends in the construction of a very complicated human machine that has no more independent mental action than the mechanical jumping-jack. This result, however, is exactly as the heads of the profession desire. That is, they think they do; but, being mechanical human machines themselves, they desire the rubber, the elasticity, the fluidity, the adjustability, taken out of students; and they have almost accomplished their desire. The result is that the average medical man is as incapable of making an independent movement as a mechanical toy. A pronounced type of one of these products, engaged in writing health articles, signs his name with an appendage, and often adds the name of his college mother; which, of course, is as it should be, for such a callow olive branch should not get far from his mother's apron string. Raising the educational standard, and making what the schools teach so obscure that students cannot pass examinations, impresses members of collateral professions and sciences with the idea that modern medicine is becoming worthy of all it claims. To make this belief doubly sure, the state and national governments--two automatic entities--lend the power of their influences; all of which influences go far to imperialize medical power; then, when the liberty-loving people feel the autocratic medical power, it turns their former respect into hate. The effort today is to make college professors out of college men who have great learning, but no practical experience. As well undertake to make an expert carpenter without tools. Knowledge wedded to experience builds wisdom.

Franklin said: "God heals; the doctors take the fee." He was not a physician; he was a philosopher. The philosophers know that doctors cannot cure anything--doctors have no curing power. Why is it that people cannot get that idea? If philosophers in all ages have known that truth, maybe I am not far wrong in saying that there is no therapeutics--no curing influence--outside the animal organism. It is preposterous to say that something can be taken internally or put on the outside of the body that will cure.

Optimistic suggestions are good, and may help the sick to health by imparting hope. Anything that makes people hopeful is curative, but the cure is within the individual.

Dryden said:

"The first physicians by debauch were made;

Excess began, and sloths sustained the trade."

Swift said:

"The best doctors are Doctor Diet, Doctor Quiet, and Doctor Merryman."

The immortal Holmes said:

"Folks want their doctors moldy, like their cheese."

The mold need not be from age so much as from lack of use. Holmes was ostracized in 1844 for advocating what the medical fledglings at this writing are discovering in France; namely, that wounds heal when left open--when clean, not medicated!

Heroes, chiefs, gifted men, enthusiasts--the giant minds among tribes and peoples--were named gods, and they were the first physicians. They were recognized as gods; they were worshiped by the simple-minded and those who knew nothing; and the big men administered to them as best they could.

There seems to be a disposition in man to worship anything which he does not understand. That is why individualistic men had, and still have, healing powers. That is why people who think they are enlightened still take drugs. That is why some of our learned medical fledglings, who know how to warble the word "quack" before they can even think, will automatically write a prescription calling for strychnin to be given to a case of infantile paralysis. As well give the remedy to a dead man! Superstition, your other name is modern medicine! Any school of healing, system, creed, faith, pretention, assumption, or declaration, founded on the usual fallacies, and offering cures that do not put those needing them to the trouble of correcting bad habits, proclaimed vehemently enough, can build a following of humanity who will declare their faith in the system.

Every faking system of cure must be accompanied by "sounding brass and tinkling cymbal," and the drawing part of the fakery must be the successful pretentions to charity.

To save the people--for the good of the people--is the strongest card in the hand that is stacked against the people. Nothing can succeed in faking the people that is not run in the name of charity or for the good of the people.

"And though I have the gift of prophecy, and understand all mysteries, and all knowledge; and though I have all faith, so that I could remove mountains, and have not charity, I am nothing." Paul was a doctor of laws, and he understood psychology better than most doctors today.

It matters not what ridiculous cures are offered the stupid, ignorant public, if they are handed out in a capsule of sweet charity, they will be gulped down with avidity and a smile, and the palliation, when there is any, is in the faith generated. Church hospitals are typical shrines; for God blesses the vandalism practiced in them. The bolus--the therapeutic agent--may be determined, but the capsule of charity brings the Balm of Gilead to the hungry soul.

Man is born with a large void in his nature, and that void is aching for sympathy and charity. This void is infinite in capacity, and is capable of assimilating any old junk, if encased or honeyed by sweet charity.

Then, whoever would explore this void with X-ray perception will find in the scrap-pile, hospitals, sanatoria, resorts, shrines, long- and short-haired fakers of all kinds; fakers from the Dives (rich-man) pattern to the Lazarus (ragamuffin) pattern; representatives of "surgical plants" --fake doctors who have vandalized the beautiful human body in the name of charity; blatherskites who cut out parts of the body for nothing, to prove that they are embodiments of charity--who use the cloak of charity to further their surgical exploitations of the human body.

Every curing system on earth, and every cure-all, can be found in this aching void; and there is no hope that it will ever be overloaded. It is well that the capacity is unlimited; for every generation of men will come with its new, elegant, and sublime fakers, with a taking variety of charity.

It is not within the possibility of many men in each generation to be endowed with the perception to recognize the fakers and the faked; hence their endeavors to save the people by imparting a little common-sense will fail to receive enough attention to change the human trend to any great extent.

The hope of a rational system of securing and keeping health will be pushed back, to give place to a therapeutics that can cure without removing cause; and as cause consists largely of bad habits, a remedy that can cure without removing habit will always be popular. The people will always be willing to allow saviors to die for them.

The immediately preceding is a frank statement of the probability that the masses will never be willing to give up bad habits for the promise of health; indeed, most people cannot be made to see that disease is of their own building, and that a correct therapeutics is simply correcting the errors of life. As every child is born. a lump of protoplasm without knowledge, the question is: Will society ever evolve a belief that disease is never anything more than an undesirable state of health, brought on from a maladjustment of man's body to its environments, and that a reasonable amount of care, a knowledge of which is within the mental grasp of all, will make health possible to all who are corrigible and willing to live in a manner necessary to evolve the highest mental and physical efficiency? If this is possible, then children may yet be born with an inherited potentiality for self-control, and ideals that can and will subordinate appetite and passion to a higher development. The present human potentiality at birth is dominated by sensuality, and a morality so perverse as to barter worship of an imaginary Deity for the privilege of indulging in pious types of sensuality.

It is not an evidence of immorality that the masses fake and are faked; no, it simply means that the faker and the faked are still on the unmoral side of life--they are unmoral; they have not evolved into a moral understanding. Much of what we see of human vandalism, as practiced by the medical profession, is not a breach of moral ethics; it is the way the blindly ignorant soul has of finding light. It is the mental urge--the subconscious longing for mental birth.

The worship of gold and position is in keeping with the belief in whatever is up and beyond the understanding. It is the sensual mind's way of seeking light.

The plant, with its urge for light that was potential in the seed, is forced to push its tender shoot around obstructions that its insinuating insistence cannot persuade to part and allow it to proceed more directly to its goal. The clinging, insinuating manner in which the tender shoots of growing plants hug, embrace, and penetrate clods, rocks, and other obstructions, might be described as love and worship--but is it? I think not. It is the plant's way of seeking light. It may have to go a very devious waysometimes backward, then again forward, and from side to side; hugging, embracing, and seemingly evincing much attachment to these associations. But not so. The potential urge for light forces the plant to cling to, and take every advantage of, its environment-not from a love of it. but for self-development--self-protection--self-preservation.

The plant's struggle for light is typical of mind-growth.

We see the undeveloped mind worshipping heroes, chiefs, gifted men, enthusiasts, fanatics, and gods--worshiping position, wealth, influence, and power. Should we not be nearer right if we said that mental urge--the desire to grow--causes mind to cling to all these objects of so-called worship, until it, the mind, develops enough virility to be sufficient unto itself?

Like the plant in its growth, mind must grow around and through obstructions, such as false theories, creeds, and schools--around great men, and gods. It must try the power and might of wealth. The mind must cling to something in its growth upward toward light; and its clinging to the false, in the manner that it does, is nothing more than the survival of the fittest, or its struggle for existence. It is better to cling to the false than not to grow at all. It is this mental urge--this desire to live--that causes mind to tether itself to its environment, seemingly clinging to, its obstruction because of its love for it. But this is not true. Mind is potential in nature, and its urge is toward full development, with truth as its goal. Truth being the goal, mind must grow through or around such obstructions as fixed creeds, great men, and gods. The selfishness of man (it is not selfishness in the vulgar sense; it is a desire to live, to grow; and it dare not let go of one

support until safely annexed to another) causes him to stereotype knowledge, and brand it with his own name, or a name of his choice; and then go to war, if necessary, to prevent change--progress--growth of mind.

What are schools, creeds, state medicine? The disposition of men to fix beliefs so that there will be no progress--no mind-growth. This is the ignorant manner of expression--this is the social understanding; but the truth is that creed is for mind what the rock is for plant; namely, obstruction to growth. But it must cling to it until safely attached to a more substantial support.

The so-called intellectual always impose on the credulous and ignorant. Man must worship something, and it is immensely gratifying to his vanity if he can manage to be the object of worship. The selfishness of man would cause him to stop progress, if in doing so he could become a god; for the word "god" means a finished product. As soon as God is discovered, be he a man, or a deity, one on the outside of the universe, progress ends. As soon as a cure is found, progress stops; and around the little god of cure, or stone of obstruction, every protection is built to immortalize it.

Simple-minded people and the credulous allow themselves to be dominated by those who are selfish. As a result, obnoxious laws and customs are established which prevent progress.

The regular school of medicine is struggling with might and main to saddle on the people its present germ theory, and its corresponding immunization and therapeutics. Which tacitly means: We have arrived at perfection, and it is time to stereotype and ossify.

This is the curse of school, creed, and church. Around and through these obstructions, mind-urge must force its tender shoots. I dispute that it is love or worship that causes mind to cling to heroes, churches, or god. Indeed, they are obstructions to mental growth; but growing mind must cling to them until strong enough to grow independently.

The intellectual have imposed, and always will impose, upon the ignorant and credulous. The medical profession is working largely on the theory that people want to be humbugged; and it is supplying the want.

The priests were the first physicians. Prophets and divines were consulted. Pythagoras, Aristotle, Athenaeos, the early Christian teachers, the mystics of the later centuries, on to the present, not only "instructed in arcane, metaphysics, and general knowledge, but treated disease."

The late Dr. Alexander Wilder declared: "The knowledge anywhere possessed of the art of healing is the measure of the refinement and civilization to which the people have attained." Show me the doctor any family employs, and I will tell you of the intellectual level to which that family has attained. Their beliefs in regard to church, healing, drugs, etc., mark the stratum in intellectual life to which they have attained. This may be a questionable compliment to those who pretend to be intelligent, yet are clinging to childish superstitions.

See people chasing after quacks--chasing after cures that are not cures--willfully helping the physician give a distorted notion about their diseases, so they will not be interfered with in their daily habits! It is obvious to what an intellectual level people have attained when they will take drugs, or are vaccinated, to cure diseases caused by bad habits. When habits are of more importance than health, and when people will struggle in every possible way to secure a healer who will indulge them in their habits, and cure them without requiring them to stop the habits, that cause disease, it is easy to see where they belong intellectually, titles to the contrary notwithstanding.

Man is civilized by social relations. His refinement depends entirely upon the mental attitude of those with whom he associates. Has a man true refinement who will, for the sake of gain, recommend an operation when he is doubtful in his mind as to whether it is necessary--doubtful as to whether any good will come from it? There are a few barbarians who say: "Damn the people! I am not my brother's keeper. We are here to give the people what they want." What kind of civilization is that? And yet we boast of our civilization.

Kindness and charity represent real culture. The only country that boasted largely of its culture before this European war was Germany. Does war represent culture? aaaa

Does the preparedness of a country represent culture? Is that an ideal religion? Is Christendom Christian? Do Christians believe in Christianity? Is Christianity a reliable therapeutic remedy for misanthropy? Does Dr. Christian know how to use Christianity to cure man of his unethical disease?

The art and technique of healing proceed from knowledge, refinement, and culture. The province of intelligence is to investigate and discover the cause and origin of disease. Scientific knowledge and artistic skill are not so much concerned with cure as with the individual himself. It will always be impossible to get rid of the personal equation in formulating a system of healing. So long as systems are formulated with the personal equation of the patient left out, the system must fail. Indeed, the patient must be the doctor, and the present doctors must become teachers. Medicine is an art. Science, when it is used as an art, will help; but when it is taken out of art, science will never give a solution to the problem of cure.

A man may paint a beautiful picture scientifically; he may have planned the picture carefully, laid out the plans beautifully in advance, and prepared formulas for his colors, blendings, light and shade-all correct according to the best formulas. But when the real artist comes along-the one who carries his model in his soul, the creator- he will make a picture of the same subject that will throw the first into the shadow so far that a second look will never be given it. That is the difference between art and science.

Do not jump to the conclusion that I do not believe in science! It is the basis on which we must build; and every man should have as much science as he possibly can get. But if he is going to cut loose from everything else, and have nothing but science, he will make a bungling record.

In a general way, the skilled physician can tell that his patient suffers; but he cannot know anything of the state of emotions, the wants, the longings, the heartaches. The doctor can see the results of appetites and passions, the same as he can see the results of an accident, the cause of which he knows nothing about. There is an element in every disease that the doctor cannot know without the aid of the patient; and there is an element of cure that belongs to the patient, without which the doctor is helpless. It is nonsense to expect cures to be performed on patients whose lives, physical and mental, are not known.

Taking a drop of blood for analysis, or examining the urine, tells but one thing--and that is the state of the blood or the urine; but nothing of how the perverted state was brought about, if it is perverted. A cure must be formulated on the cause, and not on the effect.

Without an understanding of cause, hope for cure must be lost. How can there be anything done toward removing cause without a complete understanding of what cause is?

The divine conquest of the human intellect is made when cause is known. All before that is chaos. Knowledge, religion, ethics, and morality are in a state of chaos until a knowledge of cause comes to set man right. That cause must be known not only scientifically, but artistically as well.

Archaic Medicine

In archaic medicine there was a therapeutics in the form of suggestion. It was in the form of foretelling and divination. There was something in it to help the people. Sick people want someone who can look ahead and give them hope; and hope is one of the important remedies. Suggestive therapeutics is built largely on hope--belief in betterment. We have schools of suggestive therapeutics, and there are many who practice it. They teach people how to suggest themselves out of a belief in sickness. The cure comes from within the individual; and if it happens to be that the individual needs a mental therapeutics, suggestion helps him think a little differently--helps the patient develop a more health-building belief.

In archaic medicine the serpent on the staff is the symbol of medical art. Egypt, Greece, Germany, South America, and North America employ it.

The asp on the crown of Queen Isis was a sign of the physician.

The fire serpent on a sign-post was the sign of an Assyrian physician.

In Mexico and Brazil the rattlesnake is the sign of the profession.

The serpent signifies occult life-principles and power to divine--preternatural power. The seraph on the staff set up by Moses possessed the power to save those about to die. When they were sick they had the belief that, if they could look upon the seraph, they would get well. They were sick in their minds, the same then as now. Fifty per cent of all sickness is mental.

When a person gets sick, the mind gets busy at once. Nearly all people are afraid of tuberculosis. When they have a cough or a pain in the chest, they go to doctors to find out if there is anything wrong with their lungs.

Places of learning were built in cemeteries in the valley of the River Nile.

Herodotus declared that the Babylonians had no physicians. They used the public parks. The invalids would congregate in the parks, and the people passing along were expected to talk with the sick people and ask how they felt. If they themselves or any of their family had had a similar ailment, they would tell the sick person how they got well. It was the duty of the well people to converse with the sick and help them get well according to the methods they had used. This plan, under wise guidance, could become a more perfect system of cure than any of today.

It is not very different in this day. We can always find someone who thinks he is capable of prescribing for all who are not well, notwithstanding, perhaps, the leading physicians of the community are prescribing for them. Such laymen know very well that their prescription is better than the treatment received from the physician. The layman does not realize that all the experience he has had is with himself, while the experienced physician has watched hundreds and should know much more. It shows that people are natural-born healers, all of them.

It was the same in the days of Jesus. The sick came to the road where he was expected to go by, and they expected him to heal them. That kind of healing has come down through the ages.

This method of healing the sick was not confined to Assyria and Palestine; it was in vogue even in Egypt, along with priestcraft and secular physicians.

Placing the sick in the public thoroughfares is alluded to by many of the older historical writers.

Fast-days were one of the therapeutic remedies of the Euphrates countries.

Mysterious rites, incantations, formulas, the secret word, images, symbols, sacred texts, have all served their purpose in exorcising the evil spirits that caused disease.

All the therapeutics, ancient and modern, above referred to, rests largely on the belief that cures must come from without. This is a belief that will bar the profession and the people from reliable health knowledge, so long as it prevails.

Causes must be discovered and removed. A cause is something--in influence--that always acts; not an influence that acts part of the time, and part of the time it does not.

Germs, as a cause, act sometimes, and sometimes they do not.

Germs always act under a given circumstance; namely, when the body is enervated--when resistance is lost. Then, to prevent germ action, the proper thing to do is to keep the standard of health above the point where germs thrive.

What must be the therapeutic agents? Correct eating, correct care of the body, correct sanitation, and a sane, well-balanced mind.

A knowledge that will help man to enjoy health, evolve the greatest efficiency, and save him from driveling senility or early death, is procurable today.

None but the misinformed will go about seeking cures. Cures, like salvation, spring from within, not from without.

Knowledge is the only reliable therapeutic agent.

HOME HYGIENE LIBRARY CATALOG

INTRODUCTION

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B. PATHOGENY

Instead of microbes being the cause of disease, they are at most only capable of joining with the culture media to develop an affection--certainly not a disease. As cause, bacteria must be classed with the elements and other influences in man's environment which are good or bad for him, depending on his health--resistance.

Efficient cause is anything powerful enough to produce primary disease. There are chemical causes--poisoning--and animal toxins. The poison that can prostrate and kill man must be able to overcome his normal resistance. Nothing belonging to man's normal habitat can break down his normal resistance; hence the idea that germs unaided cause disease is a delusion which the medical world must outgrow, as likewise the idea that serum can antidote germ influence; for germs have no influence except as they join other auxiliary influences and break down resistance.

C. PATHOLOGICAL PHYSIOLOGY

This should not be recognized as differing from physiology. Biology is the same whether the process be normal or abnormal. Law is the same now and forever. Biological laws are the same in health and disease. If a given disease-producing influence is experienced, disease will be established; remove the influence, and the laws, which are always the same, continue to act ideally, and health will return. Death itself is the only way to prevent the ideal working-out of physiological law.

It should be illuminating to those who think of disease and health as distinct entities to be assured that they are states, not entities, and that both are produced by the same laws; that it is within the power of man so to present his body to the laws that the state following will be health, not disease.

Correcting disease must have a limit. Where a disease has been running on until enervation is profound, or until the integrity of a vital organ is far spent, coming back to the normal may be impossible.

A patient complains of pain in the chest. On examination, congestion is found. Congestion not being a disease, on further examination a heart derangement is discovered. The pulmonary congestion is due to heart insufficiency. As there are no organic diseases proper (all organic derangements are reflex or secondary), a cause for the heart disease must be found. There may be a history of an infectious disease suffered years before--typhoid fever, rheumatism, or any of the contagious diseases. In regular medicine the primary cause--say, typhoid fever--is gone. The cause, then, is gone; so treatment is given to the heart, notwithstanding the heart lesion is not considered primary. Heart stimulants are given, which revive the organ for a time; but soon it must give out, for the treatment is stimulation, and the cause of its derangements is stimulation. In the first place, it was overworked by fever, infection, and drugs which left it impaired; then wrong eating and other habits, practiced after recovery from the disease that brought on the cardiopathy (heart weakness), prevented the organ from returning to the normal, which it would have done if it had been left for a few months or years to regain its normal tone.

In making a diagnosis, no consideration is given to daily life by the average physician. Because a patient suffered with syphilis twenty to thirty years ago, and today he has lost his faculty of speech, he must be suffering from syphilis. The intervening years of bad habits count for nothing. If symptoms of tabes dorsalis (locomotor ataxia) present, the best doctors doctor syphilis, even if tests fail to affirm their diagnosis. The past twenty to forty years of sensuality count for nothing; the whole trouble is due to a specific germ that has been hibernating in the tissues of the body.

Indeed, if correct living habits are practiced, no disease can remain in the body for any length of time. The body has the power to renew and purify itself, when given an opportunity; and all the opportunity needed is to receive sane care. There can be no hope of a thorough house-cleaning so long as the organism is taxed beyond a reasonable limit by an oversupply of food, by stimulants, by sensual indulgence, and, neither last nor least, by drugs that cause sclerosis.

Morbific cause is often beyond the reach of our remedies, because we are looking beyond the daily and hourly cause or causes for a cause that will vanish as soon as its support is gone.

In the matter of nutrition, many good and intelligent physicians often treat for the removal of an effect of malnutrition rather than for malnutrition--mistaking the effect for cause. Indeed, nearly all the work done by average physicians is on this order.

D. PATHOLOGICAL ANATOMY

A lesion of any structure when healed leaves a scar. Scar tissue is more liable to undergo degeneration than normal tissue, not because it carries a potentiality of the old disease, but because scar tissue is not nourished so well as other tissue and breaks down much more easily.

An inflammation of the urethra that extend to ulceration will leave scar tissue when cured, it matters not whether the inflammation is specific, or brought on by self-abuse (onanism), or from irritation caused by urine strongly acid from chronic toxin poisoning.

The scar tissue reduces the caliber of the urethra. This partial obstruction prevents self-cleaning. All tubes, ducts, and canals that are partially closed--strictured--fail to evacuate and cleanse themselves thoroughly. Hence, behind the strictured point, irritation and inflamation develop--a catarrhal inflammation which gradually lessens the caliber and finally develops complete obstruction. If the trouble is of the eustachian tube, noises in the head, ringing in the ears, and deafness follow; if of the urethra, slow and difficult urination from obstruction of the urethra and bladder irritation follows, and, as a result, lost coordination is liable to result from reflex irritation. In esophageal, stomach, or bowel obstructions, ulcerations and cancer are liable to follow, with all the evils accompanying partial to complete obstruction.

Primarily there must be a chronic state of toxin poisoning and pronounced diathesis before local inflammations of mucous membranes can take on chronic irritation, inflammation, ulceration, cancer, or syphilis . If a chronic state of toxin poisoning is not developed and maintained by bad habits of life, accidental irritations and nflammations will pass away from lack of support-from a lack of daily fuel supply. The truth of this can be proved at any time by noticing how quickly and well inflammations heal in those who are free from dyscrasia. and intestinal putrefaction. And another proof may be worked out-namely, correct the chronic toxin poisoning, and a stop will be put to all silent, subacute, inflammatory hyperplasia.

I have found no better definition for disease than the following: Disease is the morbid process considered in its entire evolution, from its initial cause to its final consequence; affecton is a morbid process considered in its actual manifestations, apart from its cause.

The so-called diseases, such as heart diseases, rheumatism, typhoid fever, pneumonia--in fact, every disease named in medical nomenclature--are in reality only affections. Real disease is perverted nutrition, caused by toxins generated within or without the organism. It is this chronic state of toxin poisoning that breaks down resistance and allows affections to develop. Such affections as cold --catching cold in the winter time, hay fever in the summer time, and asthma in both winter and summer--are affections resting on a base of diathesis sensitized by toxemia. The more pronounced the diathesis, the less the natural resistance, hence the harder to overcome the disease, which is chronic toxin poisoning.

All affections, commonly called diseases, are "hors de combat without a culture-medium-=a body prepared by chronic toxin poisoning--in which to develop.

E. SYMPTOMATOLOGY

1. The Patient

As it is the physician's business to cure the sick (at least, that is what nearly all laymen, and perhaps ninetynine and nine-tenths per cent of the profession, believe), those who are uncomfortable or in pain place themselves under the care of a physician to be made well, and when the pain is gone a cure is supposed to have been wrought.

The patient presents symptoms, some of which are subjective and a part of which are objective. The subjective symptoms are those about which the patient knows, while the objective symptoms are the changes of the exterior and interior about which the physician knows.

The subjective symptoms are those that have developed in the consciousness of the patient. They may have come on rapidly, or they may have come on very slowly.

The history of disease is that of a coming-on and a going off of discomfort; and on the revolutions--the cycles--made by diseases rests the reputation of all systems of palliation. The patients feel bad, and the doctors of high and low degree, representing schools whose scientific data--theories of cause and cure--are poles apart, and whose therapeutics range from conceit to the fanciful and on to the grotesque, gather around their victims and administer their "dope;" when, behold! as if by the touch of the lamp of Aladdin, the victims are blessed by the remedies, in spite of the fact that these are as opposite in their specific actions as it is possible for them to be. Yet the sufferers are "cured"! Of course, it matters not if the patients are sick again in a week, or a month, or a year, with the selfsame disease--another fanciful "cure" is made, which again our doctors and patients celebrate in the usual way, by telling in scientific terms just how it came about, even the wisest among them being ignorant of the fact that the natural progress of all disease is rhythmical or cyclical--better and worse--until the organism is broken down, and then the patient is better and worse, but never well, until death gives full relief.

It is the history which the patient recites to the physician; and it is the physician's business to weigh, analyze, and criticize what the patient tells him, and, by a physical examination, to determine just what the derangement of body is.

It should be borne in mind that the diagnosis of the exact derangement--discovering just what organ is affected, and determining whether the disease is functional or organic innocent (benign) or malignant--is very far from discovering the primary and insidious cause, without which discovery the treatment must be palliative. There is no cure short of removing the primary or initiative cause. If the initiative cause has passed away, then the secondary cause, which is doing primary work, must be discovered and removed.

The patient may be making his first call upon the doctor. He may be having his first pain or discomfort, or he may have had many attacks of sickness and pain.

The discomfort that caused the patient to seek relief may be a link in a chain of morbid derangements leading back to childhood, or even infancy--not on the order of heredity, for nothing is inherited except a predisposition to be sick in a given way; but if the tendency ever becomes a realization, habits that pervert nutrition must be practiced long enough to break down resistance and start the morbid tendencies to work.

It is necessary to get all the history of the life of the patient, and, when possible, the family history, age, sex, habits, occupation, temperament, beliefs, environments, mode and manner of the care of the body.

It is necessary to know all about the life which the patient is living, and all about the life which he has lived, if he has changed his style recently. It is not only necessary to know the physical habits of the patient, but his mental habits as well; and, in addition, the physician must have the confidence of the patient and know his secret life. The physician must enter into the relationship of "father confessor" with every important case that calls upon him. If he has not the personality to secure this confidence, and draw out the secrets that are hidden in the occult chamber of the individual's soul, he is not possessed of those qualities of character which make for healing. The doctor must have sympathy--not, however, without firmness and sternness, when necessary. The quality of selfishness in a doctor must be covered by a very large coating of politic politeness, or he will not draw patients, and certainly will not be a physician at any time. If his selfishness is pronounced, it is liable to be subconsciously interpreted by the patient, and this knowledge kills influence.

Lost self-confidence, self-respect, and self-control are the psychical elements with which the patient contends in chronic diseases, and which make management of a cure impossible for the selfish, vain, and unsympathetic doctor; for only the sympathetic can draw confessions--and confession is necessary to cure.

It is well, this early, to disabuse the mind of any reader of the idea which he may have that a successful curing system is, or can be, based on a set of cut-and-dried formulas. Indeed not; every case is different and a law unto itself. The only thing that is fixed and unchangeable is the natural laws within and without the patient. It is our attitude before the law that determines health or disease. If our actions agree with the law of our being, or the environment, all is well.

Health results from an agreeable adjustment of the body and mind to natural law and order; and impaired health--a lowered health standard, called disease--comes from disagreeable adjustment of the body and mind to natural law and order.

Diagnosis is determining the symptoms and learning just what is the cause of the morbid process, and its effect on the body.

I practiced medicine in the orthodox manner for twenty-five years. A number of those years were spent in determining just how much my treatment had to do with the recovery of my patients, and how much it did not. Little by little my drug superstition sloughed off. Not rapidly, but little by little, I learned that the physician is a woefully deluded man.

In the first place, it is most unscientific, not to say senseless, for medical colleges to teach clinical medicine, using as subjects men and women broken down in mind and body from years of bad habits, and to use, as a teaching force, medical men who do not consider the influences of the daily habits of mind and body as factors in producing disease. As proof of the folly of such teaching I cite the growth and prosperity of Christian Science, which has proved such a haven of rest for millions that have escaped the barbarous practice of "scientific" doctors who were struggling in a medical way to medicate, vaccinate, inoculate, extirpate, serumize, immunize and demonize patients, but succeeded only in teaching all a large sick habit. Christian Science has always builded better than it knew; but this is one of nature's compensating acts. The regular profession builds in an inferior way with what it knows. Selfishness, snobbishness, and bigotry have blinded the eyes and dulled the understanding of medical schools, as ignorant conceit and religious superstition have blinded the eyes and understanding of Christian Science.

Each system is standing in its own light, and prefers to be wrong rather than to give up its selfish advantages. The medical schools teach without any adequate means of finding out what the habits have been and what part habits play in the evolution of disease. Of course, habits are talked and written about; but, so far as applying the knowledge in the healing of disease is concerned, the subject is a dead letter; it does not enter into consideration, except in the most casual and perfunctory way.

There is but one way to learn of the amount of influence exerted by physical and mental habits--what part they play in a given case--and that is by inducing the patient to give them up, while the physician stands by, keeping hands off, watching nature eliminate and readjust. If the doctor cannot be satisfied to do nothing, except watch nature clean house and see to it that the work is not obstructed by the patient's bad habits or by his medical superstitions, he can never cultivate a dependable working knowledge of etiology; and without such knowledge he must remain in a mentally chaotic state concerning cause, effect, and cure.

Our present scientific teaching leads us through a "fool's paradise" of examinations, using instruments of precision to palpate, auscultate, and percuss; chemically analyze the secretions and excretions; microscopically examine the secretions, excretions, and every fluid and solid of the body; bacteriologically examine the entire body--the exudates, the transudates, and the expectorates; aspirate from every secret chamber of the body, analyze the fluid in every way possible, and then spend weeks in bacterial culture; X-ray every suspicious location, and radiograph the same. After all this examination, the diagnosis is "hung up", and the patient is sent away on suspended judgment, to return again in a few weeks or months to go through the same ordeal. This may be somewhat overdrawn, but certainly not in a few aggravated cases of mania in diagnosis.

What are the real causes of the bodily derangements which send professional gentlemen and their diagnostic specialists and experts through this "fool's paradise" looking for something that is not found in this glorious Eden? What is that elusive something that evades the microscope, stethoscope, test-tube,

analyst, X-ray, and every other instrument of precision, and every analytical, synthetical, deductive, inductive, and seductive diagnostic procedure?

It is life--a state that is commonly referred to as health. It is not an entity--a something to see, hear, taste, smell, or feel.

Health is the meter by which life is measured. When health is below a certain standard, we think disease; we lose the thought that impaired life--the state we call disease--is a lowered health standard, and that there is no such thing as disease.

The primary entities with which the physicians have to do are man and his environment. These are both good and adapted to each other, or they could not exist together. Man did not evolve until his environment evolved him. I assume that, inasmuch as nature never stultifies herself, man and his habitat are suited to each other and are potentially ideal, and that, if the unideal evolves, it is because of a maladjustment which is easy of readjustment.

I further assume that it is the doctor's duty, if he would be a physician, to throw his whole power of intellect into the study of why an environment that produces man also destroys him--why benign and life-imparting influences become malignant and life-destroying influences; and I invite any medical man to try successfully to refute my declaration that there is not one influence in man's environment which is not for his good, if he (man) is properly adjusted to it.

What should etiology be? Learning all about the influence of everything that affects man's body and mind. In this study we find that everything necessary to life, liberty, and the pursuit of happiness may be enjoyed to excess, and that, when it is, it enervates--lowers the standard of health; which means that functioning is impaired and self-poisoning takes place by retention of excretions. When this state is brought about, man loses his normal adjustment and every environmental influence has an exaggerated effect upon him.

If he has lowered his resistance from overeating, overwork, worry, fear, overindulgence in any of his physical or mental pleasures, every influence to which he was once normally adjusted affects him uncomfortably. If he undertakes to eat as formerly, he suffers from indigestion; if he works or undertakes to indulge himself in previously enjoyed habits, he is made uncomfortable and to suffer. One to three cigars distress him, whereas once a dozen could be smoked without any apparent subjective symptoms. The hopelessness of this situation lies in his remembrance that he once could smoke, drink, and otherwise indulge his sensual nature without discomfort, and in his belief that if he can find a doctor to "cut out" his disease, or cure it by some scientific means, he may return to his old flesh-pots. He knows very well that he could once indulge; he is quite sure he may again, if a cure can be found; and on this fool's errand he can find doctors and healers galore to accompany him. We have "perhaps the largest surgical plants in the world" just for the purpose of cutting out disease, so that the victims will not be put to the inconvenience of cutting out their bad habits.

The enervated man cannot indulge himself with any of his former sensual pleasures without being thrown into a state of discomfort. He and the medical expert go rummaging through the dump-pile of primary, secondary, and tertiary symptoms--a few of which are: impaired blood, functional and organic changes in various organs of the body, deranged secretions and excretions, etc.--hoping to find cause. Certainly a fool's errand, when, if they would reflect, they should notice that after every enjoyment the sick man is made worse, and after every disappointment in gratifying appetite and passion he is made better.

In this connection it may be well to give a few of the bulletin reports of the scientific activities of the doctors in their treatment of one of the world's most distinguished patients, showing how innocent the profession is of the grotesqueness of its scientific conceits:

> "The queen is sinking. She is unable to take nourishment. Her medical attendants declare that she can last but a few hours." At the expiration of twelve to twentyfour hours: "The queen has rallied, and is able to take nourishment. The doctors declare that there is a chance for her

recovery, barring complications."

What complication or complications could spring up? What causes complications? In this case the complications were obvious enough to any mind not under the spell of medical science.

Complications usually come from the treatment and nursing.

> "The queen is sinking. The rally of this morning was followed by a sinking spell, and she is again unable to take nourishment. Heart tonics given hypodermically keep what little life there is from ebbing away. Only the superhuman skill of the doctors prevents death from claiming the great woman as its bride."

"Verity, every man at his best state is altogether vanity. Selah." Superhuman conceit killed the good woman before her time.

> "During the night the doctors watched at the bedside of the distinguished patient, watching with bated breath the ebb and flow of the declining energies. Once or twice the family was aroused to view the grand queen and mother of the greatest empire on earth, while there was still a little life left in her body. All efforts at keeping life in the aged queen was abandoned at midnight." Next morning: "Most extraordinary, the unexpected happened! The queen rallied, and at this cabling is taking nourishment. The doctors fear, however, on account of the queen's great age and the weakness of her heart, that the rally will only be temporary. Sir John Blatherskite, an eminent heart specialist, was called in consultation, and he favors strychnin for the heart. This heart tonic will be given in place of digitalis, which has served long and well."

If we of the profession could see how childlike and silly much of our boasted science is, we could then see how like grandstand acting are

The queen did die--not, however, until these disgusting medical bulletins were repeated often enough to have put the whole world "wise" to the stupidity of medical science as practiced, and the shallowness of medical thinking, if the world had been capable of cutting loose from precedent and doing a little bit of independent thinking.

The profession is so used to looking to the unusual, the mysterious, the occult; to finding a cause for disease, instead of recognizing the fact that there is no disease per se--only a normal, supra-normal, or infra-normal state of health, and that these different states are brought about by different degrees of environmental stimulation.

All that can be discovered by examination, be it superficial or scientifically elaborate, is the effects of influences or causes which have passed out of existence, or which are still existent, or which have caused secondary causes before passing out. Scientific medicine spends its force on effects; the real causes are left undiscovered.

For example: A subinvoluted uterus, or a misplaced uterus, may be crowded by intra-abdominal pressure, causing a misplacement and perversion of circulation. The return circulation may be sufficiently impeded to cause a passive congestion and an enlarged hyperplastic state to develop; and the larger the growth, and the more constriction and impeding of the circulation, the larger the tumor (fibroid--for that is the character of this morbid differentiation), until restricted by the pelvic walls. This resistance to growth restricts the size and hardens the tissues. If, however, the tumor drags the uterus into the abdominal cavity, it will then, being freed from restraint, take on new and more rapid growth, sometimes filling this cavity equally to the size attained at full-termed pregnancy.

In this case the primary cause may be a catarrhal inflammation at an old placental site; or a catarrhal inflammation of the mucous membrane of the virgin uterus, due to exposure during menstruation, may take on hyperplastic growth, causing an enlargement of one side of the walls of the uterus. This causes a flexion, and a flexion always impedes the circulation, and a fibroid growth follows. All growths are the result of impeded circulation. When the circulation becomes so mechanically obstructed as to bar the

entrance of oxygen and an exit of waste matter, degeneration takes place--malignancy carries off the patient. The cure must be restoration of the return circulation by removing all pressure that causes misplacement.

2. Appearance of Patient

The patient's appearance will tell whether or not he is able to meet the requirements of existence. He looks able to carry on his work--his particular occupation- or he does not. If he does not, he will give the appearance of being sick with either acute or chronic disease.

At the bedside the patient may look robust, sick, collapsed, bluish or cyanosed, thin, fat, with thick and short neck, or long and slender; he is on his back with legs extended, or with the legs drawn up; or on the side with legs drawn up against the abdomen.

The patient may be unable to give a history or describe his symptoms.

Decubitus (Lying Down).--The manner of lying is significant. On the back means exhaustion. This is the position when a patient has lost consciousness.

In a faint or anemia of the brain, the head drops; in congestion of the brain, the head must be supported on several pillows; in asthma of the lungs, bronchi, or caused by the heart, the patient must have much pillow support.

In heart disease the patient lies upon the right side. A normal person can lie on either side equally well.

When heart disease is advancing to the fatal state, the position is sitting, with head and shoulders supported by pillows.

Pain in the abdomen will cause the sufferer to press upon it, or lie on a pillow. Pressure gives some relief. When the pain is intense there will be twisting and writhing.

In peritonitis, appendicitis, cystitis, gallstones, cancer of the stomach and bowels, the tendency is to draw the legs on the abdomen. In peritonitis, the patient will usually be on the back, with legs drawn up.

In gastric ulcer, when suffering with pain, if the ulcer is in the front wall of the stomach, the patient will lie on his back; if the posterior wall is the location of the ulcer, the patient's position will be lying on the abdomen; or upon the right or left side, if the disease is of the right or left side. These positions relieve pressure on the ulcer.

In tubercular meningitis, the child lies on the side, with legs strongly drawn up against the thighs.

Facial Expressions.--Disease as expressed in the face and posture.

Facies cardiac (heart): An anxious expression seen in the early stages of chronic valvular disease.

A purple or bluish appearance of the face, especially about the eyes, temples, and ears, with veins showing on the nose and sometimes on the cheeks, intensified by lying down: Caused by high blood pressure and an approaching dangerously plethoric state of the body.

Hepatic face: An earthy appearance; yellow tinge, jaundice.

Hippocratic face: Indicating rapid approach of death--pinched nose; hollow temples; eyes sunken; ears leaden and cold; lips relaxed; skin livid, and if the skin is pinched it returns slowly to the plane from which it was pinched or drawn.

Ovarian face: Features emaciated and sunken; anxious expression; forehead furrowed; eyes hollowed; nostrils open and sharply drawn; lips full and compressed; angles of mouth drawn and wrinkled, puckered but protruding"fish mouth."

The stupid face is that of typhoid.

Gastric face in children: A white line around the mouth, extending up by the side of the nose, shows irritation from improper feeding. Add to this sign pungent breath and vomiting, and the child has gastritis.

Gastric face in adults: Chronic irritation of the stomach in adults is indicated by a dragging-down of the comers of the mouth. Add to this drooling or driveling of saliva, and the indication is of starch poisoning; and if there is a broad, pallid tongue, the evidence is strong for overeating on starch.

Hysteria is marked by staring and an ecstatic expression.

Epilepsy is marked by a stupid face after an attack.

Protruding eyes and expressionless face in Graves' disease.

They lypermaniac has sadness written in his face. In general paralysis the countenance is composed and satisfied. The enebriate has trembling bps and a wandering expression.

The child with enlarged tonsils and adenoid growths has a stupid expression; the mouth is open, the lips hanging; the nose is expressionless.

The red nose, enlarged veins, bluish lips, cyanosed cheeks, and puffiness of face of the drinking man are called the mitral face. Where the aorta is diseased there is intense pallor. In Bright's disease the face is swollen and white.

The signs of croup are well known, but the type of disease is not so easily told. There are coughing and suffocating when a foreign body is in the air-passage.

Expiratory disturbance is marked by flushed face, puffed and bluish; the eyes are suffused, and the veins stand out.

In marasmus the features are drawn, the furrows deepened, the neck hollow; emaciation is marked, and, when profound, the whole appearance is that of the monkey.

The consumptive appearance is that of emaciation; protruding, flushed cheeks; pinched nose, with flaring nostrils; short, quick, jerky breathing; halting speech, and more or less suppressed voice.

When the face looks smaller--shrunken--and the nose is thin, long, and drawn, the bones prominent, the skin pale and covered with cold sweat, and, when drawn or pinched, the fold remains for some time, this is the facies of peritonitis, intestinal obstruction, renal and hepatic colic.

Fainting: The heart stops; the patient turns pale and falls motionless, but there is no distortion of the face; breathing is suspended.

Apoplexy: The patient is motionless and lies on the back; all animation is suspended; only breathing and pulse continue; the breathing is noisy, and gradually grows more stertorous. If the patient does not react and improve, the breathing and heart action gradually decline, the skin becomes drawn, the nose thinner and longer, the eyes dull, partially closed, glassy. The breathing stops, starts and continues, until it finally ends with a slight bodily convulsive movement.

Physical appearance must be noted--all deviations from the normal mean something.

Deformities, such as rickets, shorten the stature and cause the head to appear too large; the spine is incurved, the pelvis is deformed, the limbs are curved, the ribs project forward.

When the muscles become atrophied they cause general deformity.

Alterations of the heart or lungs cause deformities of the chest.

The bowels are often too large and distended from gas, fat, or ascites; in fevers, from tympanitis and inflammations.

Enlargement of the liver or spleen causes a large abdomen in the upper region; in the lower abdomen, enlargement may come from tumors, distended bladder, or a gravid uterus.

A large swelling at the base of the great toe, with the toe pointing outward, indicates a bunion. This deformity usually means that there is a slight rheumatism. Deformity of the third joint of the fingers--nodes of Heberden--means arthritis deformans. The nodes of Bouchard on the second joints of the fingers indicate dilation of the stomach--a disturbed nutrition from overeating of the carbohydrate foods. Joint distortions indicate gout, rheumatism, or injury; not infrequently they mean all of these. Frequently injury is complicated by rheumatism.

Hippocratic fingers (clubbing of finger-tips, with incurving nails) indicate heart or lung disease--scrofulous diathesis.

Skin.--A straw-yellow hue is found in cancer cachexia.

Paleness may be from anemia, dysemia, leukemia, amyloid degeneration, or Bright's disease.

Articular rheumatism is marked by paleness, and profuse sweats with strong acid odor.

Anger, fear, and jealousy cause paleness. The cause is vascular spasm. Fainting causes pallor.

Plethoric people are too red in color. A florid complexion means the sanguinous temperament and does not mean too much blood.

Unconsciousness may be from syncope (fainting). The face is pale; either no pulse or very light; the breathing very low and quiet. There are no signs of distress; the face is usually composed.

Cerebral Derangements.--If unconsciousness is preceded by spasm, the cause may be kidney disease--uremic coma. Symptoms may be headache, and flushed face with veins standing out. This means congestion of the brain.

A diagnosis--a decision as to the character of a disease and its cause--requires a close examination into the social life of the patient; the family history; the history of previous disease, and the diseases of the family as far back as possible; the history of the present disease; the history of family habits as well as the habits of the patient. It is necessary to know all about the personal habits of the patient, secret as well as open. The eating habits must be known--even to knowing exactly what is eaten at each meal daily. The sex life must be known--the early abuses, as well as those coming later in life.

A diagnosis, so far as determining that a certain organ is affected--for example, that the kidneys are diseased, that the patient has diabetes or Bright's disease--is far from conveying to the physician's mind an idea as to the true cause of the disease. It is true that the physician sees in his mind's eye hepatic insufficiency, or a failure in the dehydration of glucose in the walls of the intestines. But as to what has caused the malnutrition, in what way the patient has brought on his enervation, and what are his habits, the physician knows nothing from the test-tube, which only tells him that there is sugar or albumin in the urine. The diagnosis, so far as naming the diseases is concerned, may be correct; but no information is conveyed to the mind of the physician as to the primary cause of these diseases. Even when germs or parasites are given as cause, this manner of diagnosis throws no light on the question of why germs and parasites do not cause disease in all whom they infest.

Analysis of symptoms, examination of all secretions and excretions, and palpation and auscultation of all organs, amount to a scientific examination of effects; but a positive diagnosis throws no light on cause. Causes must be found and associated with effects before a curing knowledge can be possessed.

Diagnosis may be very correct, so far as effects are concerned; but cause of effects must be known.

It is necessary to know a healthy man. What are the signs of health?

The eye and the skin are clear. The outlines are normal. Those whose lines are obscured by fat are not healthy. Women who weigh over two pounds to the inch in stature are too heavy. Men who weigh more than two and a half pounds to the inch of stature are too heavy and are diseased.

Women and men who weigh much less or much more than the standards named are diseased. By diseased I mean that they give down early; they have not the resistance they should have; they age rapidly; and come to a premature grave.

A healthy body will desire only normal, natural, and simple foods.

Normal health is rare indeed. This being true, is it so very strange that so few live to one hundred or one hundred and twenty years of age-the normal lifetime of a human being?

A Normal Person--Hunger

A feeling of contentment after eating, and no discomfort.

A desire for fresh uncooked fruits, vegetables, and little, if any, seasoning, or thirst for water. Hunger is always moderate.

Urine amber, clear, and with a pleasant bouquet. Heat and acids have no effect on it. Passed with comfort.

Bowel movements should be brown, molded, but not hard; not offensive, and regular.

Skin should be soft, warm, moist rather than dry, and smooth. No disagreeable odors.

Hair is full, long, and possessed of sheen.

Lungs do their work without discomfort and through the nose.

Sleep is long, quiet, and refreshing.

Work and play are pleasurable.

When trouble comes, when disappointments and losses come, they are soon brushed aside and poise is regained with a resumption of interest in life.

Is not envious, jealous, spiteful, nor given to irritability or temper.

Mind is bright, alert and quick to learn. All attention.

Is honest, truthful, generous, kind, forgiving, economical, and philanthropic.

When sick, recovers more quickly because optimistic, and submits more gracefully to the chastening rod of correction; endeavors to get the benefit of the misfortune by reflecting on the cause, and endeavors to avoid a repetition by correcting the life.

An Abnormal Person-Appetite

A desire for more; dissatisfaction and a feeling of discomfort; gas and belching; acid stomach.

A desire for highly seasoned foods, alcoholics, tobacco coffee, and tea. Appetite is always driving; much thirst.

Urine cloudy, full of sediment, bloody, dark, odorless or rank of odor. Passed too often and with discomfort.

Bowel movements are green, gray, yellow, or white, and form into scybala (lumps). Or they are watery, bloody, wormy, and offensive to smell.

Skin is moist to wet; hands and feet cold and clammy. Always wet under the arm. Disagreeable odors from the perspiration under arms and feet.

Hair is thin, lusterless, and dry.

Lungs show asthma, cough, expectoration.

Sleep is fitful, restless, dreaming, and leaves tired on waking up.

Work is disagreeable and tiresome; no pleasure taken in recreation.

Worry, worry, worry, without much excuse. No interest in life. When trouble comes, the life is devoted to worrying.

Is very irritable, spiteful, revengeful, jealous, envious, quick to lose temper.

Mind is dull, slow, and learns with difficulty. No power of attention. Inclined to sleep, yet insomnia at night.

Is dishonest, deceitful, stingy, selfish, unkind, wasteful of other people's property, even when selfish and miserly with his own.

Recovers slowly because mental attitude is that of irritability and impatience. The abnormal person does not learn from experience. Everybody is to blame for his misfortunes, except himself. He is incorrigible.

A very good standard for health is the ideally beautiful--beautiful in body and mind.

Those who would know a sick man should study art. The artistic represents health, both of body and of mind. Then, to know the sick, contrast them with the normal--the ideal.

Post-mortems tell nothing except how terribly the body may be abused before it dies. Yet the dead organs can tell no tale; they cannot stand up and accuse their traducers, nor tell the manner of abuse.

The modern, popular idea of beauty and health is that the body should be incumbered with fat. Stock shows furnish a type of beauty that fits the modern sensual conception of what beauty consists of. Sensuality dominates everything in modern life. Even medical science, in catering to modem sensualism, has won the everlasting gratitude of Bacchanalians and gluttons, by offering the germ as the cause of disease, and tacitly freeing them from all restraint and giving them license to do as they like. Of course, this will be disputed, but I back my statement by referring to the patients themselves.

3. Pain

The evidence of pain. The patient complains of pain, and directs to its location by placing his hand on the part, or as near to the part as he can.

How much pain has the patient? He may be sensitive, imaginative, and inclined to exaggerate; or he may be frightened. On the other hand, he may be reticent and fail to tell the truth about his suffering. Again, he may be too ignorant to give a clear account of himself.

These are a few ways of learning of pain:

(a) Facial expression and bodily movements;

(b) As described by a friend or nurse;

(c) Results, such as weakness and emaciation from long suffering;

(d) Arterial pressure.

When a patient's face is contorted and his body writhes, doubles up, or stiffens, we have good evidence; yet he may be malingering (acting). However, the experienced physician will not be fooled long. It may take a little watching when the patient thinks he is alone. If he really suffers, he will suffer alone as well as when someone is near.

Many are sorry for themselves and make more complaint than necessary; others complain to secure sympathy. The real physician will discriminate, while the doctor is never anything but an amateur. The former cures his patient by imparting assurance; the latter adds to the disease by first discouraging and then operating.

When a patient who looks well declares he has been suffering for months, and he has not lost weight, and there are no objective signs, such as impaired circulation and heart action, and no tumor at the point where the pain is said to be located, it is safe to treat him as a malingerer or a self-deluded individual.

If nervous, imaginative, and self-deluded patients, describing their suffering as "awful ... .. fearful," "I liked to died last night," "I thought I was a goner," etc., are examined for patellar reflex, this movement will be found greatly exaggerated. This proves that they are very sensitive to pain, and should be questioned regarding eating; and it will be found that they eat much starch, and use coffee and other stimulants. Many will be found to have toxin poisoning.

Women bear pain--prolonged pain--better than men. The reason for this is that they are more self-controlled than men. Man is more self-indulged, hence less able to stand pain.

Types of Pain.--There are many kinds of pain; namely: boring, tearing, lancinating; a feeling of pressure, of heat, of cold, of hunger; a feeling of all-goneness, fullness, emptiness.

Colic is distinctive. It is rhythmic--the patient does not suffer all the time. It begins gradually, and increases to a climax; then subsides, to repeat again. Such pains are characteristic of canals: the intestinal, urethra, ureters, uriniferous tubules, bile-duct, eustachian tube, uterus, and fallopian tubes. An inflammation of these tubes and canals is accompanied by rhythmical pain.

Throbbing Pain: Pain that rhythms with the heart and pulse is caused by hyperemia. Headache and toothache are types. Any inflammation that is accompanied with enough swelling will have a rhythmic pain.

Precordial Oppression: This is a feeling of constriction. Angina pectoris is a type of this pain. This pain is of the heart. Affections of the pleura or lungs give no such pain. Asthma is a feeling of suffocation. It differs from oppression in the fact that it is difficult to draw air into the lungs, whereas in heart oppression there is no difficulty in getting air into the lungs, but it appears difficult to extract the oxygen, and the patient feels that he will die of suffocation.

Reflex Pain: When reflex pain is from angina in the lungs or abdomen, resembling indigestion, rheumatism, neuralgia, or neurosis, it may be relieved by rest, but not with the usual palliatives.

Shooting pains are usually neuralgic.

Relationship of Pain to Other Facts Connected with Disease.--Time of recurrence: If regular in time-say, every day or every other day-the cause may be malaria. Pains that are worse of a morning and wear off during the day are nervous headaches and joint inflammations. Pains accompanied with fever and infections usually grow worse toward evening. Fever always runs higher in the evening.

The position of the body: If the legs are drawn up against the abdomen, the pain may be in the bladder, the uterus, the bowels, the gall bladder, or may be due to pyloric disease, ulceration, or cancer of the stomach.

Inflammations of the organs in the abdomen and pelvis are made worse by standing or walking. Lying

down relieves.

When the bowels are distended with gas, or there is an accumulation of fat in the abdomen, such derangements as misplacements of the womb, piles, pelvic tumors, and cystitus (inflammation of the bladder) are all made worse by being on the feet.

The pains peculiar to chronic joint diseases and muscular rheumatism are made worse by staying in bed.

Pain produced by taking food indicates gastralgia, gastritis, ulcer, cancer, obstruction of the pyloris, gallstones, etc.

Enteritis, obstruction, and appendicitis are made much worse by eating. A few sips of milk will start peristalsis, and when obstruction or appendicitis exists, the patient will be thrown into great distress. Pain that is not made worse by eating is not caused by obstruction.

Pain that is frequently mistaken for appendicitis is caused by colitis, constipation, proctitis, ovaritis, neuralgia of the spermatic cord, strictures of the urethra, and gallstone or gall bladder disease.

Relief from drinking or taking food indicates gastric irritation caused by taking fluids too hot, eating too rapidly, overeating, the use of coffee, tea, tobacco, alcoholics, eating between meals, or gum chewing.

Damp weather, by chilling the surface of the body, causes those who are rheumatic to have pain and stiffness of different parts of the body.

Those who foretell storms and changes in the weather are human barometers, made so by a state of acidosis of the body. They have been using a preponderance of foods belonging to the acid producing class, and cooked foods which have had their enzymes killed by heat. Those who suffer headaches--even migraine sufferers--are made worse by meteorologic changes.

Headaches that occur on bright, sunny days, or when the earth is covered by snow, or on train or water trips, are probably due to eye strain.

Sea- and train-sickness is caused from abuse to the stomach by overeating, eye strain, or reflex irritation. Gas in the bowels, pressing on the ovaries, will cause sick stomach. Any neurosis is liable to be aggravated by train or sea voyages. Anything that enervates such subjects will cause them to be bad travelers.

Vomiting that relieves does not indicate that the stomach is diseased, any more than a cough that relieves indicates that the lungs are diseased.

The effort at vomiting shocks and produces reaction, which relieves pain in any part of the body. Pain produced by gas pressure, gallstone, or pain in the kidneys, womb, ovaries, spermatic cord, and testes, is relieved by vomiting. Heat and cold relieve pain. The patient must decide. Heat is more logical.

The sick habit has become a reality in these piping times of great medical discoveries. The habit of thinking sickness, talking sickness, acting sickness, and being coddled and operated upon, has developed an army of people who have become expert in complaining.

The sick habit and the drug habit are products of the medical profession. One of the principal causes is that the doctor must live, and it is to his bread-and-butter interest that every patient applying to him be very sick, or in imminent danger of dying unless operated upon at once.

The average professional calamity howl set up when a patient calls on "the best physician" in the community is quite enough to terrify, shock, and draw the patient's attention to himself and set up a morbid introspection. Once started, the introspection habit builds mountains out of mole hills; and surgical science has developed to such a state of perfection that it can extirpate every symptom of disease, except the disease itself, which is a large sick habit.

Pain Explained.--Every part of the body is supplied with nerves. Nerves, when pressed upon, give out a sensation of discomfort, and discomfort warns that something abnormal is taking place. The worm squirms away from it; the animal runs away from it, as did man in his early development. Man in his ratiocinative state is supposed to reason on the cause, and to remove it; but no, he runs to a mysterious individual, who administers a mysterious remedy, or cuts out an effect; and all concerned are satisfied, and the cause continues.

Nothing but reason, however, will direct man out of the way of harm and help him to understand cause.

When man reasons, he must know that there are two general types of causes for pain--namely, extrinsic and intrinsic. The outside causes, when understood, may be disposed of. The inside causes must be understood from inductive and deductive reasoning.

For example, when we learn that no one will develop angina pectoris who does not use tobacco, coffee, or tea, then man will know how to avoid such an affliction. When man learns that overindulgence in eating meat, or animal proteids, will slowly but surely set up a general lymphangitis and favor the development of catarrhal diseases, from nasal catarrh to tuberculosis and syphilis, he will know how to avoid such diseases. When those suffering from stone in the kidneys, gall bladder, or urinary bladder learn that these diseases follow the neglect of eating eliminating foods, and refusing to eat mineralized foods and drink mineralized water, man can avoid these painful diseases, and become his own physician.

Inflammations in the different organs create pain, heaviness, and fullness in the organs; pain, if the inflammation involves the surface; a dull, full, and heavy feeling, when the disease is of the body of the organ.

A persistent pain at or near the umbilicus is an indication of obstruction, partial or complete, somewhere in the intestine.

Radiation pain may start from an indigestion which causes gas; the gas presses upon an ovary, and the pain in the ovary causes vomiting. The nerve impulse starts in the ovary, goes to the spine, and from this center is sent to the stomach, producing vomiting. The eye strain on a railroad or sea voyage causes vomiting.

Any theory that all pains must be radiated from the spine, or from organs to the spine and from the spine elsewhere, must be limited. The truth is that pain must be taken care of in the storehouses of the nervous system--the ganglia, which are the inhibitors and dissipators of pain, as the lymphatic glands are the repositories and suppressors of toxins.

If it were not for the ganglia, which act as storage batteries for the distribution of surplus energy, the body would be killed from shock, which, under the system of storage batteries, is absorbed and the body is saved the shock.

When a locality of the body is under the continuous stress of irritation, pain must be felt in quite remote parts, because of the transmission, storage, and radiation.

When the batteries of the body become charged to full capacity, radiation or elimination takes place.

Headache results from this overflow. Its elimination causes pain.

The elimination of surplus energy is marked by pains of all kinds, and fevers. Colds and fevers are the unloading of pent-up energy.

Nerves accompany arteries. When much energy is conveyed over nerves, arterial spasms are experienced. Continual overstimulation of the arterial system ends in arteriosclerosis.

If the current of irritation is caused by envy, jealousy, or anger; or from the toxins of alcohol, tobacco, coffee, tea; or from daily decomposition of food in the intestine, with absorption of the toxins or acids or sepsin; or if the shocks come from lascivious thoughts, onanism, or excessive venery, the continual

overstimulation of the arterial system must end in hardening of the arteries, loss of coordination or tabes dorsalis, apoplexy, paralysis, etc.

It is well to remember that pain it not always located at the site of injury or lesion.

When a nerve is compressed, pain is not always found at the point of compression, nor at the nerve's termination. Epilepsy and convulsions generally have a peripheral origin. To be exact, most cases of epilepsy primarily originate in intestinal indigestion, with toxin poisoning; then one or more organs become affected, these affections transmitting their irritations to the central nervous system.

Affections of the spinal cord may manifest at any point other than at the cord. Infantile paralysis is a spinal affection. Its syndrome is impaired nutrition from food devoid of unorganized ferments and basic elements, and the consequent enervation. Resistance is so impaired that extraordinary thermic changes, or depressing physical changes, cause a giving-down of the nervous system, favoring central lesions--cerebral spinal, and meningeal inflammations. The gastric, darting, and girdle pains of locomotor ataxia are peripheral symptoms of a central lesion, and the lesion is caused by toxins.

Headaches are seldom symptoms of head lesions.

Causes of Headache: Anemia, fatigue, hunger, bad air, alcohol, morphine, lead, blood pressure, arteriosclerosis. The headache of old people frequently comes from hardening of the arteries. If examination is made, however, there will usually be found a kidney lesion; but even that and blood pressure belong to the syndrome of arteriosclerosis. Headaches come often from indigestion, constipation, eyestrain, beginning of fevers, brain tumor, and syphilis. A common headache is known as rheumatic headache. It is characterized by spots of "induration," or sensitive spots. This is without doubt the coffee and tea headache, and can be cured by stopping the use of these table beverages.

Refrigeration is said to cause this headache, but coffee and tea make their victims susceptible to cold.

Rachialgia (pain in the back), at the beginning of fevers, smallpox, and the backache complained of by most women are of no value with reference to the location of a lesion. Constipation and uterine disorders often cause much backache.

A common cause of coldness--a feeling of chilliness that cannot be gotten rid of by the heaviest clothing and warmest rooms--is intestinal indigestion; in which case clothing and hot houses are only fuel added to the fire--or, rather, cold added to the chilliness.

I have often told patients suffering in this way that if they would eat more--much more--and put on a half dozen more suits of underclothing, they would stand a good chance of freezing to death.

Neurasthenics usually complain of heat when their hands and feet are cold.

Those who have paralysis agitans are usually too warm.

A pain at any point in the body may be the aura of epilepsy.

A very sensitive state of the abdominal wall, without gas distention, or with a moderate amount of gas present in the bowels, indicates a neurosis. The real derangement may be intestinal indigestion and catarrh of the uterus,

When deep pressure in the abdomen causes no more discomfort than a light touch, the patient is of a nervous type, and should not be subjected to an operation just to relieve her of the notion that she needs an operation.

Hysteria is a hypersensitive state. The hysterical zones are at the top of the head, in the dorsal spine, at the nipple in man, and under the left mammary gland of woman; in the ovarian region, the spermatic cord and testes, and in the patella. It is not uncommon for the knee to be treated for rheumatism, when the disease is of the ovary.

Many men and women are being operated upon today, in our leading "surgical plants," because of pain in the various hysterical zones.

4. Examination of the Patient

In examining a patient, the family history should be obtained; for this gives a clue to predisposing causes and family habits which lead to specific derangements. Then the patient's personal life and habits, mental and physical, must be reveiwed. This information, with analysis of the objective and subjective symptoms, leads to a knowledge of what the patient's illness is; for diseases are the result of broken health laws.

If the patient has pain, this directs to the part of the body affected. It must be determined if the pain is local or sympathetic.

A patient may be sick at the stomach, and be vomiting; yet the real derangement or cause may be of the brain or uterus. If the stomach is treated, the treatment must fail.

Spinal disease may manifest in the joints of the feet and legs. If the physician foolishly treats the pain in the legs for rheumatism, he must fail to benefit his patient. I have met with a case wherein a boy had been treated for rheumatism of the left knee, when his disease was preputial.

Palpitation of the heart comes from stomach derangement oftener than from other causes.

Pulmonary tuberculosis often presents symptoms of heart derangement; and mitral stenosis will cause much coughing, and even hemorrhage of the lungs, which symptoms are secondary to the heart derangement.

(a) Organs of Special Sense

Only the general symptoms are of importance in eye derangements. The special belong to ophthalmology. Photophobia (dread of light) may be due to hysteria, a brain lesion, or an inflammatory disease of the eye.

Ulceration of the cornea is often an index to the state of the blood--often indicates heavy meat-eating, with consequent toxins in the blood.

Dropping of the upper eyelid may mean paralysis of the third pair.

Protrusion of eyeballs, with heart symptoms, indicates exophthalmic goiter. If but one eye protrudes, it indicates a tumor behind the eye.

Long vision, with lost accommodation of light, means ataxia or paralysis. This is the Argyll-Robertson sign. A bright spot before the eyes (scotoma), with loss of power to contract the pupil before a light, may indicate optic neuritis or tabes. If no other symptoms of tabes can be found, it is an eye lesion.

If a person, deaf in one ear, can hear a watch tick, or a tuning fork, placed on top of his head, equally well with both ears, the disease is not central.

When taste and smell are diminished, it is probably due to toxin poisoning, including tobacco, alcohol, coffee, and tea.

A headache is rare indeed that will not get well after the patient corrects his eating and other habits.

A crisis of tears differentiates a hysterical from an epileptic paroxysm.

Purulent ophthalmia is often an indication of gonorrheal infection.

Halos of light, or scintillations passing from a light, indicate indigestion in children.

There are many eye lesions that will pass away when all stimulants are given up. Toxin poisoning must be overcome by eating in keeping with the digestive power. Venereal abuse brings on enervation of the eye and brain, and, unless corrected, no cure can be made. Adopting glasses for many eye defects caused by excesses in sensuality is the height of nonsense.

When noises disturb and prevent concentration, in those who are trained to concentrate or give attention, the nerves are on edge, and the cause is overstimulation--overeating, coffee, tea, tobacco, alcoholics, excessive venery.

If, by applying the ear or stethoscope to the patient's ear, the physician can hear a crackling sound when the patient swallows with his nose and mouth closed, it indicates that the tympanum is intact.

Taste and smell are often much impaired by catarrh.

It can be said that all the special senses are more or less impaired by a style of eating that builds toxin poisoning.

(b) Vasomotor

Sudden redness of the cheeks indicates meningeal inflammation.

The well-known cheek flush of tuberculosis should not be confounded with nervous flush.

Red cheeks of teething children will be accompanied with other signs of teething.

Red cheeks and a white line around the mouth and nose indicate irritation of the stomach; in children, gastric fever, if there is vomiting. These symptoms may precede the eruptive fevers.

Cold, blanched feet and hands indicate vasomotor constriction and have intestinal putrefaction as their cause. When this condition becomes pronounced, it is called syncope of the limbs. The patient may have "dead finger"--a finger or fingers without feeling--and there may develop points of gangrene; or there may be the opposite state--venous congestion or cyanosis, such as occurs in asphyxia--oxygen starvation. The source of toxin poisoning must be discovered and removed, or this state cannot be overcome.

Acute vasomotor disturbances cause hyperemia of the breasts in women. It is too common to amputate the mammary glands, the surgeon diagnosing fluxions as cancer. The careful physician will find an accompanying uterine disease, which, if cured, will do away with the periodical hyperemia of the breasts.

In severe and advanced stages these hyperemic hemorrhages take place in the skin, mucous membrane of the bowels, urethra, ureters--bloody tears, bleeding from nose, lungs, or kidneys. There may be organic diseases, but hysteria should be suspected. Too often the physician is willing to believe the worst--that the disease is cancer.

Dry mouth may be caused by fear, anger, or fever. Salivation (flow of saliva) may mean mercury poisoning, nervousness, neuralgia, cancer, or may be the forerunner of epilepsy.

Sweating is suppressed in neuritis, neuralgia, and brain disease.

Increased urination may be due to polyuria, diabetes, excessive drinking, nervousness, indigestion, hysteria. Fear, anger, and suppression from kidney disease may cut down the amount far below the normal.

In tabes dorsalis there may be hypersecretion of digestive fluids. Hysteria should be suspected. The neurasthenic is inclined to have exaggerations and suppressions of all the secretions and excretions.

(c) Heart

The normal apex beat is a little below and to the right of the nipple. Lying on either side may change the

location slightly either way, A strong impulse should be inquired into; for the reason should be known. The apex beat may be displaced down, or to the right or left. The apex beat must vary in its location. In women the breast development prevents the nipple from being a landmark. In fullness there may be enlargement, and there may be effusion.

By palpating, any undue dullness can be discovered. Pressure over the heart that causes pain indicates either myocarditis or pericarditis. This should not be confounded with intercostal neuralgia or rheumatism, which is strictly local, on or between the ribs.

Percussion.--In examining the heart, there are two zones--namely, a superficial, which corresponds to a lung-dull sound, and means that portion of the heart covered by the lung; and a heart-dull sound, which is triangular- shaped and flat. The lung-dullness is bounded by a line extending along the left border of the sternum, at the lower border of the second rib, and extending by an imaginary curved line reaching the apex of the heart. Then draw a second line from the border of the second rib to meet the end of the imaginary line at the apex, curving it to the left somewhat. The two lines leading downward from the second rib may be called the right and left arms of an irregular triangle; the point where they meet at the top may be called the apex of the triangle; and the line connecting the right and left arms at the apex of the heart may be called the base of the triangle. The flat or heart-dull sound begins at the level of the fourth rib and terminates at the apex of the heart.

The flatness (heart-dullness) of the base of the triangle may be confounded with liver-dullness; but the physician will follow the outline of the liver and make his deductions as to liver and heart sounds.

It is to be understood that the area of dullness and flatness may vary in health, and the variation must be greater in disease.

The principal modifications are:

First, in hypertrophy of the left ventricle, the apex is pushed downward and outward. The flatness is slightly above the nipple.

Second, in hypertrophy of the right ventricle, the apex is pushed outward, and the flatness is slightly above the nipple and to the right of the sternum.

Pericardial Effusion.--If the accumulation is slight, the flatness extends below the apex beat. When the effusion is great, the flatness extends over much more of the chest wall.

Auscultation.--The most important mode of exploration of the chest is by auscultation. It requires a good ear to be educated into reading symptoms by sound.

Location of Sounds.--The aortic orifice is in the right second intercostal space. The pulmonary orifice is in the left third intercostal space. The mitral orifice is at the apex beat. The tricuspid orifice is at the xiphoid appendix.

The Normal Heart Sounds.--There are two sounds: The systolic, or first, sound is caused by contraction of the ventricles. Then there might be a short silence, followed by the diastolic, or second, sound, which is caused by the closing of the semilunar valves on the arteries. These sounds may be represented graphically as follows: The first sound (venticular) may be represented by the following figure: "u" . Then there is a brief silence, followed by a second sound, which is diastolic and longer, and may be represented by -- Then silence, and the sounds are repeated.

The attention must be educated to distinguish slight variations in these sounds. Many normal hearts must be examined to become familiar with the normal sounds. The first deviation from normal may be said to be that of emphasis on the sounds--they are more pronounced. To get the sound, have someone with a normal heart exercise vigorously for a few minutes; then, if the ear is placed to the heart, the sounds will be louder and faster. When this occurs without exercise, it must be caused by stimulation. The stimulation may be from fear or some other emotions, or from the use of stimulating foods or drugs.

An increase of the second sound may be heard at the pulmonary orifice (left third intercostal space), indicating nothing more than a disturbed circulation in the lungs.

A weakened sound may be caused by an accumulation of fat in the thorax, and it may be due to weakness of the heart. If so, it is the first sound that grows dull and finally disappears. This symptom is not so significant as a weakening of the second sound.

When there is an effusion in the pericardium, the heart sounds are muffled and sometimes extinguished.

Disturbed Rhythm.--There are two types of rhythms described by some authors; namely, intermittent rhythm and arrhythmia (irregular, lack of rhythm). Intermittent rhythm is where the pulse beat is suspended, or misses a beat occasionally. These missed strokes are usually followed by a more pronounced systol (contraction). The cause is enervation from stimulation. Perhaps, if there is one class of stimulants, more than another, inclined to produce this state of the heart, it is the coffee-and-roll or toast habit. It means a preponderance of food of acid potentiality.

Arrhythmia is marked by irregularity in the succession of pulses. Then there is a type presenting a prolongation of one of the heart beats or of one of the silent periods. Arrhythmia is also marked by cardiac bigeminate (double), and trigeminous (treble); which means the production of two or three beats, one after another, followed by a natural pause. Then there is the alternating pulse--one strong beat followed by a weak beat; then there are two short strong strokes followed by two weak strokes. The weak ones are not perceptible at the wrist.

There is the fetal rhythm, in which the two beats become similar, and the frequency is augmented so as to convey to the ear the sound given out by the heart of the unborn child.

The fetal rhythm is of unfavorable prognostic significance. lt develops in some cases of arteriosclerosis. Murmur of recall is a modified second sound which is divided into two short sounds. This occurs in a disturbed pulmonary circulation, which modifies the action of the valves, and is found in mitral stenosis.

Galloping murmur is found in two places. One place is at the left heart, a little above the apex beat, and means myocarditis or rheumatism of the heart. A second location, less frequent, is found in the right heart; this can be heard at the end of the sternum, and accompanies gastric and hepatic derangements, especially gallstone.

A murmur that accompanies normal heart sounds is of less gravity than one that replaces them.

Friction murmurs mean friction of the pericardium. They sound like the creaking of leather.

A blowing murmur is a sound like that of bellows. When accompanying the first heart sound, it is called systolic blowing; when with the second sound, it is called diastolic blowing; mesosystolic, when it occurs in the silence between the regular sounds of the heart; presystolic, when occurring before systole; in this case it may be called auricular systolic.

Heart murmurs that disappear on holding the breath are cardio-pulmonary, not endocardial.

Murmurs accompanying the radial pulsations are systolic; those that precede the pulse are presystolic; those following are mesosystolic. The diastolic murmurs accompany the second sound and are more quiet.

During the systole the ventricles contract. If the murmur is at one of the auriculo-ventricular orifices, it indicates that the blood flows backward from ventricle to auricle. This means insufficiency or incompetency of the auriculoventricular valves. When the sound is at the arterial orifices, it means stenosis of the aortic.

When the murmur is diastolic, it Corresponds with the second sound, and means that the blood flows back- ward from the arteries to the ventricle. This is aortic insufficiency. The rolling murmur heard at the apex means stricture or stenosis of the auriculo-ventricular orifice, usually the mitral.

Reduplication of sounds indicates that valve action is not simultaneous and that there is heart strain present, or high arterial tension, as in stenosis or kidney diseases.

Mitral insufficiency often gives out a whistling, musical piping sound. Aortic insufficiency is a mild, soft, and blowing sound. Mitral stenosis is a rolling sound.

When the murmur is heard outward or inward from the apex, or at the left border of the heart, it may be said that it is functional; when in the aortic area to the right border of the sternum, it is organic. Murmurs along the left border of the sternum are organic.

Before it is safe to say that a given murmur is organic, an apex murmur must be heard in the axilla and in the back, and basic murmurs must be heard through the vessels originating from the affected orifice or along the sternum. When aortic incompetency is suspected, the stethoscope may be applied to the femoral artery, and in these subjects to the abdominal aorta.

Ile following are graphic sounds of the heart:

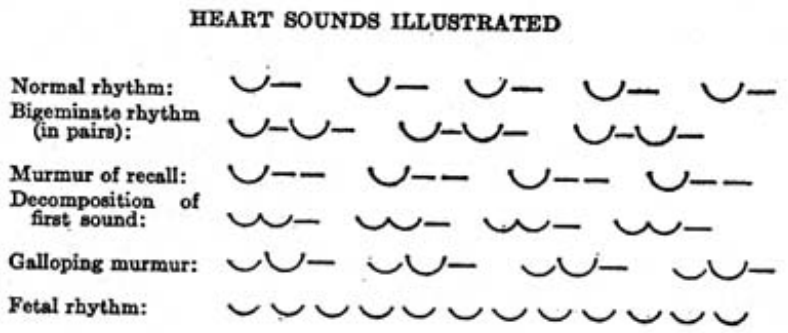


TABLE OF HEART SOUNDS, LOCATION, AND SIGNIFICANCE

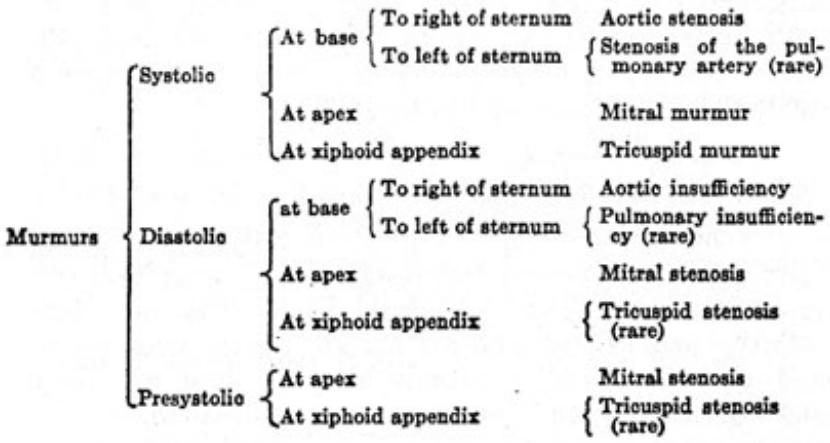
First Sound	Short Silence	Second Sound	Long Silence
Ventricular systole. Heard at apex--apex beat. Felt at radial pulse. Systolic blowing murmer heard at this point.	Mesosystolic. Blowing murmur.	Closure of the semilunar valves between heart and arteries.	Diastole, or auricular systole. Presystolic murmur.

At the first sound, the ventricles close (systole). If there is a murmur at one of the auriculo-ventricular orifices, it is because blood flows back to the auricle. This means insufficient closure of one of the valves.

When the murmur is heard at one of the arterial orifices, it indicates that the blood does not flow through so easily as it should. This means a diminution of caliber. Stenosis is the cause.

Diastolic murmur coincides with the second sound, and means that the blood regurgitates or flows back from the arteries to the ventricles. This means aortic insufficiency--occasionally pulmonary insufficiency. This murmur is heard at the apex and has a peculiar character--namely, a rolling, rather than a blowing or purring, sound. It means stricture of one of the auriculo-ventricular orifices, more often the mitral. Presystolic murmur means the same.

The following table describes the location of the murmurs:



Mitral insufficiency is often a whistling, musical, or piping sound.

Aortic insufficiency is mild, soft, and blowing.

Mitral stenosis is like a rolling sound.

Congenital malformation is marked by a systolic, forcible, vibrating murmur, heard at times in the center of the chest, not accompanied by purring, and heard best over the fourth dorsal vertebra.

Mitral murmur should be looked for in the left axilla; also behind, under the angle of the scapula.

Murmurs of the pulmonary orifice are conducted toward the left clavicle; they stop before reaching the bone.

Aortic murmurs extend toward the right clavicle, and often reach beyond even in the neck.

The diastolic murmur of the aorta passes along the sternum to its end, the xiphoid appendix. The murmur is a soft, blowing sound. There is accompanying this murmur a jerking pulse--a throbbing or dancing pulse.

To sum up: In a weak heart, when both sides are affected, there is observed venous stasis, with functional disturbance of lungs, liver, kidneys, stomach, and brain, with their various symptoms: dyspepsia, dyspnea, local pain, vertigo, palpitation, etc.; with, as termination, dilation and collapse of the heart.

A valvular defect is important as regards accommodation, whereas a dilation has a very serious importance.

Venous stasis from dilation presents cyanosis, turgid veins, with and without pulsation of the jugular and other veins, cardiac asthma, hyperemia of the liver and lungs, catarrh, hemorrhage and edema of the dependent parts and cavities. Cardiac asthma may be due to swelling and stiffness of lung substance from congestion.

Heart weakness may be due to muscular or valvular insufficiency, or both. It may be primary or secondary to other derangements which obstruct the circulation. The liver and kidneys must receive attention.

Congenital Heart Defects.--Potency of the foramen ovale, ductus arteriosus, defects of the ventricular system, and lesions of the pulmonary orifice. Prematurity is the usual cause of these defects.

Symptoms: Cyanosis (blue child-not always present), dyspnea, cough, convulsions, edema, and restlessness.

(d) Respiratory Apparatus

The larynx must be examined with special instruments. The bronchi and lungs present pain in the side, chest cough, difficult breathing, and expectoration. Difficult breathing and dyspnea may be due to either lung or heart affection. It may be reflex; if so, any of the organs may cause it.

Cough may be lung cough, or it may be reflex.

Respiration and pulse normally have a ratio of about one to five.

Cheyne-Stokes respiration belongs to cerebral or meningeal lesions, At first it is rapid and superficial, and gradually becomes more profound. This is followed by a diminution, with a final arrest; then a short period, followed by short, shallow breathing, gradually becoming faster, with a repetition of the former sounds.

Diabetic coma is characterized by abrupt and deep inspiration, followed by a pause; then a quick expiration, and a pause. These types of breathing are due to medullary derangement-possibly toxin poisoning.

Rales are of three types:

Dry or sonorous rales are called rattling when they have a grave pitch; sibilant when acute. They indicate bronchial inflammation or catarrh.

Crepitant rale is like rubbing a lock of hair between the thumb and finger close to the ear. It means pneumonia.

Moist rale has a bubbling sound. When high, it indicates tuberculosis, when of fine bubbles, capillary involvement.

A blowing sound, when heard between the shoulders, indicates bronchitis. It is tubal when it has a slightly metallic or whistling character. The pleuritic murmur has the sound of "i" spoken in a whisper through the closed fist as an ear trumpet. The sound will be modified in keeping with the amount of effusion.

In empyema (pus in the pleura) the percussion dullness will be flat like the liver sound. If the patient will count "one, two, three," while the ear is placed on the chest, the sound conveyed will be far distant-removed; whereas the voice will come to the ear when there is no accumulation.

Egophony.--While the patient is speaking, if the voice comes to the ear with a tremulous murmur, this is called egophony, and is indicative of pleurisy or splenopneumonia.

(e) Digestive Apparatus

The teeth should be inspected--the entire mouth, lips. tongue, and throat. Many stomach derangements are cured by keeping the mouth and teeth clean. Pyorrhea begins with neglect of cleanliness, and starch and sugar poisoning. Scurvy and mercury are leading causes.

"In diabetes the second lower molars are affected, and their alteration serves as guide to diagnosis."

Premature loss of teeth indicates failing nutrition from wrong eating (too much starch and sugar, and not enough raw fruit and vegetables).

The tongue is somewhat of an index, but altogether too much is made of it, as likewise of the temperature of the body, by most physicians.

A broad, pallid, thick tongue indicates too much starch eating. A long, pointed tongue denotes irritation of nerve centers. A small tongue indicates insufficient nourishment. A red tongue, with enlarged papillae ("strawberry tongue"), means great irritation of the stomach. This is the scarlet fever tongue.

Ulcerations on the tongue often mean injuries from teeth. Continual tongue irritation and ulceration should be investigated by a dentist; if not corrected, nocturnal epilepsy should be suspected.

The throat, when abnormally red, indicates irritation of the stomach, tobacco or alcohol poisoning. The throat is an index of the stomach. Treatment of the throat is very far-fetched. The throat will not go wrong unless the stomach or bowels go wrong--no, not even the tonsils. Tonsillitis is symptomatic of wrong eating--wrong combinations.

Many derangements start with an angina; but I insist that all diseases--yes, the eruptive and so-called contagious diseases--get their infective agent in gastro-intestinal putrefaction, and that without this cause they can have no existence. Hence, to cure any and all of these diseases, correct the generation of toxins. To do so is not only curative, but preventive. All so-called contagious diseases are autogenerated. This truth may require years to become popular--be accepted by the profession--but it will come.

Stomach derangements are brought on by abuse at the table. Heartburn means overeating, or too much starch or sugar eating, or all three causes.

A fullness after eating means overeating, or wrong combinations, or too rapid eating, or too much fluid with meals.

Flatulency.--Gas means overeating, or waterlogging with too much fluid intake. Navy beans, peas, sweet potatoes, apples, and other foods cause gas. Apples and other fresh fruits cause gas in those who are starch-poisoned. The habit is built by much water drinking between meals. Constipation is built by gas distention and too large fluid intake, forcing the kidneys to do the eliminating for the bowels. The present universal habit of water drinking to overcome constipation is another medical fallacy.

The tired feeling of a morning means food poisoning--toxemia. The physician should know the influence of food taken in excess, the influence of wrong combinations, and the influence of all mental and physical habits; then he can prescribe intelligently.

Vomiting.--In case of indigestion the vomitus is usually acid. It is alkaline in cases of catarrh and cholera.

Vomiting may be watery, alimentary, bilious, fecal. hemorrhagic, or purulent.

Aqueous vomiting is often viscid and soapy because of the presence of mucous. It is seen in alcoholic gastritis, ulcer, cancer, sick stomach, and cholera.

Alimentary vomiting is of food recently swallowed. Bilious vomiting shows the bile in the ejected matter.

Fecal vomiting is of the contents of the bowels, and means obstruction.

Blood vomiting may be hemorrhage of the stomach. If bright red, it means ulcer; when dark and like coffee grounds, it indicates cancer.

False membranes, and long casts of mucous, are sometimes passed. These indicate muco-entero-colitis.

White, jointed, tapelike appearances may be tapeworms. If found, watch should be kept for a few weeks. If there is really a tapeworm, portions of it will pass almost weekly.

Stomach

Deformities are often produced by corsets. The organs are pushed down; then there is compression from the liver being forced against it. Indeed, the stomach may be pushed in all directions by corset pressure, causing difficult breathing, palpitation, etc. A high stomach means hearty eating; a pendulous abdomen means debility and visceroptosis (falling or prolapsus of the viscera). Medium enlargement in the upper part indicates enlargement or dilation; and dilation means overeating, fermentation, and gas distention.

Depression at the pit of the stomach, when the patient is turned on the side, indicates inanition--great weakness. A bulging at this point means distention of the stomach. Flattening below the navel, with protrusion below, means visceroptosis.

Palpation discovers sensitiveness. A general sensitiveness to touch, without fever, indicate a general toxin infection from gastro-intestinal decomposition of food. In these cases there are usually constipation, colitis, catarrh of the womb, piles, etc.

To palpate the abdomen successfully, the patient should lie on the back, with legs flexed on thighs and thighs flexed to a right angle to the abdomen. The hands of the examiner must be warm; otherwise contractions will occur.

The sloshing sound or clapotage (a sound like that obtained by shaking a bladder half filled with water) should not be heard six hours after eating. When it is, it indicates dilation, ptosis, slow digestion, cancer of the stomach, etc.

Pyloric thickening, or cancer of the pylorus, is felt as a hard lump or tumor at the right of, and two or three inches above, the navel. If this lump is found, and there is vomiting, every two or three days, of ingesta (previously eaten food) that were eaten, one, two, or three days before. and there is clapotage six or more hours after eating, and this sound can be elicited at all times, except immediately after lavages, or until heavy vomiting takes place in advanced cases, the ejecta will present blood of a grumous character. This symptom, with cachexia, means cancer. All cases can be cured by lavage and restricted diet before this stage is reached. Surgery will not cure after this stage, and it is not necessary before. If performed, it will handicap and inconvenience the patient for the remainder of his life. These cases are non-cancerous at the start, and, if properly treated, should recover.

No case should be pronounced cancer until everything has been done that can be. The surgeon is an advocate of his calling, and will declare that surgery is the only cure. Indeed, it is never a cure, except when it fortunately removes a cause.

The stomach should be washed out daily, and the patient properly dieted. If attended to carefully, many cases pronounced cancer can be saved.

A dilated transverse colon may give out the peculiar clapotage sound; but there is always more tympanitis with the colonic affection, and the sound is farther below and at the points marked by the ascending and descending colon.

A tumorous state of the pylorus and the great curve of the stomach--the left of the stomach--can usually be palpated, while it is more difficult to discover tumifactions of the cardia or esophageal orifice.

Intestine

Many mistakes are made in examining the intestine. Constipation with accumulation is often diagnosed as floating kidney (a very rare affection), appendiceal abscess, ovarian enlargement, uterus tumor, pregnancy, tumor or cancer of the intestine. It is true that such mistakes are ridiculous and do not occur often with skilled diagnosticians, but first class professional men do make these mistakes often enough to cause laymen to seek confirmation of a diagnosis before submitting to an operation. It is not proper to seek confirmation by calling upon a physician selected by the physician in charge; for he will pick one who will agree with him. Either call a physician, and do not allow him to know that a diagnosis has been made, or call a rival of the one making the diagnosis. At all costs, try to eliminate the subterfuges of medical ethics, which means all things to doctors, even if it spells ruin to patients.

Professional ethics is a medical Potter's Field where the mistakes of doctors are interred without publicity. Consultation is where two or more professional men gather together to enjoy a private smoke and to discuss the mistakes of Moses or anyone else who haplessly is not present.

A painful point in the intestine may be caused by inflammation, impaction, gas, tumor, or cancer.

If inflammation, there will be mucous with the stools, and an accumulation of fecal matter will cause pain from pressure, and gas will cause pain from distention. A pain at McBerney's point indicates inflammation, gas, or constipation. Colitic pain is peri-umbilical, or in the right or left iliac fossa. In dysentery the pain is in the left flank and extends to the anus.

Fecal Matter.--When dry and covered with mucous, it indicates constipation and colitis. When of rank odor (putrid-smelling), it means overeating of animal proteids. When sulphureted in odor, it may be due to sulphur or sulphate of magnesia taken to relieve sluggish bowels.

The consistency may be hard, soft, liquid, mucoid, or bloody. If watery and mucoid, it indicates diarrhea and catarrhal inflammation of the mucous membrane.

When the stools are small, and largely mucous, with much bearing-down pain, the disease is probably flux or dysentery.

When the stools are of peculiar form--small and round, ribbon-like or pencil-like--there may be stricture.

Dark color may be from food or drugs; green, from spinach or other vegetables; or, in infants on milk, it means acidity and indigestion from overfeeding. Green, mucoid stools, studded with white curds, indicate overfeeding. and unless a fast is given, followed with a cutting-down in quantity, the child may be very sick.

Light color, if not from an exclusive milk diet, means lack of bile secretion and sluggish liver.

Blood in the stools may be from piles, ulcer, or cancer. When red, it indicates that it comes from the lower bowels. A local examination should discover whether the bleeding is of the nature of piles or local fissure, ulcer or polypus.

Black blood from the bowels must be considered in connection with other symptoms. Give the patient the benefit of the doubt as to the disease being malignant.

Bismuth may color the stools dark for some time after its administration has ceased.

Typhoid discharge, when the patient is fed, is yellowish and nauseous in odor.

Whitish stools indicate fat; fatty stools indicate that the pancreatic juice is unable to emulsify, or that the juices are cut off.

Sand or gravel in stools indicates that stones in the gall bladder have disintegrated and passed out--a natural form of elimination.

Abdominal Pain and What It Signifies.--Sudden abdominal pain diffused, or in the umbilical region, will in a few hours become localized in the region of the affected organ. Deadening drugs should not be given, for they will mask the affection and obscure diagnosis, Sudden abdominal pain, with vomiting, is indicative of peritonitis. The cause may be volvulus, invagination, internal or external hernia, extension of septicemia, rupture of ectopic pregnancy, or rupture of an abscess into the peritoneum. The abscess may be typhlitic, perityphlitic, appendicular, tubal, pelvic, subperitoneal, cellulitis, perforations of ulcers, ulceration caused by biliary or renal calculus, etc. An operation at once, with drainage, should save most cases. Delay means death. Unfortunately, advantage is taken of this truth to urge people with intestinal indigestion, gas pains, uterine and other pains, to have an operation at once.

Absolute quiet, frequent copious enemas, and abstinence from food, is a safe "watchful waiting." To use cathartics is unnecessary under all circumstances, but to give them where any of these symptoms exist is positively criminal ignorance.

In peritonitis the pulse is of more value than the temperature. The pulse is rapid and small (120 to 150); the temperature may be normal, subnormal, or high; the breathing is costal and rapid (30 to 40); the urine is usually highly charged with indican. Collapse threatens early. The face is anxious, the skin cold, and

the mind clear. Often the intoxication is so great that the patient talks and acts as if there were little the matter. This, however, depends on the cause. Puerperal cases are liable to act in this way. I have seen cases dying; yet they were hopeful and believed in an early recovery. When the organ involved in causation is the liver, pessimism is present.

Pain that precedes or follows bowel movement indicates rectal disease, hemorrhoids, fissure, ulceration, cancer.

If pain recurs with menstruation, the reproductive organs should be examined.

Sudden pain experienced for the first time should be analyzed carefully. If the same character of pain has been experienced before, time may be taken, if necessary, to find the cause. If pain follows exertion, it may be from hernia, rupture of tubal pregnancy, rupture of peritoneal adhesions with hemorrhage, volvulus, rupture of cystic tumor, or twist of tumor on its pedicle. Pain following trauma may be from rupture of the bladder, stomach, intestines, or other viscera.

Pregnancy, with threatening abortion, may be the cause of pain. Horseback, or rough riding, of any kind, followed with pain, is suggestive of calculus. Repeated abdominal pain due to painful peristalsis in the uterine, fallopian, biliary, ureteral, urethral, intestinal, spermatic, and other ducts, is not often recognized. If it could be, many mistakes would be overcome.

I have seen neuralgia of the spermatic vessels diagnosed appendicitis, and, after the appendix was removed, the pain that came back was diagnosed adhesions. It is no uncommon thing to have the appendix removed, then the right ovary, then operations for adhesions, then operation on the gall bladder, because of genital affections; namely, spermatorrhea, ovarian irritation, endometritis with stenosis of the neck of the womb (a very common cause of abdominal pain in nulliparous women), or urethral tenesmus.

There are many gall bladder operations because of painful peristalsis caused by gastro-intestinal indigestion, and irritation and inflammation of the viscera. After hernial operations, pain may continue because of adhesive bands. I know of one death caused by obstruction from adhesions at the internal ring of partial hernia.

Women of menstrual age should be examined for affections of the genito-reproductive organs.

Sudden abdominal pain in anemic young women should cause the physician to suspect perforating ulcer of the stomach or duodenum. In children, abdominal pain usually means gastro-intestinal derangement, such as gastritis, enteritis, twist, invagination, colitis, appendicitis.

In those past middle life, particularly in old age, cancer is the common cause of abdominal pain

The character of pain should be noticed. In perforation the character of the pain is the same in all viscera.

In invagination the pain is paroxysmal and periodic, due to peristalsis. Strangulation is generally intense and periodic, due to peristalsis; later there is aching and dragging. In appendicitis the pain comes on suddenly, and is intense in fulminating cases. There is a type which comes on slowly, and is easily controlled by fasting and quiet. A sharp, lancinating pain, continuous in character, is possibly due to perforation. A continuous, agonizing pain spells diffuse peritonitis, and means death unless immediately relieved by operation and drainage.

Pain caused by obstructed peristalsis is periodic, and will subside if no food or drink be given. In appendicitis the patient will remain comfortable, but in obstruction from a twist or invagination, discomfort and pain will not leave, the pulse will run high, and the face becomes anxious.

When a stone is passing, the pain will be periodic. When it comes on, it will be excruciating. Between agonies (which means between the rhythms of peristalsis) there remains a feeling of soreness--a tolerable aching, which, contrasted with the greater pain, is insignificant, but which would in time become intolerable, if full relief could not be found.

Pain from stone lodged in any canal--appendix, enteron (intestine), colon, biliary, pelvis of the kidney, ureter, urethra, etc.--is very excruciating, and food increases the pain,

Gastric ulcer is inclined to give out pain when chilled with cold drinks or ice cream. When it is fully developed, pain may be caused by the ingestion of solid foods.

In coming to conclusions regarding an affection, pain is a guide; hence it should never be suppressed by drugs, nor ignored or disputed.

Pain on palpation may be caused from radiation; hence the hands of the physician should be warm, and the temperature of the room should be warm. It should not be forgotten that the personality of a physician may be such as to cause pain. Such surgeons find much excuse for operating.

Facial expression, position of body, tension of muscles, all may manifest pain.

On account of the number of organs and the complexity of the nerve supply, the great variety of functions, etc., the abdomen sends out the greatest variety of pains.

The gastric crisis of locomotor ataxia presents paroxysmal vomitings and severe gastric pain, lasting several hours or several days, which may recur after days or weeks. Other symptoms of tabes dorsalis will clear up the diagnosis, and save a foolish and unnecessary operation for some abdominal affection which happens to fit the particular insanity of the surgeon called. If there were not such senseless operations performed, I should not make such disagreeable statements.

Nephritic crisis (kidney crisis) is caused by a dislocated kidney. The nerves and blood vessels are twisted more or less, and the ureter is flexed. This axial rotation may cause serious strangulation. Where the right kidney is misplaced, the symptoms are nausea, vomiting, pain in the back and thigh; excessive or defective secretion in the bowels, causing indigestion and similar disorders in the renal secretions.

Gas in the bowels frequently causes pain. The gas produces the pain by stretching the peritoneal covering.

Pain at a given point does not always signify that the cause of the pain is located in that region. Absence of pain in regions is often significant,

Pain at the navel is not diagnostic; yet it often signifies appendicular, fallopian-tube, or invagination affections, cancer of the stomach, etc.

If, when pressing the abdominal wall, there is one spot that gives out pain or discomfort, and no other point is sensitive, it is reasonable to believe that the disease is located. When the whole abdomen is sensitive, the pulse is quick, and there is an anxious expression of the face, the disease is peritonitis. If the patient is bright and all attention, and the symptoms appear within a week after confinement, the disease is puerperal peritonitis. When there is no fever, and the pulse does not vary very far from the normal, yet the patient complains at every touch. and the bowels are disturbed with gas, the case is that of trauma, or stretching of the peritoneal sheet, which is made sensitive by toxin poisoning from gastro-intestinal decomposition. This is an affection that is turned aside by a class of physicians as hysteria. Because the patient complains of pressure on one part as much as on another, the doctor decides that there is nothing the matter--just hysteria. Another class will diagnose the case according to the delusion that happens to possess them at the time of examination. It may be fibroid tumor (such cases are liable to have a fibroid); and, of course, the tumor is the cause, and it must be removed. If the doctor's delusion runs to the appendix, gall bladder, floating kidney, enteroptosis, displacement or prolapsus of the womb, etc., etc., the operation selected will be in keeping with his delusion. Is this statement of mine a delusion? I wish it were. These delusions are created and propagated at medical societies. Two or three leading men force their delusions on the rank and file. Medical societies should be suppressed; for they are a menace to society. For a few months after the A. M. A. meetings there is an epidemic of operations, ninety to ninety-five per cent of which are inexcusable, except for the delusions inoculated at the last meeting of the association. Of course, this statement will be pooh-poohed by those whom it fits; but if proof of insanity is desired, surely the inmates of an insane asylum should not be consulted regarding their delusion.

An accumulation of fluid in the abdomen will, on palpation, show flatness at the most dependent point, and resonance at the highest points; whereas an ovarian tumor will show the reverse. In a vaginal examination, with a finger on the vaginal roof and the hand upon the abdomen, the transmitted movements will be felt if there is a tumor; if dropsy, there will be no sensation transmitted. Advanced pregnancy should not be mistaken for tumor or dropsy; yet this mistake has been made by "first class" surgeons.

Arterial pulsations in the epigastric (stomach) region are seldom due to aneurism. To keep from making such an awkward mistake, patients with tension and severe throbbing of the abdominal aorta should be examined daily, and kept on a fast for a few days. If the condition is high blood pressure, the throbbing will soon pass away, and will not return unless overeating or improper eating be indulged in, or sensuality in some form be practiced. The symptom is often found in habitual coffee drinkers.

Obscurity of Abdominal Symptoms.--Reflex pains often get physicians into trouble. Operations on the abdomen have been performed by wise physicians for reflex pains in pneumonia; the symptoms being pain, tenderness, gas distention, temperature, frequent respiration, but lacking the pulse of peritonitis. Extensive intercostal neuralgia may be mistaken for abdominal affection; also for lung disease. The intercostal nerves end in the abdominal wall.

Abscess in the wall of the abdomen may be mistaken for peritoneal disease. More than forty years ago a case of abscess of the abdominal wall came into my hands, after several good physicians had named the disease peritonitis and given an unfavorable prognosis.

Volvulus (Twist in the Bowels).--This is a rare obstruction, constituting about one-fortieth of an intestinal obstructions. Men are said to have this affection oftener than women. The cause is probably an extra-wide mesentery. Invagination is probably made possible from the same cause.

Volvulus symptoms are tympanitis; great peristatic pain; inability to have an action from the bowels after the segment below the obstruction is emptied with enemas.

At first the pain is periodic. It gradually increases and becomes more constant. If no food is given from the start, pain will not be so marked. Vomiting will be a more or less constant symptom. Symptoms must vary to agree with the temperament and excitability of the patient.

The disease is so rare that a diagnosis will be made after an operation. Any case presenting symptoms of obstruction with symptoms of profound prostration--giving the appearance of being on the verge of collapse--should be opened up, and whatever is found should be righted as quickly as possible. Such cases do not stand the shock of prolonged operations well.

Robinson declared that the chief etiology of volvulus sigmoid (this furnishes about sixty per cent of the locations) is elongated sigmoid, possessing a narrow foot, accompanied by inflammation caused by vigorous action of the left psoas muscle, which injures the sigmoid, inducing migration of germs or their products through the coats of the bowels, inciting plastic peritonitis. Adhesions follow, favoring the development of this mechanical obstruction. The cause back of all causes is intestinal decomposition, with infection by toxins. Man pays and pays for lack of control in eating--for food drunkenness.

Volvulus occurs in subjects over forty years of age. Marked tympanitis, or meteorism, or gas distention, is first located in the left iliac fossa. This may be remembered as a small, but not dependable, diagnostic point.

Liver

Hypertrophy of the Liver.--A fullness is observed under the ribs on the right side. Tumefaction of the spleen co-exists. When it does, there is tumefaction of the upper half of the abdomen. This is especially noticeable when the patient stands. The liver is more developed in children than in adults.

To determine the amount of enlargement, place the patient on his back with legs flexed, and begin the palpation and percussion on the lower abdomen, gradually going up toward the ribs. In enlargement the

dull, flat sound will be found anywhere below the ribs, depending upon the amount of enlargement. Under normal conditions the flat sound begins two fingers' breadth below the nipple, and terminates at the costal border (border of the ribs).

The liver is prolapsed when the flatness is below the points mentioned.

The border of the upper line of the liver is on a line drawn from the right border of the sternum at the level of the sixth costal cartilage. It then follows the sixth rib to the right mammary line, and reaches the seventh rib on the axillary line, the ninth on the scapular line, and ends, at the spine, at the eleventh rib. Strong percussion is needed above to bring out the dullness, but light percussion is sufficient below.

Normally the lower limit of the liver may be confounded with kidney flatness at the axillary or the scapular line. The liver extends from the eleventh rib, following the costal border midway between the ensiform cartilage and the umbilicus, and terminates in the left side at the level of the apex of the heart. Liver flatness is diminished when there is emphysema of the lungs, gas distention of the stomach or bowels, or distention from ascitic effusion.

Atrophy of the liver occurs in cirrhosis and yellow atrophy.

General hypertrophy occurs in alcoholism, and the enlargements occasioned by liver and heart derangement brought on from excessive eating of starch and sweets,

(f) Urinary Apparatus

Lumbar pain is an accompaniment of all derangements of the pelvic viscera. The lay mind associates backache with kidney disease; but backache may mean rheumatism, constipation, piles, fissure, prolapsus of the womb, endometritis or endocervicitis, enlarged prostate, stricture of the urethra, etc. Too much attention is given to lumbar pain or backache in connection with kidney affections. Indeed, severe kidney disease may be developed without much discomfort in the back.

In nervous diseases, pain in the bladder is felt in urinating, especially at the expulsion of the last few drops. In urethral irritation it is the first urine that causes discomfort. Hysterical women are very prone to have urethral irritation. Hysterio-cysto-neurotics are usually subjected to so many operations that they are ruined, but never cured.

In this connection I wish to chronicle an observation that I have made: In all cases of tabes dorsalis I have found granular inflammation and great sensitiveness of the urethral mucous membrane, and almost invariably stricture. I have made a practice of using the olive-tipped sound and rubbing away the granulations, and at the same time dilating any stricture that may be present. I have found this treatment a valuable adjunct to the general treatment.

Of all influences leading to the development of tabes, venery stands first. Hence a successful treatment of tabes dorsalis must keep in view the need of remedying the sexual neurosis.

In locomotor ataxia, and in some cases of arteriosclerosis, desire for urinating is lost. The subject must use his reason and attend to this function at stated interval. The urine is sometimes voided without consciousness, and unless the subject sees it pass he will not know it.

Frequent desire to urinate may be wholly due to nervousness; or it may be due to stricture, granular inflammation of the urethra, irritation and inflammation of the bladder, gravel or stone in the bladder, polyuria (hypersecretion of urine) due to drinking overmuch, or eating sloppy foods--soups.

In urethral stricture the stream is often divided, the length and volume of the stream is diminished, and a few drops will be passed after leaving the urinal. This is also true of prostatic enlargement. When the urine stops suddenly, it indicates stone in the bladder. Pain at the end of the penis is another sign of stone in the bladder.

Retention of urine is where the urine is held in the bladder without power to empty it. This demands

catheterization. Partial retention is the habit of carrying residual urine--a small or large amount may be retained after all is passed that can be passed. This in time causes a filthy bladder, and consequently bladder disease. Catheterization and washing out the bladder with tepid water will give great relief. Enlarged prostate, stone, and partial paralysis are the causes of this affection.

Anuria is suppression of secretion, and the bladder is found empty.

Examination of Urine (see tests in medical dictionary).--Urine varies in quantity. When below 1,200 grams (38 ounces), oliguria (scanty urine) is said to exist; when above 1,500 grams (46 ounces), polyuria exists.

It is necessary to note the amount of urine voided in twenty-four hours. Make a note of the time of urinating, and throw the first urine away. Then save all voided, including that which is passed at the close of the last hour in twenty-four. If there are about thirty-eight to forty ounces, with no symptoms of kidney derangement, such as sugar or albumin, all is well.

Note the color, transparency, consistency, odor, filaments (threadlike appearances), substances in suspension, sediments, and always the reaction and density.

When the urine is turbid, its cause must be known. This condition is due to the presence in it of mucous, pus, uric acid, urates, phosphates, etc. Mucous precipitates by adding acid; pus forms a curdle by adding ammonia. Uric acid and urates are dissolved by heat; phosphates become soluble by adding acetic acid.

The cause for change in color should be determined. A reddish or brown appearance is caused by the presence of blood. However, certain drugs cause this appearance (coal-tar remedies in certain subjects). The microscope reveals the red corpuscles. Hemoglobinuria, requires the spectroscope; also urobilinuria. An intense color indicates bile pigment. (See test table in medical dictionary.)

The most important tests are for albumin and sugar. A simple test for laymen to determine the presence of albumin is to boil urine in a test tube, or a spoon if a tube cannot be procured. If the urine becomes milky or cloudy, add a few drops of lemon juice. If the urine clears up at once, there is no albumin. When suspicious of albumin, the patient should consult his physician and have the urine thoroughly examined.

Normal urine has a peculiar, well-known odor. When urine gives out an ammoniacal odor (smells of ammonia), it indicates bladder derangement, retention of urine, or possibly it may come from eating raw vegetables. Fecal odor indicates a vesico-rectal fistula--an opening from the bladder into the bowels.

In diabetes the urine, like the breath, may have a sharp, pungent, metallic, or ether smell. This odor is an unfavorable prognostic sign. It indicates a threatening diacetemic coma (diacetic acid in the blood). When this odor is present, the urine should be tested with ferric chloride, which gives off a burgundy-red color.

In dyspeptic coma, related to diaceturia (diabetes), diacetic poisoning, the principal symptoms are: a sharp epigastric plain (stomach pain); an increasing wandering or beclouded state of the mind, which gradually terminates in coma; then comes the final state, which is marked by a characteristic breathing, described by Kussmaul as follows: "The breathing is divided into four stages; namely, a brisk inspiration, a pause, a brisk expiration, and a pause," This syndrome (aggregate symptoms) is liable to be precipitated by anything that will produce fatigue. A journey is liable to precipitate the symptoms. I have noted that diabetic subjects, on coming to Denver from low altitudes, are liable to do themselves harm through their desire for sight-seeing--they are inclined to walk overmuch and overdo in many ways.

Before the ending referred to develops, there may be detected a peculiar odor of the breath and urine; namely, a strong ether odor, in some cases very pungent. This odor from the breath of diabetics is not characteristic; for I have met with it in children suffering an attack of gastritis, also in fasting to overcome various morbid affections. This peculiar breath develops in those suffering great anger, and from other excessive emotions.

It is said this odor is caused by the development of acetone in the blood. Rheumatism--the arthritis-deformans type--is especially marked by the development of acetone (vinegar) in the blood.

It is thought that diabetes is more probably caused by the development in the blood of a ptomain. I have found that gastro-intestinal decomposition is invariably a precursor of diabetes. When digestion is reduced by dietetic abuse, and the nerve energy is broken because of enervating habits, power to digest the carbohydrate foods is lost, when they are ingested, acetous fermentation must take place. Just what syndrome is set up will depend upon the physical state and the personality of the patient. A diabetes may develop; some form of rheumatism may be the manifestation; insanity or crime may be the ultimate result of the morbid process.

Where this state of the blood or urine is suspected, the following test should be made: Place urine in a test tube. Allow a drop or two of perchloride of iron to trickle down one side of the test tube. The iron, being heavier than the urine, falls to the bottom of the tube. If there is sugar present--if there is ethyl-diacetic acid present--the perchlorid turns the urine brownish. This coloring is not characteristic, for the same color can be obtained if the patient has taken antipyrin. The use of the drug should be suspended until the sugar test is made, and then the drug should be abandoned by those who would like to get well. Anything that depresses the body will prevent recovery.

Turpentine, onions, and asparagus impart a disagreeable odor to normal urine.

The consistency of urine varies. Sometimes it is thick, and viscid. It may froth easily. This should lead to examination for albumin. If a spot of urine on the clothes attracts flies, sugar should be suspected--which, of course, suggests diabetes.

The color of urine varies. It may be very light-colored in diabetes, inflammation of the kidneys (interstitial nephritis), nervous polyuria, and at crises--which latter means at the time when symptoms of disease decline.

The color is deep when disease is intense; for the excretions are scanty. The urine then is a reddish or brown color, due to bile. When the urine is very red, blood should be suspected. If in women, menstrual discharge may account for it. If the blood is from the urethra, it will pass when not voiding urine. When from the kidneys, the blood is more uniformly mixed with the urine. Carbolic acid imparts to urine a blackish-brown color; rhubarb, logwood, and senna color the urine red; santonin gives it a greenish yellow appearance.

Chyluria.--Instead of urine being clear, it becomes turbid when containing chyle (emulsified fat) or pus.

An excessive flow of urine--a temporary polyuria--may be caused by eating freely of vegetables, soup, fruit, and salads. Besides, there may be a slight urethral and bladder irritation, produced by the excessive alkaline intake. Coffee and oranges, or other fresh fruit eaten for breakfast, exclusive of other food, will often cause an excessive flow of urine. Watermelon causes an extra secretion of urine, and should not be eaten by those of a constipated habit, because it diverts fluid elimination by the kidneys. Any foods inclined to stimulate the kidneys to extra action should not be eaten by those with an established constipation habit. Thirst should be endured; for it is a demand for fluid in the gastro-intestinal canal, and unless supplied by drinking or using an excess of fluid furnishing foods, the eliminatng organs will yield to severe demand (thirst), and the necessary amount of fluid to supply the thirst will be forthcoming from the blood for normal secretion, and excretion will be established by the bowels; which means that the vicarious work of the kidneys will be given up when elimination by the bowels has been reestablished.

Scanty secretion of urine--anuria--may be caused by diarrhea or obesity. In the former case the bowels have taken up vicarious work for the kidneys. In the latter case the tissues of the body take the place of a lavatory. In unmasked language, the victim of this physical state urinates into his own tissues.

One of the very necessary states of the body for maintaining health is the proper disposition of water in the system. When constipation exists as an established habit, swilling the stomach with water fails of accomplishing the desired end--causing the bowels to act. On the contrary, it waterlogs digestion, causing fermentation, diluting the enzymes, and flushing them out of the body by way of the kidneys, leaving the bowels as dry as Sahara.

Bladder.--When the bladder is distended, a hand laid over it will feet a globular swelling, which gives out a dull sound on percussion.

(g) Genital Organs

Sex power should be examined into. At the beginning of nervous diseases the power is often increased, but it diminishes as the disease advances. Anaphrodisia is viewed as unfavorable in diabetes, Abuse of this function hastens old age and old-age diseases. A natural lack of this power indicates inefficiency, lack of ambition, and low resistance.

Masculinity is necessary to accomplish work. Sex neurosis must not be mistaken for power. Lasciviousness means mental weakness and lack of discipline. Drunkenness cannot be said to be thirst or a desire for water.

Empire-builders and great men are those who use their power for self- and world-building and not for self- and world-destruction.

Disease from sexual abuse brings on paranoia sexualis or primary monomania--a delusional insanity confined to the sex subject. 'Those in this state are given over to physical and mental abandonment, to satyriasis (excessive venereal desire). In women the disease is named nymphomania (excessive or furious desire); other names are hysterio-mania and furor uterinus. As the name implies, there is an affection of the womb and ovaries, bringing on the sex excitement.

The mental state of the sex neurotic is beyond the influence of moral suasion. Physical and mental training may overcome the disease. Local diseases must be corrected. Urethral irritations, inflammations, and strictures must be overcome; uterine irritations, hyperemia, inflammations, enlargements, and ovarian affections must be corrected. Constipation should be attended to first, and morbid appetities must be corrected. Candy, cake, and ice cream eating is injurious. The mental state must receive special attention; for all derangements of a sex nature are more mental than physical.

Lasciviousness is a bad mental habit which is easily. enough overcome before the habit is fully formed. But like all bad habits, it requires all the power, and in man; cases more than the power, which the sex neurotics have, to throw off the disease.

Self-abuse appears to be universal; but the better class abandon the disgusting habit early in life. The harm comes from lost self-respect and the curtailment of efficiency. Men are handicapped in every race in life. The silver-tongued orator barters brain power for sex pleasure, and forty-five years of age finds him no more interesting than he was at twenty-five. Man, to be interesting, must continue to grow as long as he lives. Only the sensualist retires and is satisfied with half-achievements.

When the sex power is utilized in self-development, man never ceases to grow mentally. This is the reward of self-control. All men who have made history have done things-have actually lifted themselves by their own mental boot-straps. They have been strongly sexed, and have not dissipated their energies lasciviously.

Women who allow themselves to develop lasciviousness lose their color early. They become nervous, irritable, and shrewish. Old age comes too soon. They may attract by giving their personal appearance much attention; but their aura sexualis attracts satyrs who are lust-drunk, rather than those who are looking for loyal friends. A nymphomaniac--a woman whose psychology is pronouncedly hysterio-maniacal--cannot find satisfaction in the love of one man. As a rule, there is one for whom she would lay down her life, but loyality is not in her make-up. Promiscuity is one of the features of monomania sexualis. Voluptuaries, if ever cured, must eat properly, take the proper care of the skin, and be very busy in a work that will occupy every hour. lf such people have one idle hour, it will be spent in disloyalty to self, friends, and family in unlicensed liberties.

A man may have but one bad habit, and that habit in time will ruin him. There is but one safe life to live for man or woman--namely: be busy, cleanly, and constantly on guard in resisting the formation of bad habits; for everyone who builds bad habits in time is mastered by them.

Fortunate, indeed, is the one who is mastered by good habits.

Children should be examined for tight prepuce. Circumcision is seldom necessary. Simple dilation with dressing forceps is sufficient. Then, if there is adhesion, the foreskin may be rubbed or pushed back.

Little girls often are troubled with leucorrhea. The cause is acid poisoning. The acid comes from gastrointestinal fermentation. The treatment is cleanliness and proper diet.

In examining adult males, scars on the penis point to soft chancre. The hard chancre does not leave a mark, unless it has been subjected to severe cauterization, which is unnecessary in either form of chancre.

Eruptions, eczema, herpes, syphilitic papules, etc., are often found. Too often herpes will be treated for syphilis by someone who is either ignorant or knavish. The greatest harm to the victim of such treatment is the developing of syphilitic mania--syphilophobia.

Varicocele (enlarged veins in the scrotum) is known by the sensation of a bag of worms. Surgery for this derangement is malpractice, the same as operating to remove varicose veins of the legs. Venereal abuse, self-abuse, lasciviousness, are the causes, along with digestive abuse. Eating in a way to generate toxin poisoning is a live second to venereal abuse. The cure must be the correcting of bad habits of mind, body, and eating. All cases can be cured, if properly treated early.

Hernia is easily diagnosed. There is a history of a small tumor that comes on standing and coughing, and goes away on lying down.

Enlarged prostate may be discovered by introducing a finger into the rectum. About three inches, or from two to four inches, anterior, a round, hard, tumor-like body will be felt. This is the prostate gland. Much injury is done this organ by massaging it--a treatment that is quite a fad among a certain class of medical men. This treatment is often as far-fetched as giving digitalis or strychnin for an already jaded heart, or morphine for a restlessness brought on from oxygen starvation in pneumonia, or for precordial oppression when the heart is enervated, or for headache due to hyperemia of the brain. There is a difference in the results, however. The drugs used in such haphazard fashion often cause death, while the massage cultivates an enlargement of the prostate; or perhaps I should say that the massage becomes an ally of venery, coffee, tea, alcoholics, tobacco, sugar, meat, and starch in hastening a senile tendency.

Manipulating the prostate is one of hundreds of nonsensical professional inanities. The average human being is inexcusably gullible toward the title-decorated profession; and the professions, being made up of the same common clay, do not hesitate to park their wants on a common so succulent.

The mass of humanity--the high, the low, the rich, the poor--nearly all are educated to stand for useless professional service amounts to--are superfluous and have in palliating or extirpating symptoms or effects (affections)--and this is what ninety per cent of present-day professional service amount to--are superfluous and have no excuse, except that the people are unwittingly educated into an officious impertinence which would be criminal if the acts were not covered by the ethics of social custom--which is only another name for the dogmatism of convention.

There is but one other as tragical parallel in civilized life, and that is war. The ethics of war allows those connected with it to commit crimes so impossible and atrocious that hell weeps at their enormity.

Custom is a refuge for inhumanity; and in the matter of healing, the sins committed in the name of professional science, charity, humanity, and skill--expert service--are equaled only by our present World War.

Such a small affair as massaging the prostate gland is professional impertinence practiced by those who look enviously on those intrusted with larger impertinences, such as removing the appendix or ovaries, operating on the gall bladder, and all other internal organs, with no more excuse for the crime than that professional ethics and human gullibility permit it.

Impotency may be a symptom of nerve-center derangement, excessive venery, auto-suggestion, or

mental worry.

Priapism is a sex neurosis brought on from abuse of the grand passion, eating overstimulating foods, and "going the pace" until the body is desperately enervated. It is a sign of sex exhaustion.

Only the olive-tipped sounds are fit for diagnosing and successfully treating stricture.

The examination of women should begin with an inquiry into the function of menstruation--its regularity, if painful, quantity, etc. Painful menstruation may be due to inflammation of the mucous membrane--catarrh--flexions, versions, ovarian engorgements. The primary cause of all uterine and ovarian derangements in young or single women is infection of the pelvic lymphatics from intestinal putrefaction. Correcting the dietary, mode of living, and care of the body will soon correct the worst forms of pelvic affections of single women. In married women--especially those who were married suffering from pelvic-lymphatic infection--all sorts of evils will follow confinements. In the first place, labor will be longer and more painful than it should be; injuries will not heal kindly; slight septic infections will be experienced, which will cause a perversion of the milk, followed by sick children; and mothers Will be left with enlarged wombs, with an impetus in the line for building uterine or ovarian tumors, and, in time, with chronic toxin poisoning and some form of cancer.

Uterine hemorrhages in virgin women may be due to ovarian and uterine engorgement, brought on from lymphatic infection, lascivious habits, idleness, reading of trashy literature, and picture show suggestions,

Hemorrhage in married women is due to three causes, aside from puerperal hemorrhage; namely miscarriage or abortion, submucous fibroid, or cancer.

Leucorrhea.--A slight discharge before and after menstruation does not mean anything except an acidity from overeating or eating improperly--eating candy or too much sweets.

A thin, catarrhal, albuminous discharge, greenish, yellowish, or white, means catarrh.

A muco-purulent and copious discharge is indicative of venereal disease. A fetid odor may mean an incomplete abortion, or cancer.

Abortion Habit.--It is generally thought that repeated abortions are due to syphilis. I have not found this true. I have found that there are temperaments that establish habits very easily. Such people, when they meet with one miscarriage, are liable to have others follow. Correcting life and habits will cure.

Enlargement of the lymphatic glands in the groin (adenopathy) often indicates an ulcer or chancre in the vulva. Where there is enlargement of these glands, and they feel like bird- and buckshot under the skin, this condition indicates toxin infection from putrefaction in the bowels. This is true of men as well as women. An infection with syphilis under these conditions is favorable, with the usual treatment, for developing a very formidable type of disease. These glands enlarge in cancer of the womb or rectum.

Inflammation and suppuration of the glands of Bartholin, situated on either side of the lower part of the vagina, indicate gonorrheal infection. Unless such cases are treated carefully, systemic infection may spread, break down the health, and cause death.

(h) The Nervous System

The facies (appearance) of paralysis is quite pronounced, and understandable to those acquainted with the various expressions.

Paralysis and its deformities are many. Any part of the nervous system may be involved. The muscles and organs to which the nerves are distributed must become atrophied, and the opposing muscles are rendered rigid and spasmodic. The intellect must be affected, and the countenance becomes an index.

Action or motility must be observed.

Motion--voluntary motion--is lost. The amount of paralysis must be in keeping with the amount of lost power.

Monoplegia is where one limb is paralyzed. **Hemiplegia** is where one arm and one leg are involved. Where the face of one side and the limb of the opposite side are involved the name of **crossed** or **alternate paralysis** is given.

When the two upper or two lower limbs (which is rare) are affected, the name of **paraplegia** is given. Where the paralysis is confined to less than one limb, or to a part of the extensor, or part of the contractor, muscles of one limb, the paralysis is named **partial paralysis.**

Where the limb is entirely paralyzed, it is readily recognized; for it is devoid of all motion and cannot defend itself at all. When raised, it falls as dead, if allowed, if burned, it cannot get away from the torture.

Where the paralysis is of a muscle or two, the auxiliary and opposing muscles undertake to do vicarious work. Where this condition is pronounced, deformity must develop; for the muscles which are doing extra work are unduly developed, and those which are paralyzed go into a state of atrophy. The two extremes in a limb cause the limb to be deformed. If the strengthened muscles are extensors, the limb is forcibly extended, and vice versa.

A paralyzed side of the face is smooth. This contrasts very greatly with the opposite side, which is overdrawn and contracted because of losing the counterpoising effect of the paralyzed opposite side.

If the patient attempts to whistle, spit, or put out the tongue, the movements mark the change that has taken place. The movements lack uniformity.

The orbicularis palpebrarum (the muscle that closes the eyelids) is paralyzed when the cause is peripheral (external); but when the lesion is central, this muscle is left intact. When this muscle is paralyzed, the eye remains open, and the dust settling in it is a source of much annoyance as well as discomfort.

Where muscles are relaxed, the paralysis is said to be flabby; the opposite is contracture.

Where there is contracture or rigidity of muscles, the upper extremity hugs the side, while the lower extremity extends. The arms stick to the side; the forearm is bent at a right angle; the hand is flexed and pronated (palm down). The toes of the extended leg are flexed toward the sole.

Contractures may be hysterical or functional; but often they are due to organic change, caused by an inflammatory state brought on from toxin poisoning or a traumatism (injury). Atrophy of the brain, spinal cord, or membranes accompanies or causes paralysis. All permanent lesions end in contracture. The reason for this, as stated before, is overdevelopment of opposing muscles and atrophy of the paralyzed muscles. A time comes, however, when there will be a wasting of even the muscles not paralyzed, because they become so contracted that they have no other movement than that of contraction. The effect is that of inactivity, nutrition fails and the whole limb withers.

Much of this sort of deformity follows infantile paralysis. The disease is central. Where the paralysis is of vital organs, the children die. Where the paralysis is of one extremity, complete, there will be no contractures, hence no deformity. Where the paralysis is partial of one limb, or partial in two limbs, there must be contractures, hence deformities.

Much unnecessary financial burden is placed on the parents of paralyzed children. In many instances the burden is too great, when the end is, or should be, known to the medical adviser. The end of all treatment must be contracture, which means deformity. Possibly the cutting of tendons to correct a very inconvenient or unsightly deformity may be advisable; but if the object is a cure, or holding out a hope of cure, it is cruel to parents to give hope where there is none to be given.

All lesions sooner or later end in contracture, and mean degeneration. Of brain diseases it may be well to mention: inflammation, hydrocephalus, tumors, hemorrhages, traumatism (injury), degeneration,

medullary diseases (diseases of the white substance of the brain), myelitis, sclerosis, tabes, and meningitis; for the latter disease has contractures among its symptoms. Indeed, it is reasonable to believe that infantile paralysis is cerebro-spinal meningitis.

Gait.--Where the contracture is not too great to prevent locomotion, the following symptoms appear: In flabby hemiplegia, or hysteria, the leg drags (helcopode). The sole of the foot drags or sweeps the ground; or the movement may be circular (helicopode), and the foot comes to the ground on the toes.

In flabby paraplegia the step is short, the legs are apart, and each limb is alternately dragged without clearing the ground. The hips incline and rotate while walking.

Paraplegia with contracture is marked by short and slow steps. It is difficult to lift the foot, and only the toes touch the ground. There is a tendency for the feet to cross each other; the knees touch, and the thighs are held close together. The body reels as in balancing. This gait is called "cross-legged progression."

In paralysis agitans there is the added feature of an irresistible propulsion, which gives the patient the appearance of falling forward. Those unacquainted with the gait will have a feeling that the patient is putting on, or otherwise he surely must fall; yet such patients will walk for blocks, pitching forward as though they must fall.

"Steppage" is the gait of tabes dorsalis. Paralysis of the extensor muscles, especially of the anterior and external muscles, of the leg allows the toes to drop. This necessitates the lifting of the leg high (a stringhalt lift), so as to swing the foot which hangs, and the toes strike the ground first.

There is a pseudo-tabes of alcoholic, lead, and other toxin poisoning. Its gait is different from that of locomotor ataxia. The latter gait is not from paralysis; there is lost power for coordination (directing movements). When such patients close their eyes, or undertake to walk in a dark room, they cannot take a step.

It requires a close observer to detect the early symptoms. In the early stages the patient is awkward in turning back abruptly or standing on one foot.

Combined sclerosis--namely, posterior and anterior lateral hardening of the cord-is known by spasmodic rigidity of the extremities and a tabes--spasmodic gait--an exaggerated tabes gait.

There is another incoordinate gait of mixed tabes dorsalis--namely, that of the drunk man--in which the patient straggles and strays from a straight course. He sways and staggers, regains his equilibrium, to again lose it and then reestablish it, etc. In this case the patient holds his arms extended in the manner of balancing. This gait should not be confounded with chorea.

Convulsions.--Convulsions are readily recognized. The symptoms are characterized by a series of abrupt, involuntary contractions, which at times last long enough to keep the affected part in a set position for a while. These are named tonic convulsions. At other times the contractures follow each other rapidly--an intermittent contraction. These are called clonic convulsions.

Convulsions are general or local. In children, convulsions are common as a result of toxin poisoning. The earliest cause of convulsions in childhood occurs in the first month, and sometimes the first week, of life--namely, septic poisoning. The mother receives a laceration, or a bruising, which sloughs off, allowing absorption of more or less septic material. The only symptoms experienced by the mother are a slow getting-up, a slight fever, pallor (septicemia), and slowness in returning to normal. The septic state may be due to imperfect womb drainage. Rarely septic poisoning may be produced by a putrescent cord resting on an excoriated surface at the umbilicus. The convulsions from septic poisoning range from a slight one or more, to seizures repeated every twenty to thirty minutes for days.

Several years ago I was called to see a child, two weeks old, who, I was told, had been convulsing for eleven days. I watched it for an hour, and it had four during the hour. The spasms were short, not lasting more than two minutes. Recovery followed by proscribing the mother's milk. Another case comes to mind. This child, a bright boy a week old, had severe convulsions for twenty-four hours, which put his mentality

in statu quo. He lived an idiot, and died at twenty-two. Now I am told that his mother is dying of cancer of the womb, twenty-five years after the birth of that boy--undoubtedly due to lack of proper attention to the injury received at the birth of that child. This woman was a Christian Scientist at the birth of her child, and is yet, so far as I know. Nature moves on ideally or not, as she must; faith, backed by intelligence, ends well, but, when backed by fanaticism, it ends in disaster and ruin.

Convulsions in children, coming from irritation in the bowels from fermentation, and toxic poisoning from decomposition, are of daily occurrence. Convulsions starting in this way come and go. The child may outgrow them--whatever that means; but the epilepsy of after-life takes its origin in childhood convulsions.

Jacksonian epilepsy is a partial or sympathetic convulsion confined to one-half of the body. The herniplegic type, which belongs to the epileptic type, involves progressively the two limbs of one side. This type of convulsion is not accompained by loss of consciousness at first or in the beginning of the seizure. The patients watch their own paroxysms. This form of epilepsy indicates a lesion of the brain on the opposite side.

There are abrupt, involuntary contractions of one or several muscles of the face. The cause is neuralgia; and the neuralgia is caused by toxin--coffee, tea, tobacco, alcoholics, or gastro-intestinal decomposition.

Trembling or Tremors.--A motor disturbance. There are three varieties: (1) rapid rhythm-eight to twelve per second; (2) that having from five to five and a half to seven and a half per second; (3) slow, having four to five to the second.

One variety stops during voluntary movements (paralysis agitans); the other begins with the movements and grows more violent as the end approaches (multiple sclerosis). Then there is a type confined to one limb--the hemiplegic type.

Chorea belongs to children's diseases. It is an indication of bad care--lack of poise. Rest and correcting the manner of living, is the proper treatment.

F. NOSOLOGY

Nosology is naming and classifying disease; but as there is but one disease--namely, **Toxin Poisoning**--the names given to the organs affected are really nothing more than naming and classifying affections. Real disease may be likened to a string or cord on which affections are strung as beads. Break the cord, and the beads are lost--correct the toxin base, and affections must scatter. (See "Crises.")

II. Diagnosis

Diagnosis is a mystifying subject, because, unless great care is used, affections will be mistaken for primary disease, and treated as such until the organ takes on such pathologic changes as to become organically changed. For example, irritation of the stomach, kept up long enough, ends in cancer.

Inasmuch as mistakes of this kind are being made all the time, and not alone by mediocre professional men, too much caution on this subject cannot be preached.

When tumors are removed without even a thought of their cause, it is time to get busy on cause.

When gallstones are removed, when the appendix and ovaries are removed, without a thought being given to the cause of the derangements, we think of lack of etiological efficiency in high places.

Bacteriology is to blame for a great deal of shiftless laziness on the part of average physicians.

There are several orders of phenomena to be noticed in every disease; namely, direct cause, and reactory effects. A morbific cause starts up a physical or mental derangement; then follow organic affections. For example: Excessive eating brings on indigestion; indigestion causes gas distention of stomach and bowels. The pressure from gas on the diaphragm causes thoracic symptoms, such as dyspnea, oppression, heart

palpitation; eructating gas causes irritation of the throat. In time a sensitive throat and catarrh, enlarged tonsils, adenoids, and all the diseases peculiar to the mucous membrane of the nose and throat, will in turn be added.

The gas distention kept up by heavy eating causes distention in the lower bowels causes displacement of the stomach and bowels, and constipation. Constipation causes colitis, typhlitis, appendicitis, and inflammation of the lymphatic glands from absorption of putrefaction. Gas distension in the lower bowels causes displacement of the pelvic organs, interfering with the pelvic circulation, causing prolapsus, tumors, etc. The bladder also suffers from pressure; and in males this pressure produces irritation of the neck of the bladder and prostatic enlargement. The rectum becomes involved; piles, proctitis, and prolapsus develop. While these and many minor and obscure affections are in process of development, the nervous system is being affected; enervation is established to such a degree that resistance to disease-producing influences is lost; the environmental influences, which once were passed unnoticed, affect profoundly. Digestion and assimilation are profoundly affected. At this stage, germs become a complicating cause. This is the stage in this vicious pathological circle where tuberculosis and glandular involvement show up. In all this morbid circle, germ influence is an after-consideration; for in about a year and a half after tuberculosis has started in the lungs, germs are discovered, and it is said that the germs are not found earlier except in cases that progress rapidly. Man, like an apple, resists decay until resistance is lowered. Germ decay follows a bruise to the apple. In man, germ influence follows enervation.

Epidemic, infectious, and contagious influences get their work in after mankind's resistance is lowered by a thousand-and-one influences that break down resistancethat enervate.

The graphic picture of affections following the single cause--namely, overeating--must vary in keeping with the peculiarities of the patient. This vicious circle may be established in a child or adult who looks well to the unprofessional eye. Yet he is inflammable, so to speak, and only waits for the fulminant, which may be a germ of diphtheria, scarlet fever, measles, or some other external morbific agent.

After enervation, the affection follows the cause--overeating; then germ or contagious and infectious influences become secondary causes.

When a pathological chain of causes and reactions, as described above, is once started, it is obvious how very impossible it would be to fit a satisfactory nomenclature to it. Nomenclature forces too much attention to names, and so-called diseases are nothing more than affections set up by morbid sympathies. A nomenclature has, however, been evolved, and it is safe to declare that, instead of its being a benefit to the profession, it is a hindrance to right thinking; for it is almost impossible to find two expert physicians who will agree on a diagnosis.

Much to the disgrace of the profession, it is generally known that, if a score of physicians are consulted, the patient, when through with his last counselor, will have from ten to twenty different opinions.

Why is this? No doubt there are many reasons that could be given of an irrelevant nature; but only one reason is necessary, and that one is that all these different diagnoses are right and they are all wrong.

The rhinologist finds adenoids and bony growths in the nose. His diagnosis is right! The throat specialist finds catarrh, enlarged tonsils, and follicular inflammation. He is right! The heart specialist finds an overworked heart; if the disease has been running on long enough, he will find a heart lesion. He is right! The stomach and bowel specialist finds ptosis of the stomach and transverse colon, retarded digestion, and retention of food in the stomach. He is right! The gynecologist finds inflammations, prolapsus, fibroid tumor, maybe an ovarian cyst. He is right! The abdominal surgeon finds appendicitis, ovaritis, tumors, misplacements, etc. He is right! The genitourinary specialist discovers an enlarged prostate, and a foul bladder from retained urine. He is right! The kidney specialist finds albumin or sugar in the urine, and his diagnosis is Bright's disease or diabetes, He is right! The syphilophobiac finds a positive Wassermann test, and his diagnosis is syphilis; and he is right!

All other specialists find something relating to their specialty; and they are all right, and, as stated

before, they are all wrong. Their failure in curing the case is proof positive that they are all wrong. Of course, more or less palliation is given, but no cures need be expected; for all these so-called diseases are affections--sympathetic derangements--and, to get rid of them permanently, the cause must be removed. Such patients are better after taking the prescriptions of one doctor, and worse after taking the advice of another; but the ebbing and flowing, or the oscillating between better and worse, is the legitimate and characteristic progress of toxemia or intoxication, and the getting better or getting worse after taking a given treatment is simply coincidental. In this fool's paradise some doctors are made famous and others are ruined. It is largely a game of chance, except when social favoritism loads the dice. (Read in this connection chapter on "Crises.")

III. Prognosis

To foretell the evolution of diseases without a comprehension of real cause is attended with delusions--mental mirages.

There is such a thing as classifying experiences based upon the habits and customs of society, disease-building though they be, enabling those who become expert in the science to diagnose and render aid, without the priests of the system having even a conception of what a change of habits and customs would do for their theories built on the sands of error.

For illustration: Physicians who are adjusted to a clientele that uses alcoholics, tobacco, coffee, and tea would be professionally lost in a society of abstainers. A science of palliation based on debauchery will ill fit one based on normal habits or sobriety.

Cause of disease can never be discovered in those who are abnormal from debauchery. Health, and what it takes to maintain it, is the only way to find a correct diagnosis and prognosis. When cause is found and removed, therapeutics is superfluous. (See chapter on "Therapeutics.")

IV. Therapeutics

Therapeutics is that branch of medical science which considers the application of remedies as a means of cure.

The drug idea is to relieve and cure. In the very nature of man, the drug-and-relief idea is bad; but if man is one thing more than another, he is a habit-forming animal, and if his habits are bad and work for his destruction, he will accept relief rather than stop his habit, which is a natural cure--if to stop a disease-producing habit can ever be considered in the sense of a remedy or cure.

Drugs, or anything that will relieve without removing cause, is a questionable good, and certainly an outrage and a crime where the remedy blinds the physician as well as the patient to the need of searching for cause and removing the same.

To illustrate: Today 1 received a letter from a gentleman who wrote me concerning his wife. He declared that for the past twelve years his wife, fifty years of age, had enjoyed very good health, with the exception of occasional slight indispositions, which were quickly cured by ----- a drugless physician. He then so graphically described symptoms which had made their appearance within the past month that it left no doubt that his wife was far advanced with cancer of the womb. Should such tragedies happen? Never! They are the fruits of a fallacious system's understanding of the cause of disease. A physician who was not in bondage to a creed-bound etiology would have discovered this woman's perverted nutrition in time to save her.

There is no excuse today for systems of healing which ignore the truth that there can be no cure without righting errors of nutrition, and there can be no errors of nutrition the causes for which cannot be found in the mental and physical habits of the patient, and the patient's attitude toward his or her environment; for be it known that we attract what we have.

To relieve a pain with drugs, by manipulations, by ignoring, by suggestion--in a few words, to relieve in any way without knowledge of the true cause--is a crime against the patient, against society, against

morality, against ratiocination, and tends to bind man hand and foot below his possibilities.

Discomfort and pain are educators. If man could not find palliation, he would be forced to seek the cause of his discomfort and remove it; and, in doing so, he would discover himself and his God--which is the object of being. Know thyself!

First of all, man seeks thrills and shocks, after he has dulled his sensations on the commonplace--after abusing his privileges. When he takes to the toboggan because the travel on the plain has grown monotonous, his pace will soon force him to seek relief. It is at this stage of man's career that he flounders in reliefs.

What is a saloon? A place to secure relief from discomfort. What is a cigar store? A place to find a new sensation--relief from discomfort. What are midnight lunches? Means of finding relief from discomfort. What are bawdy-houses? Homes for lost souls seeking relief from discomfort. What are doctor shops and drug stores? Places for seeking relief from discomfort and pain. The same is true of hospitals and sanitariums, resorts of all kinds, including globe-trotting, sight-seeing, etc., etc. And, neither last nor least, what are churches? Places for those who are uncomfortable in mind and body--palliation.

After a glimpse at a few of man's institutions for seeking relief from suffering, it is well to think over the question of whether all this restless seeking after relief is necessary. Yes, anything that is, is necessary, and will remain until something better can take its place, The relief which man seeks is in keeping with his development, and his development must be held down to the horizon of his sensations.

Those who are looking for a better plan to secure mind, heart, and body ease would do well to read this first volume over and over; it should be found a rational way out of discomfort. It is not a doctor, a healer, a drug, a formula a diet chart, some peculiar exercise or bath, that man needs. He needs to know what causes his discomfort; and then he can become his own physician, as soon as he proves the truths of the book in his own life. When man learns to know how and why he fell, he can lift himself up.

The day for healers and saviors should be past. Teach man to be his own healer and savior--then civilization can reorganize on a rational basis. So long as it is man's duty to save the world, the world will not be saved; but when man learns to save himself, without any intermediary, then the world is saved.

We need no therapeutics--no remedy; we need knowledge of life. Instead of the professions being a good, they are a curse. The world would be better off in a hundred years from now if they could be blotted out; for they are a menace to progress; they are palliatives; they cater to man's appetites and passions; they keep him in ignorance of his best interests; they keep him enslaved to his passions.

Nature can take care of herself; and, as man is a part of nature, he can take care of himself, if obstructions which have grown up about him are removed.

Nature's Plan as Concerns Utilization of Building Material

Birth and death are activities always present in man's body. Every minute cells are born, and every minute cells die.

The process going on is building up and breaking down. This process means that new material must be brought in and made into new cells, and that the old cells must be broken down and removed. To accomplish this, **Two Ferments** are required; namely, unorganized ferment (enzyme) and organized ferment (bacterium). The organized has received attention in a previous chapter.

It is my desire that the readers of this book look upon bacteria as beneficial rather than as enemies to man.

At the very genesis of this process--namely, bringing food to a state of solution, fitting it for absorption--there must be some plan for preparing material for cell building; and there is. The material must be dissolved, and from the time food enters the mouth until it is a living cell it is accompanied at every step

of its progress by refining elements called enzymes. The enzymes--from those in the mouth, stomach, and bowels to those that kiss life and mind into a finished brain cell--are graduated and fitted for their special purposes; and so subtile and varied are they in their work that they are a constant surprise to medical scientists. To show how the learned men of the profession are surprised at the mysterious subtilty of some of the finer ferments, enzymes, I take pleasure in reproducing one of my recent articles from "Philosophy of Health":

Vitamin--What Is It?

Vitamin ("vita" = life + "minum" = small)--small life. We talk much about life; we see where it is, we see what it does, we see it manifest all about us, we know that there is life; yet we cannot see it, we cannot feel it, we cannot analyze it. We cannot live without it. We know that it is, because we see how matter acts under its influence, and how it acts when life is removed from it.

Life is, or it is not, an entity. If it is an entity, it is much too microscopic for man's extended senses (instruments of precision). If it is not an entity, then it must be the "summa summarum" of a physiological synthesis. If it is an entity, then it must be a something that is ommipresent, and at the same time so subtile, subsensorial, and elusive as to sidestep the chemist and all his analytical wiles. Yet it adds the missing link to a synthesis that becomes an animate being.

It is difficult to conceive of life as not present. As in the case of air, light, and electricity, we must assume that it is; or otherwise analytical reasoning becomes void. Nature--the great artificer, the chemist par excellence--and the associational, or social, nature of elements, cause the latter to assemble and unite in just the right proportion to make a compound--a synthesis--attractive for the everpresent life, which at once enters, and the inanimate becomes animate.

Would not life--animal life--be exceedingly precarious if omnipresent life itself were not ever present? Suppose a supply of air, which is a coarse substance compared with life, should have to be gathered, or material for its supply should have to be discovered and purposively supplied--would not life be so precarious that being would scarce secure a hold, and that to remain in being for years, as man does, would be impossible? As it is, man dies for lack of air. The lungs and blood fail to exchange gases, notwithstanding the fact that air is ever present and man's body is submerged in it continually. Let us assume a simile for life: Suppose that a living being were compelled to discover just what foods contained life--vitamin--and he were compelled to provide himself with enough or die, is it thinkable that the world would be populated with beings? Every little while the medical profession discovers something which "God forgot" that is necessary for man's continuance in life! Oh, wonderful man! Wonderful doctor! Wonderful mind!

We must not forget that, in seeking knowledge, a little wisdom should not be despised. The medical blend of knowledge and wisdom is not good. A little more wisdom and a little less knowledge would help some.

Life is not dependent upon procuring a food that has a mysterious property, but upon knowing how to care for the body in such a way that life will flow in and take up its habitation therein.

Iron is needed in our bodies; without it we cannot extract the oxygen from the air. Why do we at times lose the power to appropriate iron from the food consumed? Because assimilation is injured by toxemia, and toxemia is developed by living in a manner to cause intestinal decomposition. The toxin overstimulates and enervates; and enervation causes sluggish elimination. The retention of excretions injures the life of the blood, so that it renews itself badly; then it fails to appropriate the iron from the food intake. And as this is true of iron, so is it true of every other element. At times all elements are refused; namely, minerals in the food, oxygen from the air, and, neither last nor least, life--vitamin--from the living presence.

A physiological synthesis must be made up of just the required elements to attract the absent--which is ever-present--life. Then, when the elements in the synthesis become quantitatively disturbed, this subtile element departs and the synthesis disintegrates.

Vitamin is a new name--a misnomer--to describe an element that may or may not be found in food. It may be refined out of food, as in polished rice and white flour; it may be rendered inert by cooking; and it may be antidoted, as we can prove at any time, by the use of iron, alcohol, tobacco, coffee, tea, narcotic drugs, mineral poisons, toxin from decomposition, and, neither last nor least, by depressing and discouraging thoughts, fear, envy, hate, etc. This element is as old as life--as old as creation--and is known as enzyme. Digestive ferments have been known for many years, but not known in their most subtile forms and obscure developments.

No wonder that the subtiler forms of enzymes are mistaken for life--vitamin; for they are so closely linked to the genesis of being that one appears as necessary as the other, and the action of one may be confused with, or mistaken for, the action of the other.

If there were some way to extract the enzyme from an egg, it would not--it could not--hatch. Of course, we know that the egg must be fertilized, or it cannot take on quickening--the vitamin, the little life, cannot be attracted. The last step, however, in the synthesis of being is fermentation, and coincidently quickening. The most refined, unorganized ferment is the last element before life-vitamin--adds itself to an organized compound of elements, which I call a synthesis of being.

Enzymes range from the coarse solvents--namely, ptyalin, amytopsin, trypsin, steapsin, pepsin, et al.--to those within the blood, and those whose subtilty fits them for cell-building and becoming the all-important key to life in the formation of new beings. It is these bodies--it is one or more of these subtiler enzymes--that have been discovered and named vitamin. How do I know? By analogy. It is unthinkable that life (vitamin) is an entity that can be destroyed, or that can be extracted from vegetable or animal beings, bottled, and given out "ad libitum" to those who have forfeited theirs in riotous living.

The description of the substance said to be vitamin tallies exactly with what we know, and can conceive, of the action of a refined and subtile enzyme.

The description of the substance said to be vitamin discovered by Dr. Funk, misnamed vitamin, and which substance he declares is indispensable to life (how can life be dependent on a little life; how can electricity be dependent on the electric light or any other manifestation of itself?) does not fit any conceivable description of life. Life is as old as food itself-an element as old as creation. It is the breath of life that quickened man. It is the word made flesh--the subtile presence that quickeneth all things.

"The word 'vitamin' has not found a place in the dictionary yet;" and it is scarcely defined and barely understood by its discoverers.

It is said that Dr. Casimir Funk, a Russian chemist now of New York, invented the name to fit "certain mysterious substances in food," which have been demonstrated by a Scandinavian chemist as substances which apparently are not food, yet necessary to its utilization. Isn't this the description of a digestive ferment--an enzyme? Certainly, food cannot become food until acted upon by a ferment.

It is said that Dr. Funk has isolated those substances which he says are "indispensable to life;" and since his announcement "other scientists have added to the meager sum of knowledge."

Digestive ferments have been taken from the hog (pepsin) and from the chicken (ingluvin--pullus gallinaceus). Would it be so very strange if chemists should analyze out of every organized structure (plant or animal) a ferment, or the genesial elements out of which ferments are made? So important an element as ferment must, like life, be present, either in form or potentiality, everywhere.

In the olden time, and up to the very recent present, the perpetual-motion discoverer was abroad in every land, and was always just about ready to demonstrate its discovery to the world. But, alas, the world waited in vain; for no announcement ever came. And now the perpetual-motion explorers are out of business forever--put out by the electric discoverers.

Electricity is a power that is elusive to the chemist, and beyond our senses; yet it can be sent over a wire half as large as the little finger, silently and unobjectively, in such quantities and with such power as to move a train. This has awed the perpetual-motion crank into silence. When we know that electricity is

made up of electrons (units) so small that a pane of glass allows them to pass through its pores as though it were a coarse sieve or not at all present, we can understand how a cyclone of fifty thousand volts can pass through our bodies as an open door, leaving no trace of its coming or its going.

Yet electricity is probably so coarse, compared with the subtilty of life, that there is not much hope of a Russian, or any other chemist, gathering or isolating it. If, however, "these substances," which are "indispensable to life," are what I insist they must be, they are not vitamin, but ferments--enzymes, and are indispensable to life. Yes, indeed; for "this mysterious substance," which they call vitamin, is without doubt ferments, and in the evolution of beingevolution of cells, quickening of fertilized ova--stands next in importance to life.

The human mind is yet so coarse in its thinking that it alludes to the subtile and universal manifestation of life as "mysterious substances," and talks of gathering or isolating these substances. Certainly we are far, far away from its discovery, so long as our imagination and ideals are so coarse.

Dr. C. Houston Goudiss, editor of the "Forecast" magazine, declares: "Not the wisest man living can tell us just what vitamin is. While these substances appear not to be food, they do appear to be essential to the digestion and assimilation of food; for their withdrawal, suppression, or absence, from whatever cause, results in disease and death of the animal or man fed on such food." Dr. Goudiss unwittingly describes exactly the attributes of enzymes. Probably the name "vitamin" confused him. Any "wisest" physician should tell us just what an enzyme is, even if he balks at life.

In a crude way, vitamins--enzymes--have been known for many years. That there is an enzyme constituent in every cell, in every being, animal or vegetable, in animate nature, is as true as reason. Why? Because it is necessary for reproduction. It has been known that scurvy--a disease newly named acidosis--is caused by living on foods deprived of enzymes; and it is as widely known that uncooked vegetables and fruit, taken in abundance, will cure scurvy, or scorbutus, or acidosis, by supplying the ferments--enzymes--necessary to attract life. The secret of the raw-fruit-and-vegetable cure is that scurvy, or scorbutus, or acidosis, means that more food has been taken than can be appropriated by the body, and the body, like a machine, has become choked by waste products and debris to the extent that decomposition exceeds recomposition; and when enzymes fail to maintain asepsis, and toxin gains the ascendency, disease is brought on and death is threatened; for toxin destroys enzymes, and, as the enzymic power weakens, life power weakens, since not enough life can be appropriated out of the living presence to perpetuate the life of the body.

By using succulent fruits and vegetables in scurvy, or acidosis, much distilled water is furnished the body with which to flush out the accumulated putrescence. Fruit and vegetables contain over ninety per cent water. The salts are antiseptic; they antidote the toxins that have been generated by the decomposition resulting from the oversupply of food devoid of vitamin (?)--no, enzymes--which brought on the scurvy. Bread, meat, cakes, pies, puddings, sugar, etc., etc., are mostly food formulas that are artificially prepared and refined to the extent of excluding the enzymes, hence are not in keeping with nature's formulas. Therefore they are not ideal foods--they are short on enzymes; and, when they are eaten, the body is furnished too much nutriment, and not enough enzymes to keep a digestive and assimilative equilibrium. When this style of eating continues, a time comes when the chemistry of the body is perverted by acid fermentation to such a degree that it fails to attract the ever-present life--vitamin--and it must crumble into decay.

Such diseases as pellagra, hook-worm, tuberculosis, scrofula, syphilis, and many others, are directly and indirectly caused by a dietary--foods--that has had its chemistry tampered with. The chief element--namely, enzyme, not vitamin--has gone out of it, allowing decomposition to become established. This far-reaching and not generally known truth can be demonstrated at any time. When a treatment is based upon this truth, syphilis becomes easy to manage.

Those who attempt in any way to explain what vitamin is, do so in something like the following fashion:

> "We have learned that there are vitamins that promote growth, vitamins that prevent scurvy, and vitamins without which the baby will soon become rickety. Some of them are destroyed

by cooking, but cannot be dried out, while others are not appreciably affected either by heat or drying. "--Goudiss.

In the same way a multiplicity of attributes may be credited to electricity. We might say that there are electricities which promote different lights--white, red, green, yellow, etc.; electricities that run trains and cars and motors, kill criminals, etc.; electricities that warm the feet and hands, cook food, iron clothes, etc. Electricity is the same yesterday, today, and forever. It is the motor power for all these manifestations, and a world of others. Then shall we speak of it in a plural sense? Life, according to common understanding, is not plural. It is not quite obvious that there is a different kind of life in different kinds of animals; that the monkey, man, and all other animals and vegetables known to have individual existence, are possessed of different kinds of life.

It is not true, yet it is pertinent to the argument, that it requires a different yeast (bacterium) to raise 'bread, cake, doughnuts, puddings; to cause apples to sour into vinegar, grapes into wine, malt and hops into beer; to cause carbohydrates to ferment in the stomach and bowels, causing acid stomach, rheumatism, etc., or to cause proteids to decompose and develop a toxin that, directly or indirectly, is responsible for all the septic or zymotic diseases. It is as unreasonable to contend that there is a distinct organized ferment (bacterium) for every disease, a distinct unorganized ferment (enzyme) for every tissue that is built, as to declare that there is a different life for every animal and plant, or a vitamin (a little life) for every phase of life.

The tendency apparently is for the educators to compound, complicate, and comminute all knowledge, until it is a wilderness so entangling that there is no show for a John-the-Baptist to come out of it and teach the people how to make the paths of their thinking straight. It appears that everything in life of mental value must be mystified and complicated, or it is not considered worthy of attention.

We are told editorially by the "North American" for September 13, 1917, in commenting on what Drs. Funk and Goudiss have to say on vitamin:

Ten or twenty years hence we will know more about them. Wider knowledge may reveal mistakes in deductions which at present are little more than guesswork. But certain facts long established by usage and now approved by science so firmly uphold Dr. Funk's description of the vitamin as an indispensable attribute of life, that people should know all there is to be known on this subject.

For instance, it long has been known that orange juice is the best preventive of scurvy among babies. It also has been common knowledge--though until lately ignored by science--that the potato not only is a most nourishing food, but that since its introduction into Europe whole countries formerly ravaged by scurvy have been almost free from this distressing ailment.

Now science vindicates the experience of "ignorance" by showing that orange juice and potatoes are notably rich in anti-scurvy vitamins. And in these two instances, heating even to the boiling point does not injure the vitamin content. On the other hand, the vitamins of milk are sensitive to heat. Even the low degree required for pasteurization seems to affect them, while sterilization appears to destroy them entirely.

Beriberi is a disease of the nerves which for many years had wrought widespread ravages in our Farthest East possessions. Early in 1910 a severe outbreak of this malady was speedily and completely checked by the substitution of unpolished rice for the polished product, which constituted the chief food among the sufferers. Subsequent tests on men and animals proved that beriberi not only is caused by a diet consisting chiefly of rice from which the outer coat or pericarp has been removed, but that it can be cured by the substitution of whole unpolished rice, or the administration of the so-called "waste" which results from polishing.

By isolating from these polishings a crystalline base which cured fowls that had developed a disease similar to beriberi after being fed a diet of polished rice, Dr. Funk was led to his discovery--one which yet may rank with Harvey, Pasteur, and Lister.

Subsequent experiments of like nature by other scientists proved the case beyond doubt. Now we know it is the absence of this vitamin from polished rice that causes beriberi. Just how the vitamin in the rice grain affects the human system; just what it does, or where are its fields of operation, we do not know.

That it must play a vital part in the maintenance of health is well evidenced by the fact that pigeons fed on polished rice until paralyzed with beriberi will revive almost instantly when the anti-beriberi vitamin is injected, and in a day's time be fluttering about as though they never had been ill.

> "This almost miraculous transformation can be due only to the presence of the injected vitamin," said Dr. Goudiss; "and the minuteness of the quantities used supports the view that the vitamins are not foods in the usual sense of the term, but have some obscure connection with the production of internal secretions which are essential to assimilation."

He further says:

> "No longer can we regard ourselves as properly fed because our meals show a scientifically correct balance of protein, carbohydrates, fats, and mineral matter; for without that evasive element which in some mysterious manner gives the word to the forces of the body to digest and assimilate these nutrients, we might as well eat sawdust. For a time, it is true, we may get on very well, for the body stores vitamins against the time of need; but these cannot last long, and without a constantly renewed supply, disease and death inevitably await us."

In addition to beriberi, recent investigations have led to the belief that other deficiency diseases are caused by lack of vitamins. Chief among these is pellagra, so alarmingly prevalent in many of our southern states and which, curiously, is found chiefly among those whose diet consists almost wholly of corn meal ground in the modern way, with the germ and hull of the grain removed.

In localities where the old-fashioned "whole-ground" corn meal is used, pellagra is almost unknown. This has led scientists to assume that the outer coat of the corn grain contains a vitamin which will prevent its development, even when corn is the sole article of diet. When used in a mixed diet, as is the case in most instances, the employment of whole-ground corn meal becomes a matter of secondary importance; for the needed vitamins will be supplied by other foods in the menu.

It also has been shown that a diet consisting solely of white wheat bread will produce a disease not unlike pellagra; and here again science is forced to conclude that in wheat, as in corn and rice, the vitamin inhabits the outer coat of the grain. It is not yet known where this vital substance secretes itself in fresh fruits and vegetables, but science is sure of its existence in nearly all such articles of food.

Thus far, the foods found rich in vitamins include raw milk, or milk just brought to a boil; the yolk of egg; meat juice and broths; fresh vegetables and vegetable soups; fresh or cooked fruits and their juices; whole grains, slightly broiled meats, and cod-liver oil.

Those apparently deficient in this element are sterilized, preserved, or cooked milk; white of egg; sterilized meat extracts; dried fruits and vegetables; highly milled grains; soup meat and preserved meats; and bread raised with soda without the addition of sour milk.

We have dwelt on the details of this subject because it concerns a matter no one can afford to ignore. However easy it once may have been for some persons to dismiss the subject of food as relatively unimportant, no such attitude is tenable today. And at present we face food conditions which demand not only the practice of strict economy, but application of every help science can offer.

This newspaper could not consistently omit its utmost in the dissemination of such knowledge. For during the last seven years, with the aid of Mrs. Scott, we have so emphasized the value of a varied diet, and one which includes fruits and green things, that we could not overlook such sanction of our course. In this connection, we wish to quote from a recent editorial from the "Journal of the American Medical Association":

> "The discovery of the vitamin has emphasized the value of those elements of food which,

> although present in minute quantities, exercise a determining influence in the utilization of the ordinary articles of diet. As Garrod says: 'The immense practical importance of these hitherto unknown factors is in the fact that once the missing element -the vitamin-is discovered, a specific remedy for the disease has been found.'
>
> "That the nutritive value of a diet does not depend wholly on its calorific value must be admitted. The importance of flavors, spices, and of the preparation of food so as to arouse the esthetic senses-in other words, the nutritive value of good cooking--has been pointed out by Sternberg, of Berlin, who insists that the science of cookery is not merely the application of chemistry and physics, but rather an application of the physiology of the senses, applied psychology and esthetics. The spices and flavors used by the cook, Sternberg suggests, may be closely allied to the vitamins, if not identical with them. They may stand in the same relation to loss of appetite and health in general that the specific vitamins do to particular diseases."

Thus is the vitamin closely linked to our present needs. The war is forcing us to a food situation which will necessitate particular attention to diet. Its insistence on no waste will compel us to eat foods and parts of food hitherto little used.

Instead of being a deprivation, this may prove an immeasurable benefit. For it may force us to become acquainted with the power of vitamins to protect our bodies against invading hosts of disease which still are unconquered.

It is rather doubtful if the orange-juice cure so "long known" is really understood. If it is not, it may lead to wrong conclusions. The facts are that orange juice in the treatment of babies is not a very old remedy, and as yet not a widely used one. When there is indigestion and poisoning from the decomposition of fats--cream--in young babies and children, orange juice, which is potentially alkaline, antidotes or neutralizes the acid of decomposition; and it is just possible that scalding the juice does not entirely inhibit this action, but it certainly does weaken it. To say that a vitamin in the orange juice did the curing is working the imagination overtime--it is simply assumption If what is claimed for vitamin be true, all one needs to do to prevent decomposition, or prevent stomach and bowel derangement, or cure all types of diseases, is to extract a little vitamin from some favorite food, and use this "mysterious substance" in abundance. Another cure-all! Another way to prevent diseases! What about germs as a cause? And the specific antidotes made from the specific germs? Indeed, when there is so much known of cause, cures, and immunization, is it not strange that there is any sickness at all? The laboratory struggle still goes on in search for specifics that will out-specific all other specifics. Professional asininity is obvious all the time to the discerning.

One of the most necessary things to do for the victims of scurvy, scorbutus, or acidosis is to rest from food for a while; then start the eating on fruit; and then select a proper diet--fresh fruit, vegetables, etc. Those who are very much poisoned on carbohydrates and proteins combined, because of eating to excess, complain that they cannot eat fresh fruit; that it distresses them--which it does, and will continue to do until there is a decided lettingup on overeating and improper mixing.

Regarding rice: Much is made of the rice story. Indeed, that story is worn to a frazzle by every novice in dietetics. It has become a professional platitude. In spite of it, however, polished rice is still eaten, as is white flour. Both are eaten in preference to the less refined grain preparations--and it is perfectly all right for those who supply the necessary enzymes by eating freely of fresh fruit and salads.

It is doubtful if there has been a test made where no food is eaten except rice. Until that is done, no one can tell what a mono-diet of rice will do. I should expect a race of people to go down on such a diet, even if only unpolished rice were eaten; for rice is not an all-around food. Fruit for one meal, rice and fruit for another meal, and meat, fish, cheese, nuts, or beans, with salad, for another meal, will supply all the food and enzymes--vitamin--needed to attract all the life--energy--required.

It takes more than one dietic error to bring man to grief.

There is much to the chemistry of food--far too much to make a cure-all of enzymes, misnamed vitamin; or to make the lack of enzymes--vitamin--the cause of all bodily derangements.

Fermentation is the important process that stands between food and body-building. It is a question of which ferment will be given the right-of-way--unorganized (enzyme) or organized (germs, bacteria).

An ordinary lay mind can understand that the stomach glands must secrete digestive juices, furnish enzyme, or unorganized ferment, or food cannot be brought to a state of solution, fitting it for absorption. A solution is not all that the ferment (enzyme) accomplishes. A property of resistance is imparted to the food pabulum by the enzymes that acts the same as is claimed for vitamin. This is necessary, and for the purpose of resisting the influence of organized ferments (bacteria or microbes), which are everywhere present, ready to "do their bit" in preparing food for elimination which resists enzymic fermentation because of its unfitness as a food, or because the intake is beyond enzymic (digestive) power.

The food that is acted upon by the unorganized ferment (enzyme) attracts life; the "mysterious substance" of Dr. Funk is a subtile enzyme; it is this mysterious element that brings about the fermentation necessary to cause the egg to hatch, the nut and seed to germinate. Ah, it is this element in the cell of living flesh (animal tissue) that enables the animal to live and reproduce itself--that enables the cell, the unit of the body, to produce a successor. And this quickening element, this mysterious enzyme, starts the fermentation that attracts life, It is then that vitamin flows in and being begins.

This mysterious element, enzyme, appears to be subject to the law of summation--of accumulation and dissipation. In the nut and the seed this element lies dormant, and under favorable conditions may remain ages, retaining the power of fermenting and starting the quickening process. After quickening begins, maturation depends upon whether the environment in which the resurrection takes place contains elements of nutrition potentized with enzymes sufficient to attract the vitarnin--life--necessary for cell proliferation.

Individual life is a state that must vary in keeping with the environment. If the nourishment contained in the environment is potentized with enzymes, then vitamin (little life) will be added; for it is the ever-present link, it is the ever-present immanence--the bridge leading from inanimate to animate.

The air must be vital. I do not mean that it must contain oxygen; for all air--that in the mountains and that in the valleys, in the basement, in the cluttered room, or on the wide-open veranda--is of the same composition. But not all air is potentized with life-vitamin. Sewer air does not differ from mountain air in the amount of oxygen and nitrogen which it contains, but it does differ in the amount of vitamin. The mountain air is potentized with vitamin; the sewer air, the air in closed houses, in closed bedrooms, in dark closets, etc., is dead air. Bottled water, stagnant pool water, boiled water, distilled water, are dead waters. Cooked foods are dead foods. That "mysterious substance"--life, vitality, resistance, vitamin--always eludes the chemist. In the laboratory, it is or it is not in the test tube. It cannot be found except by mental analysis--through the power of deduction. Life, energy, vitality, vitamin, is found--it is in the air, the water, the food, the sunshine, or it is not. We must find out by mental deduction. We have learned from observation that air and water are potentized with life (vitamin), or they are not. We know that where these elements have an opportunity to renew themselves from the world's great storehouse, they contain vitality--vitamin; but when they are confined they become poisonous; not from a lack of basic elements, but they become toxic; for life (vitamin) is always supplanted by toxin when life, or vitamin, fails to be forthcoming from the source of its generation.

Life--vitamin--is cumulative and dissipative. We in our daily lives are either building resistance or we are not. If we persist in supplying our lungs with the air that is vitalized--that contains vitamin; if we persist in supplying our bodies with food that is potentized with enzymes (raw fruit and vegetables), and if we supply our minds with mental food that is vitalized with vitamin, we are building power--resistance. It is well to remember that vitamin--life--is not subject to the rules of the laboratory, and is not confined to substances as coarse as that used in laboratory experiments; but it potentizes thought as well as material food for body-building. And it should not be forgotten that all elements which are to enter into the development of being must be potentized with enzyme. Without the enzymic torch to light the way for vitaminic transfusion, animation fails to appear.

Vitamin will never be bottled; hence the medical mind that looks for a cure-all which can be applied with a hypodermic syringe is doomed to disappointment. Modern medical mind has not got away from its ancestral idea of cure. Enzymes may be extracted and used to bring about fermentation, but vitamin--life--will not be attracted, and scurvy, or acidosis, will overtake the victim of laboratory extracted enzymes and such food as malted milk and artificial foods in general.

It is not cure that we need. It is knowledge of how to adjust our bodies so that the ever-present vitamin will flow into us. We must know how to make a vacuum of our bodies that will attract life, energy--vitamin.

Dead thoughts (old theories that have failed) will not be potentized by clothing them with new-fangled notions. A right theory must be based on fundamentals--on eternal verities. If it is, then the false all around us becomes truth. Truth always must have a potentiality of fallacy; and whether we get the truth or the false depends upon our development--what we are developed for or attuned to. Is our mentality potentized with the enzyme of truth? It it is, then the false can be evoked into life. Vitamin will be added; for it is ever present.

There are dead thoughts. There are thoughts that are languishing, because that on which they feed is devoid of the enzyme of truth. And there are live thoughts--thoughts pregnant with vitamin.

If we clothe our bodies in such a way that our skin is supplied with life (vitamin), and that air can get to it, we shall cumulate energy--we shall store our bodies with vitamin. But if we breathe air, drink water, eat food, think thoughts, that are devitamined--devitalized; if we keep vitamin away from the surface of our bodies by improper clothing; if we drink dead water, eat dead food, think dead thoughts, we become devitalized, and toxin takes the place of enzymes; sickness and death take the place of vitamin--life.

Life, as stated above, is cumulative and dissipative. Such diseases as scurvy and all so-called blood diseases, scrofula, syphilis, tuberculosis, et al., are wholly dependent for their continuance on a lack of enzyme--a lack of food that carry enzyme into the body. Hence the body cannot attract vitamin or life. Consequently disease follows. This is demonstrable. When the profession and the people generally give up dernon-worship--give up their belief that what is called bad, disease, devil, evil, has an existence, and are able to see that these supposed entities have no existence per se, but are different phases of health handicapped from a lack of vitalized food, air, water, sunshine, and mind, then truth will flow in, and a proper theory and practice of the healing art will evolve.

The reason why syphilis is so formidable is because the remedies used are allies of the morbid process. When the gentle influences of life-building activities are allowed to develop normally, this supposed-to-be greatest foe to the health of man, which, we are told, taints the human family, will fade like a dream. It matters not if the remedy is called enzyme, vitamin, or life, or if it is called by any other name, or called by no name at all; success does not depend so much on isolating and prescribing "mysterious substances," or administering wonderfully wrought synthetic experiments, such as "606," et al., which are "so indispensable to life," as upon knowing how to help the human body appropriate and accumulate such an amount of enzymes (vitamin-this "mysterious and evasive element") that it may fortify itself against unnecessary decay, which is another name for scurvy, scorbutus, acidosis, scrofula, tuberculosis, syphils, cancer, etc., etc.

Nature is prodigal in furnishing seed--ova and sperm--the major portion of which fall upon stony places and fail to quicken; others spring up, but fail to find a supply of enzymized food; or, as the "North American" editor and his doctors would say, their food fails to carry the vitamin necessary for growth.

Life is a state which oscillates between quickening and decay, between integration and disintegration, between synthesis and analysis, between physiology and pathology. Standing at the head of these two processes are two ferments. At the head of organization is an unorganized ferment, named enzyme; at the head of disorganization is an organized ferment, named bacteria. When the body is dominated by unorganized ferments, growth, renewal of tissue--in a word, metabolism--is poised and normal. When the food supply is short of enzymes--that miracle-working "mysterious substance" which Drs. Funk and Coudiss misname "vitamin"--then the organized ferments gradually gain control; and as the body's stock

of enzymes runs low, diseases of a toxic character--of which scurvy, tuberculosis, cancer, and syphilis are types-spring up.

Drs. Funk and Goudiss use the word "vitamin" where enzyme" can be used more understandingly. Advanced dietitians are beginning to realize that the end of enzymic variety occurs coextensively with cell, tissue, organ, and organisms. All the different digestive secretions are different enzymes. Food, in its travel from the mouth to its ultimate synthesis---cell-development--meets first with the gross enzymes found in the alimentary canal, which disintegrate and bring to solution the food intake. Not only is food prepared for absorption, but it is potentized with life--vitamin. It should be obvious to everyone who has followed the argument that the function of the enzymes is not only to prepare food for absorption, but to prepare the pabulum for the ever-present vitamin, or life, to take up its abode; and as the pabulum becomes more refined at each new enzymic influence, not only is more life added, but the life becomes psychic when cell-development is reached. At every succeeding step, food pabulum meets with a more refined enzyme, until at last it becomes sufficiently vitalized to be born a living cell with mind-potentially. It is the function of enzymes to metamorphose food into living tissue. If the food intake is devitalized--is devoid of enzymes, or Dr. Funk's vitamin--the body's enzymes run out, and then a retrograde metamorphosis begins to appear. The symptoms are a general discomfort--a tired feeling; the bright health glow of the surface of the body gives way to sallowness; the eye shows dullness; the mind is less active; life begins to drag; interest is lost; different organs begin to function badly. From this point, unless the body is served wittingly or unwittingly with enzymes, ill-health will continue to death.

The miraculous transformation in the health of pigeons given the enzymes of the rice is only observed about laboratories. Only the East Indian fakir and his dupes can see trees matured before their eyes, and hills leveled while they wait. There is a lot of credulity or illogical reasoning among many medical high-brows.

It takes a lot of inability to reason to believe that babes can be fed in such a way as to bring on scurvy, or acidosis, and then be suddenly transformed into health by orange juice or an injection of "vitamin." What is that so-called waste--that material which is polished off the rice? A ferment that is to conserve the rice; an enzyme needed by the rice to prevent bacterial fermentation from killing the germ of life when sprouting--when generation is taking place.

No one would think of the gastric secretions as food. Enzyme is not a food; it is a ferment, and its function is to prepare food for absorption and fit it for quickening.

It is refreshing to find a few scientists who are willing to admit that there is something besides protein, carbohydrates, fats, and salts in the process of metabolism. Indeed there is; but it is not vitamin, unless that name is to succeed digestive ferments--enzyme.

In reading the "North American" quotation, kindly substitute the word "enzyme" (digestive ferment) for "vitamin." Mystery will disappear, and the truth win stand out and seem so simple that he who runs may read.

This "vital substance" is made by each organism. Each organism makes enzymes for itself out of the food elements furnished. If all the elements necessary are furnished, and in sufficient quantities, the organism builds itself ideally. If there is a shortage in any, the body will he weakened to just that extent.

For years I have denounced the machine mode of feeding. I have contended that feeding so many calories and so much protein, fat, etc., was fallacious, was a subordinate part of dietetic wisdom, and had nothing whatever to do with dieting the sick. This contention has certainly borne fruit, in that doctors who make diet prescriptions on the quantitative and qualitative plan never cure anyone, and never can.

Good cooking does not consist of flavors, spices, etc., to arouse the esthetic sense, or arouse an unnatural appetite. Good cooking means the simplest cooking possible to retain the normal taste of the articles cooked. A pampered appetite that cannot eat of this simple cooking should be sent to cold storage, and stay there until any natural food tastes well.

The major part of the medical profession is a long way from the Tipperary of a curing understanding of diet.

"Tildenites" have long known how to live, and the present war reform will not change their manner of living.

Just use the word "enzymes" for "vitamin," and mystery disappears.

Therapeutics defined is, in a few words, the science and art of applying remedies to the cure of disease.

"Everybody knows" that there is such a thing as curing disease; hence, when I say that there is no such thing as curing disease, the average individual looks askance and inquires: "If you don't cure anybody, what do you do? What are you teaching?"

There is a therapeutics of doing nothing. For years I have said that it takes more wisdom to do nothing well than to administer all the remedies in Christendom. It takes more knowledge, more experience, more will, more independence, more individuality, to do nothing well, and scientifically, than to apply all the science that has ever been discovered.

Carlyle said:

The profession of healing is a sacred one--the outcome and acme of all priesthoods--divinest conquest of the human intelligence--and will appear one day.

The question is: Did Carlyle build better than he knew? The probabilities are that he believed in some kind of therapeutics, and his highest conception was that there would be a divine remedy, instead of human intelligence, to pilot man out of disease-producing influences.

On the subject of therapeutics--giving something to cure--I am a drug nihilist; I have been accused of drug nihilism for forty years. It has been said that I do not believe in anything; and I am accused of it yet. However, I never have seen anyone who has more beliefs than I have. I have beliefs enough and to spare; and I admit having a lot of unbeliefs. I do not believe in the fixity of states and the unchangeableness of good. I believe in never-changing law and order, and man's ability to adjust himself amicably to nature's requirements.

Whether Carlyle knew what he was talking about I cannot say. But he told one of the biggest truths that have ever been recorded. Now, what did he mean by it? If he meant what is ordinarily understood as sacred, that would indicate that he did not have the right idea of cure--that he did not have the right idea of therapeutics.

Perhaps it would be well for me to say what I mean when I admit that I am a "drug nihilist"--why I talk on therapeutics, and yet do not believe in therapeutics.

All curing is within the body itself. All we can do is to make the sick comfortable by removing obstructions to the normal operations of the body. The tendency of the body is toward health. The tendency of everything on the side of evolution is toward the ideal. The tendency of vegetation is to develop the ideal type; and if it does not develop the ideal, it is because of obstruction. When trees are planted close together, they grow high and very slender, they are not well proportioned, and they always lack vital resistance. A plant that grows ideally must not be obstructed; it must receive the sun's rays, be exercised by the wind, and have enough of suitable nourishment to promote its growth and allow it to develop ideally.

It is the same with the human body. If it has been planted unideally--in a soil that does not represent all the elements--the child cannot grow ideally and cannot represent an ideal human being. Now, the question is: Can a child born in such an environment ever be brought around to an ideal state? To answer this question opens a large field of therapeutics in which I do believe; namely, the adjusting of the individual to the environment, and the environment to the individual, so that he may evolve into as normal or ideal a state as his potentiality will allowhis potentiality is able to assimilate the elements necessary to bring on

ideality.

If man is hampered by being gestated and born in an environment that does not represent all the elements necessary for ideal body-building, and then the mental state of the mother has been one of depression all the way through the gestation period, we have a big job in bringing that child into an ideal state. The question is: Can it be done?

Eugenics is the subject of much talk these days, and a lot of it means nothing. There is too much importance attached to heredity. The possibilities of man making good are as numerous as the rays that radiate from a center of light. This being true, why talk about his being held down by his inheritance? It is his environment that holds him down, more than heredity.

Pausanius was a Greek traveler who lived in the second century. A physician said of him: "He ails nothing." To which he replied: "I use none of your physic." Again the physician said: "Sir, you are an old man." To which Pausanius replied: "That happens because you never were my physician." Long life often means possessing enough sense to avoid all kinds of opportunities to die. Doctors have had to take the jokes of philosophers from right and left; and it is right that they should, for they as often kill as they cure. Why is it that the people are suspicious of the profession today? Why is it that there are more people who do not have the confidence in the profession which they once had?

Because doctors send out a boomerang every little while that strikes back. The most recent is attempting to force state medicine. It shows obvious, even to lay minds, that if regular medicine were all it assumes to be, there would be no other system of healing necessary. To keep the ranks as thin as possible, students must be selected, and entrance to the profession made as impossible as it can be made, so that only young men of leisure and wealth, or of special favor, may enter. This bars many men of strong ideals and inventive imagination and original thought. As the practice of healing requires as much of art as of science, and as long college training kills the art faculties, our present plan of making doctors ends in the construction of a very complicated human machine that has no more independent mental action than the mechanical jumping-jack. This result, however, is exactly as the heads of the profession desire. That is, they think they do; but, being mechanical human machines themselves, they desire the rubber, the elasticity, the fluidity, the adjustability, taken out of students; and they have almost accomplished their desire. The result is that the average medical man is as incapable of making an independent movement as a mechanical toy. A pronounced type of one of these products, engaged in writing health articles, signs his name with an appendage, and often adds the name of his college mother; which, of course, is as it should be, for such a callow olive branch should not get far from his mother's apron string. Raising the educational standard, and making what the schools teach so obscure that students cannot pass examinations, impresses members of collateral professions and sciences with the idea that modern medicine is becoming worthy of all it claims. To make this belief doubly sure, the state and national governments--two automatic entities--lend the power of their influences; all of which influences go far to imperialize medical power; then, when the liberty-loving people feel the autocratic medical power, it turns their former respect into hate. The effort today is to make college professors out of college men who have great learning, but no practical experience. As well undertake to make an expert carpenter without tools. Knowledge wedded to experience builds wisdom.

Franklin said: "God heals; the doctors take the fee." He was not a physician; he was a philosopher. The philosophers know that doctors cannot cure anything--doctors have no curing power. Why is it that people cannot get that idea? If philosophers in all ages have known that truth, maybe I am not far wrong in saying that there is no therapeutics--no curing influence--outside the animal organism. It is preposterous to say that something can be taken internally or put on the outside of the body that will cure.

Optimistic suggestions are good, and may help the sick to health by imparting hope. Anything that makes people hopeful is curative, but the cure is within the individual.

Dryden said:

"The first physicians by debauch were made;

Excess began, and sloths sustained the trade."

Swift said:

"The best doctors are Doctor Diet, Doctor Quiet, and Doctor Merryman."

The immortal Holmes said:

"Folks want their doctors moldy, like their cheese."

The mold need not be from age so much as from lack of use. Holmes was ostracized in 1844 for advocating what the medical fledglings at this writing are discovering in France; namely, that wounds heal when left open--when clean, not medicated!

Heroes, chiefs, gifted men, enthusiasts--the giant minds among tribes and peoples--were named gods, and they were the first physicians. They were recognized as gods; they were worshiped by the simple-minded and those who knew nothing; and the big men administered to them as best they could.

There seems to be a disposition in man to worship anything which he does not understand. That is why individualistic men had, and still have, healing powers. That is why people who think they are enlightened still take drugs. That is why some of our learned medical fledglings, who know how to warble the word "quack" before they can even think, will automatically write a prescription calling for strychnin to be given to a case of infantile paralysis. As well give the remedy to a dead man! Superstition, your other name is modern medicine! Any school of healing, system, creed, faith, pretention, assumption, or declaration, founded on the usual fallacies, and offering cures that do not put those needing them to the trouble of correcting bad habits, proclaimed vehemently enough, can build a following of humanity who will declare their faith in the system.

Every faking system of cure must be accompanied by "sounding brass and tinkling cymbal," and the drawing part of the fakery must be the successful pretentions to charity.

To save the people--for the good of the people--is the strongest card in the hand that is stacked against the people. Nothing can succeed in faking the people that is not run in the name of charity or for the good of the people.

"And though I have the gift of prophecy, and understand all mysteries, and all knowledge; and though I have all faith, so that I could remove mountains, and have not charity, I am nothing." Paul was a doctor of laws, and he understood psychology better than most doctors today.

It matters not what ridiculous cures are offered the stupid, ignorant public, if they are handed out in a capsule of sweet charity, they will be gulped down with avidity and a smile, and the palliation, when there is any, is in the faith generated. Church hospitals are typical shrines; for God blesses the vandalism practiced in them. The bolus--the therapeutic agent--may be determined, but the capsule of charity brings the Balm of Gilead to the hungry soul.

Man is born with a large void in his nature, and that void is aching for sympathy and charity. This void is infinite in capacity, and is capable of assimilating any old junk, if encased or honeyed by sweet charity.

Then, whoever would explore this void with X-ray perception will find in the scrap-pile, hospitals, sanatoria, resorts, shrines, long- and short-haired fakers of all kinds; fakers from the Dives (rich-man) pattern to the Lazarus (ragamuffin) pattern; representatives of "surgical plants" --fake doctors who have vandalized the beautiful human body in the name of charity; blatherskites who cut out parts of the body for nothing, to prove that they are embodiments of charity--who use the cloak of charity to further their surgical exploitations of the human body.

Every curing system on earth, and every cure-all, can be found in this aching void; and there is no hope that it will ever be overloaded. It is well that the capacity is unlimited; for every generation of men will come with its new, elegant, and sublime fakers, with a taking variety of charity.

It is not within the possibility of many men in each generation to be endowed with the perception to recognize the fakers and the faked; hence their endeavors to save the people by imparting a little common-sense will fail to receive enough attention to change the human trend to any great extent.

The hope of a rational system of securing and keeping health will be pushed back, to give place to a therapeutics that can cure without removing cause; and as cause consists largely of bad habits, a remedy that can cure without removing habit will always be popular. The people will always be willing to allow saviors to die for them.

The immediately preceding is a frank statement of the probability that the masses will never be willing to give up bad habits for the promise of health; indeed, most people cannot be made to see that disease is of their own building, and that a correct therapeutics is simply correcting the errors of life. As every child is born. a lump of protoplasm without knowledge, the question is: Will society ever evolve a belief that disease is never anything more than an undesirable state of health, brought on from a maladjustment of man's body to its environments, and that a reasonable amount of care, a knowledge of which is within the mental grasp of all, will make health possible to all who are corrigible and willing to live in a manner necessary to evolve the highest mental and physical efficiency? If this is possible, then children may yet be born with an inherited potentiality for self-control, and ideals that can and will subordinate appetite and passion to a higher development. The present human potentiality at birth is dominated by sensuality, and a morality so perverse as to barter worship of an imaginary Deity for the privilege of indulging in pious types of sensuality.

It is not an evidence of immorality that the masses fake and are faked; no, it simply means that the faker and the faked are still on the unmoral side of life--they are unmoral; they have not evolved into a moral understanding. Much of what we see of human vandalism, as practiced by the medical profession, is not a breach of moral ethics; it is the way the blindly ignorant soul has of finding light. It is the mental urge--the subconscious longing for mental birth.

The worship of gold and position is in keeping with the belief in whatever is up and beyond the understanding. It is the sensual mind's way of seeking light.

The plant, with its urge for light that was potential in the seed, is forced to push its tender shoot around obstructions that its insinuating insistence cannot persuade to part and allow it to proceed more directly to its goal. The clinging, insinuating manner in which the tender shoots of growing plants hug, embrace, and penetrate clods, rocks, and other obstructions, might be described as love and worship--but is it? I think not. It is the plant's way of seeking light. It may have to go a very devious waysometimes backward, then again forward, and from side to side; hugging, embracing, and seemingly evincing much attachment to these associations. But not so. The potential urge for light forces the plant to cling to, and take every advantage of, its environment-not from a love of it. but for self-development--self-protection--self-preservation.

The plant's struggle for light is typical of mind-growth.

We see the undeveloped mind worshipping heroes, chiefs, gifted men, enthusiasts, fanatics, and gods--worshiping position, wealth, influence, and power. Should we not be nearer right if we said that mental urge--the desire to grow--causes mind to cling to all these objects of so-called worship, until it, the mind, develops enough virility to be sufficient unto itself?

Like the plant in its growth, mind must grow around and through obstructions, such as false theories, creeds, and schools--around great men, and gods. It must try the power and might of wealth. The mind must cling to something in its growth upward toward light; and its clinging to the false, in the manner that it does, is nothing more than the survival of the fittest, or its struggle for existence. It is better to cling to the false than not to grow at all. It is this mental urge--this desire to live--that causes mind to tether itself to its environment, seemingly clinging to, its obstruction because of its love for it. But this is not true. Mind is potential in nature, and its urge is toward full development, with truth as its goal. Truth being the goal, mind must grow through or around such obstructions as fixed creeds, great men, and gods. The selfishness of man (it is not selfishness in the vulgar sense; it is a desire to live, to grow; and it dare not let go of one

support until safely annexed to another) causes him to stereotype knowledge, and brand it with his own name, or a name of his choice; and then go to war, if necessary, to prevent change--progress--growth of mind.

What are schools, creeds, state medicine? The disposition of men to fix beliefs so that there will be no progress--no mind-growth. This is the ignorant manner of expression--this is the social understanding; but the truth is that creed is for mind what the rock is for plant; namely, obstruction to growth. But it must cling to it until safely attached to a more substantial support.

The so-called intellectual always impose on the credulous and ignorant. Man must worship something, and it is immensely gratifying to his vanity if he can manage to be the object of worship. The selfishness of man would cause him to stop progress, if in doing so he could become a god; for the word "god" means a finished product. As soon as God is discovered, be he a man, or a deity, one on the outside of the universe, progress ends. As soon as a cure is found, progress stops; and around the little god of cure, or stone of obstruction, every protection is built to immortalize it.

Simple-minded people and the credulous allow themselves to be dominated by those who are selfish. As a result, obnoxious laws and customs are established which prevent progress.

The regular school of medicine is struggling with might and main to saddle on the people its present germ theory, and its corresponding immunization and therapeutics. Which tacitly means: We have arrived at perfection, and it is time to stereotype and ossify.

This is the curse of school, creed, and church. Around and through these obstructions, mind-urge must force its tender shoots. I dispute that it is love or worship that causes mind to cling to heroes, churches, or god. Indeed, they are obstructions to mental growth; but growing mind must cling to them until strong enough to grow independently.

The intellectual have imposed, and always will impose, upon the ignorant and credulous. The medical profession is working largely on the theory that people want to be humbugged; and it is supplying the want.

The priests were the first physicians. Prophets and divines were consulted. Pythagoras, Aristotle, Athenaeos, the early Christian teachers, the mystics of the later centuries, on to the present, not only "instructed in arcane, metaphysics, and general knowledge, but treated disease."

The late Dr. Alexander Wilder declared: "The knowledge anywhere possessed of the art of healing is the measure of the refinement and civilization to which the people have attained." Show me the doctor any family employs, and I will tell you of the intellectual level to which that family has attained. Their beliefs in regard to church, healing, drugs, etc., mark the stratum in intellectual life to which they have attained. This may be a questionable compliment to those who pretend to be intelligent, yet are clinging to childish superstitions.

See people chasing after quacks--chasing after cures that are not cures--willfully helping the physician give a distorted notion about their diseases, so they will not be interfered with in their daily habits! It is obvious to what an intellectual level people have attained when they will take drugs, or are vaccinated, to cure diseases caused by bad habits. When habits are of more importance than health, and when people will struggle in every possible way to secure a healer who will indulge them in their habits, and cure them without requiring them to stop the habits, that cause disease, it is easy to see where they belong intellectually, titles to the contrary notwithstanding.

Man is civilized by social relations. His refinement depends entirely upon the mental attitude of those with whom he associates. Has a man true refinement who will, for the sake of gain, recommend an operation when he is doubtful in his mind as to whether it is necessary--doubtful as to whether any good will come from it? There are a few barbarians who say: "Damn the people! I am not my brother's keeper. We are here to give the people what they want." What kind of civilization is that? And yet we boast of our civilization.

Kindness and charity represent real culture. The only country that boasted largely of its culture before this European war was Germany. Does war represent culture? aaaa

Does the preparedness of a country represent culture? Is that an ideal religion? Is Christendom Christian? Do Christians believe in Christianity? Is Christianity a reliable therapeutic remedy for misanthropy? Does Dr. Christian know how to use Christianity to cure man of his unethical disease?

The art and technique of healing proceed from knowledge, refinement, and culture. The province of intelligence is to investigate and discover the cause and origin of disease. Scientific knowledge and artistic skill are not so much concerned with cure as with the individual himself. It will always be impossible to get rid of the personal equation in formulating a system of healing. So long as systems are formulated with the personal equation of the patient left out, the system must fail. Indeed, the patient must be the doctor, and the present doctors must become teachers. Medicine is an art. Science, when it is used as an art, will help; but when it is taken out of art, science will never give a solution to the problem of cure.

A man may paint a beautiful picture scientifically; he may have planned the picture carefully, laid out the plans beautifully in advance, and prepared formulas for his colors, blendings, light and shade-all correct according to the best formulas. But when the real artist comes along-the one who carries his model in his soul, the creator- he will make a picture of the same subject that will throw the first into the shadow so far that a second look will never be given it. That is the difference between art and science.

Do not jump to the conclusion that I do not believe in science! It is the basis on which we must build; and every man should have as much science as he possibly can get. But if he is going to cut loose from everything else, and have nothing but science, he will make a bungling record.

In a general way, the skilled physician can tell that his patient suffers; but he cannot know anything of the state of emotions, the wants, the longings, the heartaches. The doctor can see the results of appetites and passions, the same as he can see the results of an accident, the cause of which he knows nothing about. There is an element in every disease that the doctor cannot know without the aid of the patient; and there is an element of cure that belongs to the patient, without which the doctor is helpless. It is nonsense to expect cures to be performed on patients whose lives, physical and mental, are not known.

Taking a drop of blood for analysis, or examining the urine, tells but one thing--and that is the state of the blood or the urine; but nothing of how the perverted state was brought about, if it is perverted. A cure must be formulated on the cause, and not on the effect.

Without an understanding of cause, hope for cure must be lost. How can there be anything done toward removing cause without a complete understanding of what cause is?

The divine conquest of the human intellect is made when cause is known. All before that is chaos. Knowledge, religion, ethics, and morality are in a state of chaos until a knowledge of cause comes to set man right. That cause must be known not only scientifically, but artistically as well.

Archaic Medicine

In archaic medicine there was a therapeutics in the form of suggestion. It was in the form of foretelling and divination. There was something in it to help the people. Sick people want someone who can look ahead and give them hope; and hope is one of the important remedies. Suggestive therapeutics is built largely on hope--belief in betterment. We have schools of suggestive therapeutics, and there are many who practice it. They teach people how to suggest themselves out of a belief in sickness. The cure comes from within the individual; and if it happens to be that the individual needs a mental therapeutics, suggestion helps him think a little differently--helps the patient develop a more health-building belief.

In archaic medicine the serpent on the staff is the symbol of medical art. Egypt, Greece, Germany, South America, and North America employ it.

The asp on the crown of Queen Isis was a sign of the physician.

The fire serpent on a sign-post was the sign of an Assyrian physician.

In Mexico and Brazil the rattlesnake is the sign of the profession.

The serpent signifies occult life-principles and power to divine--preternatural power. The seraph on the staff set up by Moses possessed the power to save those about to die. When they were sick they had the belief that, if they could look upon the seraph, they would get well. They were sick in their minds, the same then as now. Fifty per cent of all sickness is mental.

When a person gets sick, the mind gets busy at once. Nearly all people are afraid of tuberculosis. When they have a cough or a pain in the chest, they go to doctors to find out if there is anything wrong with their lungs.

Places of learning were built in cemeteries in the valley of the River Nile.

Herodotus declared that the Babylonians had no physicians. They used the public parks. The invalids would congregate in the parks, and the people passing along were expected to talk with the sick people and ask how they felt. If they themselves or any of their family had had a similar ailment, they would tell the sick person how they got well. It was the duty of the well people to converse with the sick and help them get well according to the methods they had used. This plan, under wise guidance, could become a more perfect system of cure than any of today.

It is not very different in this day. We can always find someone who thinks he is capable of prescribing for all who are not well, notwithstanding, perhaps, the leading physicians of the community are prescribing for them. Such laymen know very well that their prescription is better than the treatment received from the physician. The layman does not realize that all the experience he has had is with himself, while the experienced physician has watched hundreds and should know much more. It shows that people are natural-born healers, all of them.

It was the same in the days of Jesus. The sick came to the road where he was expected to go by, and they expected him to heal them. That kind of healing has come down through the ages.

This method of healing the sick was not confined to Assyria and Palestine; it was in vogue even in Egypt, along with priestcraft and secular physicians.

Placing the sick in the public thoroughfares is alluded to by many of the older historical writers.

Fast-days were one of the therapeutic remedies of the Euphrates countries.

Mysterious rites, incantations, formulas, the secret word, images, symbols, sacred texts, have all served their purpose in exorcising the evil spirits that caused disease.

All the therapeutics, ancient and modern, above referred to, rests largely on the belief that cures must come from without. This is a belief that will bar the profession and the people from reliable health knowledge, so long as it prevails.

Causes must be discovered and removed. A cause is something--in influence--that always acts; not an influence that acts part of the time, and part of the time it does not.

Germs, as a cause, act sometimes, and sometimes they do not.

Germs always act under a given circumstance; namely, when the body is enervated--when resistance is lost. Then, to prevent germ action, the proper thing to do is to keep the standard of health above the point where germs thrive.

What must be the therapeutic agents? Correct eating, correct care of the body, correct sanitation, and a sane, well-balanced mind.

A knowledge that will help man to enjoy health, evolve the greatest efficiency, and save him from driveling senility or early death, is procurable today.

None but the misinformed will go about seeking cures. Cures, like salvation, spring from within, not from without.

Knowledge is the only reliable therapeutic agent.

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