

MOSES BEN MAIMON  
(Maimonides)

***The Preservation of Youth***

Essays on Health

*Translated from the Original Arabic*  
(*Fi TADBIR AS-SIHHA*)

*and with an Introduction by*  
*HIRSCH L. GORDON, M.D., PH.D., D.H.L.*

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## *Maimonides as Physician and Medical Author*

Maimonides (Moses ben Maimon) was one of the most colorful personalities of the twelfth century. He was an outstanding physician with a very extensive practice, holding, at the same time, important medical appointments in the royal court of Egypt. He was equally eminent as a commentator (*Pirush Hamishnah*), codifier (*Yad*), and philosopher (*Guide of the Perplexed*).

He was born in Cordova, Spain, in 1135, when it had a population of half a million and was at its height as a cultural and medical center. Because of the persecution of the fanatical Almohades, he had to leave his birthplace when thirteen, trying first to find shelter in southern Spain, and from the age of twenty-three to thirty in Fez, Morocco. While there, he studied medicine with such famous physicians as Ibn Zuhr (son of famous Ibn Zuhr-Avenzoar) and Abu Yusuf. Maimonides then, at the age of thirty, left for Egypt where he lived in great fame, and fatiguing medical and literary activities, for the remaining thirty-nine years of his life. He refused an offer made by the English king Richard the Lion-Hearted, in 1193, to accompany him as a court physician to England. He

composed ten medical works, all written in Arabic. He died in Cairo, December 13, 1204 at the age of sixty-nine, thus culminating a resplendent career.

His Arabic medical works, of which *The Preservation of Youth* is the first to be rendered from Arabic into English, are:

1. *The Preservation of Youth*
2. *The Extracts (Gleanings from Galen)*
3. *Commentary on the Aphorisms of Hippocrates*
4. *Medical Aphorisms*
5. *On Hemorrhoids*
6. *On Sexual Intercourse*
7. *Discourse on Asthma*
8. *On Poisons and the Protection Against Deadly Remedies*
9. *Discourse on the Explanation of Fits*
10. *Glossary of Drug Names*

The works of Maimonides are based on authoritative Greek and Arabic sources, used with critical discrimination, and on his vast personal experience. They excel with their brevity, precision, clarity and rational approach. He used the language of the accepted ancient and medieval "hormone" pathology in vogue until a century ago and now making a partial and modified

return in medicine. The practical application of those theories was sound. He gave preference to personal observation over traditions of the past. He considered theoretical knowledge inseparable from practice, the ultimate aim being the fight against disease and the prolongation of life.

His theology was not in conflict with medicine, but, on the contrary, supported it and lent it prestige. He ridiculed the belief in the occult, demonology, exorcism, amulets and spells, as he did home remedies whose efficacy was not supported by experiment and practice. He considered that medical science held the key to morality and godliness, natural processes being synonymous with the divine. He demanded the highest standard of ethics from the physician and took no remuneration from the indigent.

Many physicians before Maimonides referred to emotional states of the patient, but Maimonides made the interaction of mind and body the cornerstone of his diagnosis and therapy, in true psychosomatic tradition. He dwelt at large on the importance of the measures to prevent disease, on the role of proper diet and on the contribution of constitutional disposition.

The physician should always strive to strengthen the patient's own forces, utilizing also the forces of nature.

He cautioned against over-medication, especially on a hit-or-miss basis. When in doubt, he advised: leave it to nature. What affects us is not medication alone, but medication plus the forces of nature.

He demanded of the physician detailed examination and close observation. One cannot learn medicine from books alone nor from experience alone. Practice is inseparable from knowledge and speculation. Every patient is a case by himself and demands an individual approach and care.

The medical views of Maimonides as expressed in his medical writings, and also in his philosophical and legal works, do not belong to the *curiosa* of the medieval healing art, but are an organic part of what was best and enduring in the medical traditions of the past.

H. L. G.

## *Introduction*

*The Preservation of Youth* was composed in Arabic by Maimonides in 1198, six years before his demise. It was written in Egypt for the Sultan Al Afdal, son of Saladin, at his request. Like all the other medical works of Maimonides, it has never been translated into English until now. It was rendered into Hebrew by Moses Ibn Tibon in 1244, and republished recently with copious notes by Dr. Süßmann Muntner, Jerusalem, 1957. The Latin translation made by John di Capua, a converted Jew, in 1290, and used extensively in the medical schools of Europe, was based on the Hebrew translation.

Six authorities are quoted in this work. Three of them are Greek: Hippocrates, "The Prince of Physicians" (460-357 B.C.); Aristotle (384-322 B.C.); Galen (130-200); and three of them are Moslem (but not Arab): Rhazes (Razi)

(850-923) from Persia; Farabi (870-950) from Turkey; and Ibn Zuhr (1113-1162) from Spain. Maimonides often introduces his own opinion as by "the author" or "the servant."

The Sultan complained of poor digestion, chronic constipation and depressive moods. In his reply, Maimonides discusses the dangers of overeating, the three digestions and diets adjusted to the state of health, season and age. He schedules physical exercises and evaluates various foods: cereals, meats, milk, wine, vegetables and fruits. He prescribes a regimen for the healthy, the sick and the convalescent, extols the power of nature and describes the types of physicians in his day. He further discusses mild and drastic remedies, compound and simple drugs, purgatives and emetics. He suggests music as a therapeutic measure and gives directions for various pharmaceutical preparations, such as digestives, sedatives and aphrodisiacs. In a special chapter he discusses the interrelationship between mind and body, also hypersensitivity, philosophy and theoretical morality, the even keel, imaginary good and evil, and the desirability of emotional stability and optimism. In the last chapter he comments on airs and waters, and on the ideas of Al Farabi and Al Razi about patients and diseases. He cautions the reader on the pitfalls of erroneous approaches to medical science. The last topics of his work are concerned with sexual intercourse, the bath, discharges from the nose, food

deterioration and the advisability of avoiding sudden changes in the art of living.

H. L. G.

[ED. NOTE:

The sub-titles are not in the original Arabic text but were added by the English translator, Dr. Gordon.]

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A LETTER FROM RABBI MOSES BEN MAIMON  
TO THE SULTAN (AL AFDAL, THE SON OF SA-  
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I, the insignificant servant, Moses, the son of God's servant, the Israelite from Cordova, received a command from a messenger of the Honorable Chief, His Royal Highness, let God increase his Excellence. He ordered his servant to write down the regimen he should follow in the treatment of the diseases that befell my lord. Let God keep illnesses far from him and may the state of health always accompany him. The messenger who brought the lord's command reported that my lord complains of chronic difficult bowel movements that take place only after strenuous effort. He also reported occasional attacks of horror, melancholy and the fear of death. This is accompanied by vomiting and poor digestion most of the time. That is what he reported.

And I plan to divide this memorandum into four parts:

About the care of health in general, fit for every man and expressed briefly; The care of the sick in general, when there is no physician or when the physician is not perfect and experienced in wisdom; The care of my lord in particular, according to the condition he complains of;

As well as sections of helpful hints in general and in particular for the healthy and for the sick, for every place and for every period. And let no one criticize us for finding in this chapter and in the rest of our composition statements that were already mentioned in other articles that we have written before. Because every chapter was written as an answer to a special inquiry and not as a composition that aims to teach medicine to people.

And from the Lord I ask for help and integrity.

*The Preservation of Youth*

Essays on Health

## CHAPTER I

### *About the Care of Health in General Fit for Every Man and Stated Briefly*

It is our intention to relate in this chapter items that are easy to remember. Their application is of great benefit in the care of health. They represent the consensus of the opinions of the greatest physicians.

HIPPOCRATES: AVOID OVERSATIETY AND FATIGUE!

Among them is the dictum of Hippocrates: The preservation of health is the abstaining from oversatiation and from the breakdown due to fatigue. And note that Hippocrates implied in the care of health two rules, and they are: to avoid oversatiety and the fatigue that results from injurious excessive movements and exercise. Satiety is the consumption of food to the point of losing the appetite and this involves the filling of the stomach and its distention. Every organ that becomes distended

must expand its parts and weaken its strength, and therefore the stomach cannot digest that food at all. It results in weakness, slowing up of movement and a feeling of heaviness. This is particularly true if one drinks to excess after his meal to force digestion. For nature demands the absorption of water in order to soften the food and make it light for the stomach. This results in indigestion, which may be either serious causing death, or mild causing sickness. It may also cause dyspepsia and nausea. The results are changes that depend on changes in the types of food, temperaments and the disposition of the organs to develop sicknesses.

#### THE THREE DIGESTIONS

If the digestion of the food in the stomach is poor, its second digestion, in the liver, is also poor and so is its third digestion, in the organs. And this causes most of the diseases. And Galen said as follows: Whoever wants never to become sick, should avoid poor digestion and excessive movements after the intake of food. And in order to avoid this great harm, the physicians warned against satiation and ordered that a man should cease eating while he still has desire for food and thus avoid the

distention of the stomach and its overfilling. And all physicians agree that to partake a little of bad food is less harmful than eating a lot of good and healthy food. For when one eats bad food below the point of satiation it will be well digested and will nourish the organs with what is useful in it, while the expelling powers will increase and will evacuate the bad surpluses, so that no injury will be caused by it or the injury will be insignificant.

#### INDIGESTION FROM AN OVERBURDENED STOMACH

But the satiated, even though he partook of good bread and good meat, cannot digest it at all. And we have explained why. And in order to avoid satiety, the physicians warned against eating several courses and that one should be satisfied with one course per meal to avoid excessive food and to stop the appetite before satiety. This will enable one to know the various digestibilities, for every victual is digested in a special way, according to its nature.

As to the amount of food for one who wishes to care for his health, it is the advice of [your] servant to eat when the temperature is even, not to expand the stomach, not to overburden it and to enable it to produce a chyme with ease. And as soon as it is established what amount is

proper, one should select foodstuff that agrees with him, namely, that it should not produce gas, or thirst, but give him pleasure, lightness, and a tendency to soft stools. This means good food, of which one should partake regularly.

#### DIET IN WARM WEATHER

The warmer the temperature, the less should be the quantity, because in summertime the digestive processes are too weak to benefit from natural heat. When the temperature cools off one should increase the amount, because in wintertime the digestive processes are strong enough to gather and hold the natural heat. And when it gets cold the openings in the flesh close and do not prevent satiety.

[Your] servant states: If a man would take care of his body as he takes care of the animal he rides on, he would be spared many serious ailments. For you will not find a man who would give too much hay to his animal, but he measures it according to its capacity. However, he himself will eat too much without measure and consideration. Man is very attentive to his animal's movement and fatigue in order that it should continue in a

state of health and not get sick, but he is not as attentive to his own body.

#### EXERCISE FIGHTS ILLNESS

One does not consider exercise, though it is the main principle in keeping one's health and in the repulsion of most illnesses. And Hippocrates has already said: The preservation of health is the avoidance of being broken down from fatigue. And there is nothing like excessive body movements and exercise. Because body movements and exercises will ignite natural heat and superfluities will be formed in the body, but they will be expelled however, when the body is at rest the natural heat is suppressed and the superfluities remain. And even when the food is of the best quality and of the right proportion, movement and exercise will destroy them. Exercise removes the harm caused by most bad habits which most people have. And no movement is as beneficial, according to the physicians, as body movements and exercise. Exercise refers both to strong and weak movements provided it is a movement that is vigorous and affects breathing, increasing it. Violent exercise causes fatigue and not everyone can stand fatigue nor needs it. It is good for the preservation of health to

shorten the exercises. It is proper to do exercises only when the stomach is empty and the superfluities, urine and fecal matter are expelled. One must not exercise when it is very cold or very hot and the best time for it is the beginning of the day, when one awakens from his sleep and evacuates the superfluities which we mentioned. From the sayings of Galen about the care of health we learn: Just as body movement before partaking of food is always good, so after partaking of food it is always bad.

#### BUT NOT AFTER MEALS

And know that movement after partaking of food is very injurious, whether shaking, or sex, or a bath, because they are very damaging; especially great is the harm to those whose blood vessels are narrow and thin by nature. Yet it is desirable that one should exercise a little the length of his house, so that his food may descend to the lower part of the stomach and get warm in order that it should be boiled. And sleep will help the boiling and especially for one who has the habit of sleeping during the day. The care of health requires that one kind of food should not be brought in [the body] over a previous food. And one should eat only when justified by a feeling of

hunger, when the stomach is clear and the mouth possesses sufficient saliva. Then one is really hungry. A man must not drink water unless he is truly justified by thirst. This means that if one feels hungry or thirsty he should wait a little, as occasionally one is led to feel so by a deceptive hunger and deceptive thirst. And the cause is a bad moisture that irritates the mouth or the stomach and when the irritation passes one should not partake of anything, unless the hunger or thirst be strong; then he is allowed to eat or drink. Drinking of water after a meal is bad, as it interferes with digestion, unless one is used to it.

#### DRINKING OF WATER WITH YOUR MEAL

And it is not fit to drink, with your meal or after it when it is still in the stomach, anything besides cold water with no admixture. One of the good health habits is not to retain superfluities under any condition and to evacuate them in time of need. One should not partake of food and then enter a bath or engage in sexual activities or go to sleep or do exercises unless he has examined himself previously and tried to eliminate the superfluities. And also after engaging in these five activities he should examine himself well.

It is part of the care of health to investigate the quality of food and this is very useful. One must know the nature of all foods of every kind. And the physicians have already written many detailed books about it, and they were justified in doing so because it is very necessary. We will therefore state helpful rules in the spirit of this chapter and according to the many foods that are accepted by us. The good foods that are to be prepared by those who want good health are: wheat bread well prepared, the meat of a goat and a one-year lamb, the meat of a chicken and pheasant and pigeons and turtle doves, and the yolk of a chicken's egg.

#### WHEAT IS GOOD FOR BREAD

And by bread well prepared I mean that it should be made of wheat that is fully ripened, after its superfluous moistures become dry and it is not old enough to begin deterioration. The bread must not be made of refined flour, but after it is sifted in the sieve its sourness-producing parts should be made visible and enough salt added to make it suitable. The bread should be made of rough grain unchafed and unpolished and its leavened part should become visible. Its dough should be plentiful while it is being kneaded in order to be baked in the oven.

This is the improved bread of the physicians. And this is the best of food.

#### BUT FOR NOTHING ELSE

And it is important that you should know that everything prepared from wheat aside from this bread is by all means not a proper food. But the following dishes prepared from it are especially bad: unleavened bread, boiled dough, such as noodles, macaroni, dumplings and fried dough balls, fried pancakes covered with honey, and bread soaked in olive oil or in other oils. All these are bad foods for every man. White bread or bread made of refined flour and boiled wheat are not good foods either. Only a stomach with great power to digest them can derive much nourishment and good from them.

The types of meat which we mentioned above are not all of one nature and are not of equally good quality. But the best of quadruped meat is that of sheep in pasture one year old and castrated steer of average fatness. The best part of their meat is in the anterior of their bodies and what is connected to bone.

## FAT MEAT IS BAD

Everything that is within the abdomen is bad and the fat parts are all bad; they satiate but they are hard to digest as they diminish the appetite and produce white moisture. And the heads of cattle have more superfluities than the other organs, and the extremities of animals, i.e., their legs, lack superfluities and their nourishment is not bad. And the sheep is full of superfluities; there is nothing good in it. But a suckling kid is good food and easily digestible. The meat of fowl is in general lighter than the meat of cattle and is digested more rapidly. And the best of the fowl meat are those we mentioned.

Milk, immediately after it is milked, is a good food, provided it does not become sour in the stomach. It does not absorb fumes and does not develop flatulence in the lower abdomen. And it should be taken with a little honey and a grain of salt, as Galen suggested, in order that it should not congeal in the stomach. And the best of the milks and the most rarefied is the milk of a goat or a cow. This offers good nourishment.

## AVOID MILK PRODUCTS

And any dairy product or additions to milk are bad; for example, when it is curdled or boiled or when it has something boiled in it, it is very bad. All types of cheese are very bad and heavy, but cheese one day old, which is white and sweet and not fat, is good. So states Galen who recommends it as good to eat. But everything resembling it is not good, especially old cheese with a lot of fat. Butter, raw or boiled, is not at all bad as human food.

Honey is good nourishment for the old and bad for the young and especially for those whose temper is warm, because it turns rapidly into red bile.

And fish are mostly bad nourishment, particularly for those who are phlegmatic and for the old, and especially large-bodied fish and the salted kind. Those that come out of polluted waters and the very fat are very bad and increase the fluids. But small fish whose flesh is white, hard and tasty and which come either from the sea or from large bodies of fresh water, such as the salmon, is not a bad food, but one should eat very little of it.

## WINE IS NUTRITIOUS

It is well known among physicians that the best of the nourishing foods is one that the Moslem religion forbids, i.e., wine. It contains much good and light nourishment. It is rapidly digested and helps to digest other foods. It also removes the superfluities from the pores of the flesh and excretes urine and perspiration. It has other virtues besides these and is very useful, as the physicians tell us. But this concerns something that we are not allowed to make [from the religious viewpoint], which makes talking of it superfluous and unnecessary, and therefore we will not mention the various kinds and how they could be used in the upkeep of health.

## CHOICE OF VEGETABLES

But the vegetables that are bad for all men are garlic, onions, cress, horse-radish, cabbage, and mad-apples. All of these are poor food for one who wants to be in good health, but cucumbers and green melons are not so bad. As to the yellow melon, if one will eat it early in the day, when the stomach is empty and without a bad fluid, and the person is the possessor of a disposition that is not bad, it will be well digested, cool off the body a little, increase

the output of urine, purify the [blood] vessels and provide some nourishment that is not bad. We mention it, because it is extensively eaten by many people.

Fresh fruits that grow on trees are bad nourishment for men in general. Some of them are worse than others. Among those that are bad are carob, nespole and sorb apple, and some are less bad and almost good, like figs and grapes.

#### GALEN ACCEPTS FIGS AND GRAPES—

Galen said that figs and grapes are the princes of fruits and are less injurious. But the blood that is formed from those fruits is not good. And let people not mistake my statement that "all that grows on trees has poor nourishment," for fruit honeys and their ripe wines, their juices and candies made from them help in special diseases, because their value as food is different from their value as medicaments. This is clearly known to those who are versed in pharmacology. Galen said that from the viewpoint of morality and divine truth, it was his intention to warn people not to eat fruit.

#### BUT DISFAVORS OTHER FRUITS—

He further said that it was his habit to be smitten by fever once a year and when his father commanded him to abstain from eating fruit, he was protected from fever that year. From that time he made it a rule never to eat fruit and he swore that he never had fever after that, except for one day. And one can mention this as an item of truth because the moisture of fruit contains materials from which fevers are formed. And let it not seem strange to us that many people eat fruit without developing fevers, for habits and regulations bring various results. If a Hindu should eat refined bread and sheep's meat he would surely get sick and if one of us should eat rice and fish, as the Hindus do always, he would doubtless also get sick. It is not the intention of this work to declare it a special cause [of sickness], but it is the intention to declare that fruits are generally not good to eat and one should eat little of them. One must never combine them with a meal, but one may eat pears, grapes and figs before meals as they soften and moisten the stool. One may eat after them, provided they have left the stomach. And the binding plants such as quince and plums should be eaten sparingly and after a meal, in order that they should contract and close the opening of the stomach.

## PARTICULARLY PEACHES AND APRICOTS

And just as grapes and figs are considered the best of all fruits, so are peaches and apricots considered the worst. And one should never come close to these two species because they produce moistures that mix with the blood and make it boil and this is the main cause for the formation of putrefied fluids and fevers. But dried fruits like raisins, dried figs, kernels of pistachio and hazelnuts are not bad, but it is best to use them only as relishes with food, especially raisins and pistachio nuts, because they are very good for the liver. Galen said also: The health of the liver is our life. The partaking of some sweets after a meal is very good, because it gives the stomach the power to retain the food and to digest it. This is all that I have found proper to mention in this chapter and that is all we intended.

## CHAPTER II

### *The Care of Patients in the Absence of a Physician or in the Presence of a Physician Who Is Not Adequate and Not Experienced in This Science*

According to the prominent medical authorities, medical science is of extreme importance to man, because he is disposed to become sick from most of the foods he eats, and sooner or later he will need the advice of a physician. Medical science is divided into three parts.

#### THE HEALTHY, THE SICK AND THE CONVALESCENT

The first and most important part: the behavior of the healthy, and that is the care of health and its maintenance.

The second part: the care of the sick; ways and means of regaining of health that has been lost. This is known as medical advice.

The third part: the care that Galen called "the restoration." This is the care of health in persons who are

neither very well nor very sick, such as those who are in a convalescent state or the aged.

As has already been explained, a man needs the services of a physician in every item of health and at every time, but his need of a physician during sickness is especially great and avoiding him is dangerous. Fools think that a man needs a physician during his sickness only and at no other time, but it very often happens that a man gets sick while traveling or while in a small town where there is no physician or only a physician on whose wisdom people do not rely. This is the place for the advice of your servant, indicating what to do on such an occasion.

#### THE ANCIENT GREEKS

Galen has already explained to us that the ancient Greeks, when in doubt as to what to do in a certain disease, did nothing but left the patient to nature, which they considered sufficient to cure all illnesses. And Hippocrates sang the praises of nature in many places at great length, considering nature to be wise, clever and capable of doing what is necessary for the sick without resorting to medication. And it is true that the physician

should help nature, support it and do nothing else but follow it.

#### RAZI'S RULE

And Razi said in one of his well-known chapters: If a disease is stronger than the patient, there is no hope that he will survive and no physician will help him; if the strength of the patient is greater than the strength of the disease, he will not need a physician, because nature will cure him; but if the strength of the patient and that of the disease are equal, then one needs a physician to increase the patient's strength. This can be done only by the perfect physician, who knows how to strengthen the patient and take care of him, so that he may overcome the hurdles of nature. However, most physicians commit many errors and, while they think they increase the patient's strength, they really weaken him and interfere with his progress.

#### ARISTOTLE HARSH ON PHYSICIANS

And about this, Aristotle said, in his book *De sensu et sensibili*, - that many die from medication because of the ignorance of physicians in understanding nature. When

the physicians say "nature," they mean the power that rules all living creatures, whose presence and true function has been explained in the books of the ancient sages. For these reasons kings invite many physicians and chose from them the most intelligent, wise and experienced. Through their concilium they may be saved from error.

#### USE MILD REMEDIES

From all that I have mentioned in my introduction, it becomes clear that it is proper to leave the patient to nature when there is no good physician. And the expression "leaving to nature" implies that one should not take a medication which healthy people are not used to taking and that one should not forget to take the proper amount of his food. One should drink when he is thirsty, and one should eat when he is hungry, as one is accustomed to do. And one should eat the lightest of the foods that he is used to eating. And it is proper for a man to know that even if he has with him one or many prominent physicians, he should not permit himself to employ drastic medication, unless it is upon the advice of a very, very adequate and experienced physician whose wisdom has been put to the test and whose experience

cannot be doubted. Otherwise one should prefer during illness light rather than strong medications.

#### AND AVOID THE DRASTICS

I will now explain the character of the strong medicaments and name them. They are: venesection with the loss of much blood, strong and prolonged purgatives such as colocynth, convolvulus scammonia and cleansing by strong emetics, like the two types of hellebore and nuxvomica, and strong enemas that contain colocynth, sagapenum, castor oil and the like. Equally strong measures are abstaining from food entirely and the avoidance of drinking and the enduring of thirst. There are already many prepared medications for various conditions like the theriac, Theodoric and Mithridatic and their like. All these medicaments are powerful and one should prepare them only upon the advice of a physician who excels in theory and practice. From these things, if they have a beneficial influence in their place, the patient will recuperate immediately or a short while afterward or will, at least, be saved from death. But if they fail, they will cause immediate death or an illness that will ultimately cause the patient's death. And therefore it is proper to exercise care.

## THE LIGHT PROCEDURES

The light medical procedures are: the removal of blood through cupping and scarification on the thighs or on the upper part of the body, a purge with manna, pears, plums, cherries, violets and syrup of roses in a cold state.

Emetics such as barley water, oxymel, horse-radish, atriplex littoralis seeds or melon roots and others. Also light enemas, like those of barley water, coarse bran water, honey water or oil and their like.

Also light food, such as nourishing fluids mixed with sugar, bee honey, barley soup, toasted rusk, soaked twice, or thin biscuits as prepared for sick people.

We can also include here such medication as is also taken in good health, like the drinks used by healthy people—oxymel, rose and lemon water, violets and the like—and the syrups that are of equal quality, such as rose sugar, violet sugar and myrobalan jam.

## THE COMPOUND DRUGS

In the same fashion we must take the fluids compounded out of light and reliable drugs, such as licorice, coriander, oxtongue, endive seed, eryngo leaves, panicaut, asparagus root, rind of lettuce root, fennel root,

celery, cucumber seed, portulaca, portulaca oleracea, sugar melon, althea wood and seed and their like. And other drinks that are compounded from the fruit, seeds and flowers that healthy people take, and the tamarind drink. All these medicaments are light. When they reach the proper place they will restore the health of the debilitated patient and will cure the stronger one for a long time. Even if they miss their aim, they will cause no death or severe injury. Most of the physicians rely on such a system, avoiding doubt in search for perfection.

#### PURGATIVES

The purgatives such as hiera picra, agaricon and operculina turpethum and their like, such as cassia fistula, are of medium quality, not too strong and not too weak. Cassia fistula, though it frequently causes tenesmus, has a sure effect. Agaric is also a sure purgative, but occasionally it hurts with its sharpness and its dehydration, when we have to remove fluids from the entire body or from one organ. Equally injurious to men with a warm constitution may be hiera picra and triphylla. They often produce too extensive a reaction.

When we warned against indiscriminate medication with the theriac Mithridatic even when advised by an

experienced physician, we had in mind the sick only. As to those of good health, it has already been mentioned as a good health rule to take the theriac every ten days.

#### NOTHING ABSOLUTE IN MEDICINE

The physicians have already mentioned that there is nothing absolute in medicine and that everything depends on specific conditions, as when they advise one to take the theriac every ten days for the health's sake.

It is not proper for one who has a warm constitution to take [the theriac] or to take it in the summer or in a period of great heat or when the stomach has any trace of a bad moisture.

#### EMETICS

And when it is said that to vomit once or twice a month is good for the health, this is so provided a man has no weakness in his chest or fullness or pain in his head. Vomiting is of no help when it is very cold. And every time it is allowed, it is under the conditions we have mentioned.

We have advised employing light medications and we mentioned some of the appertaining regulations. If one

cannot find a very experienced physician, he may turn to any physician he can find, if there is no alternative. Sometimes even a small amount of a medication will be injurious if the physician errs and applies it to the wrong place.

#### GALEN: WATER IS AMBIVALENT

Galen has already explained to us that sometimes he tells a patient to drink water until saturation, in order to cause perspiration, soft stools, absence of fever and perfect health. And sometimes if one is allowed to drink water when it is improper for him, it can cause the patient's death or a chronic disease from which he can never be cured. And the conditions in which the drinking of water is allowed or prohibited have already been explained.

And as with drinking water, [one must be careful one understands] how careful we have to be in drinking other fluids. When it is time to drink and we do not know whether to permit the drinking of water or not, one may take the normal amount to which he is accustomed. In the same manner if we are not certain whether to give a patient food or prevent him from taking it, we should give him a small amount of it.

When one cannot reach a very intelligent physician, one should follow the habits he is accustomed to when he is well, but take only a little of what he usually takes. One must be careful always to preserve the strength of the patient while he is taking nourishment. It is advisable to take light nourishment, if he is allowed to take any, such as chicken soup, meat broth, the yolk of a soft-boiled egg and wine, or even a little heavier food, such as chicken meat.

One must never forget to strengthen the physical powers with food and the emotional powers through the aroma of warm fragrant ingredients, such as musk, amber, basilicon, and lignaloes for illnesses accompanied by a feeling of cold, and by cold ingredients, like those prepared from roses, nilufar, myrtle and violets, in illnesses accompanied by warmth.

#### THE ROLE OF MUSIC

And in order to strengthen the vital powers, one should employ musical instruments and tell patients gay stories which make the heart swell and narratives that will distract the mind and cause them and their friends to laugh. One should select as attendants and caretakers those who can cheer up the patient. This is a must in

every illness. In the absence of a physician one must figure it out himself.

The physicians have advised every physician that if he can manage to control the illness with diet alone, he should not employ medicaments, and if he cannot accomplish this without medical healing, he should employ ordinary medical means, such as a medical regimen and therapeutic foods. If this medical regimen does not help, one can try light medication: if it helps, it is good and if it does not help the patient, one may undertake stronger and stronger measures.

#### COMPOUND DRUGS

If one can manage well with one individual drug, one should not use a compound one; or one should use a medication which is compounded of the fewest possible ingredients. One should use medications compounded of multiple ingredients only when compelled to do so. All these provisions are made when one is regulated by a good physician and this is even more the case when there is no physician at all. One should be careful not to employ strong medications or many medicinal ingredients. It is best to be satisfied with ordinary and

mild care. This is the amount we found proper to write on this topic.

### CHAPTER III

#### *The Care of My Lord in Particular, According to the Condition He Complains of*

It has been the consensus of medical opinion that the foundation of health is that the excrements should be soft and if they are hard one should make them soft. Their retention produces very bad fumes that enter the heart and the brain and cause dehydration and confusion of the vital spirits. They produce bad thoughts, apprehensiveness and exhaustion and prevent the elimination of superfluities from digested materials. A special effort is needed to soften the stool.

#### IBN ZUHR ON LAXATIVES

Ibn Zuhr, let God remember him for good, said: The best way to soften the stool is by taking a fluid of rhubarb and tamarind. Your insignificant servant was told of my lord's disposition, that it is good for him to soften his stool with amaranth prepared in a fat chicken with saffron

seeds, sugar, lemon water and mangelwurzel, that were boiled with it, without discarding the water. And he should make it a habit during a meal to eat first green leafy vegetables spiced with a sauce made of barley and good oil. After this my lord can eat whatever he wishes. And when he has finished his meal he should suck on quinces, pears, an apple or a pomegranate with its seeds. And the vegetables which my lord takes should be, first, beets, mountain spinach, spinach or rape-wine, whichever he has, mixed in good olive oil and barley sauce.

But if he has to soften his stool with medication, he should take a gram of good rhubarb and pound it, and an ounce of the tamarind fruit, purified and cut as thin as possible, and soak them overnight in a liter and a half of water, boiled well and simmered. In the morning it should be strained over three ounces of filtered syrup of roses. After he takes this he should abstain from food until the completion of six hours from the rising of the sun.

#### FOR CONSTIPATION

If the stools have become very hard it is best that he should take cassia fistula. And here is the mode of its preparation: oxtongue herb—four drachmas; licorice, cleaned and shelled, herba fontis, barberry seeds—three

drachmas of each; althea seeds—five drachmas; moist roses of seven petals, anethum—seven hearts. All should be soaked in one and a half liters of warm water a day and a night, then it should be boiled and crushed and strained over twenty drachmas of cassia fistula, twenty drachmas of almond oil and one ounce of sugar. He should take it and wait until it completes its action and its evacuation. He should then eat a boiled chicken. If it is not the proper time for finding moist roses he should place over it three ounces of strained rose syrup. And I know that one who reads this paragraph will wonder, and say: It is not right to use barberry seeds, because they have the character of preventing the softening of stools toward which you aim. One should know that barberry seed has the property of preventing the injury caused by cassia fistula, of strengthening the intestines and preventing tenesmus. This is what the old practitioners taught us. And the physicians also mention that oxymel of roses causes softening. It is proper that my lord should possess it also and should take it when it is very hot to soften the stool.

Its mode of preparation: One should take a liter of very strong vinegar and throw into it one hundred moist rose leaves, which have been placed in the sun for one day. Next morning one should remove the roses and place

other rose leaves in the vinegar, the same number as before. And one should not refrain from changing the rose petals every day for forty days. And one should take this vinegar and make of it a syrup, three pounds of sugar for every three ounces of vinegar.

Ibn Zuhr compounded an oxymel syrup made of raisins and it was very good when made during the summertime. Its mode of preparation: The dark raisins should have their seeds removed. In one liter of vinegar one should throw half a pound of raisins and soak them for two days. Afterward he should put them on the fire and boil them twice and purify them, making oxymel vinegar. And this compound is made with great care because the vinegar will withhold the white superfluity and will prevent the formation of malodorous moistures and nothing can be equal to it or like it. It is of a very subtle substance and has a cooling effect on the temperament. The oxymel is of great help in all fevers. But the vinegar hurts the liver very much, it irritates it and shrinks it and causes its blood to become pale.

#### THE LIVER'S ROLE IN HEALTH

Galen has already explained that the preservation of man's health lies in the health of the liver; it colors the

blood and increases its moistures, but it increases its heat, and if it does that too much, it may burn the blood. While vinegar weakens his strength, raisins, that are congenial to the liver, give it fats and nourishment. When the syrup is compounded of vinegar and raisins as the venerated [Ibn Zuhr] did, we get the benefit of the vinegar and we prevent injury to the liver. We thus obtain the benefit of the raisins and we are saved from increased heat. This syrup is so wonderful and good that it should be prepared.

Your servant has already compounded for his master two syrups and an electuary for the occasions which he mentioned. One of the syrups he should always take, every time. Its function is to purify the blood, remove its turbidity and cleanse it of the gases that come from the black bile. It will expand the spirit and gladden it. It will chase away evil thoughts and feelings.

And this is the mode of preparation: One should take rose leaves—one pound; oxtongue —half a pound; lavender—two ounces; Sodom's apple, fumaterra seed and citron leaves—one ounce of each. He should soak all of these in six liters of warm water a day and a night. Then all of them should be boiled several times, crushed, cleansed and strained through a sieve. Place them in six liters of sorrel syrup and put over a small flame until they

thicken into a syrup, perfuming it with a quarterweight of myrrh.

#### TO STRENGTHEN THE HEART

Your servant has not found any syrup equal to it, to gladden and strengthen the heart and give it power. It is mild and neither raises nor lowers the temperature and therefore can be taken at any time. And the amount to be taken is from two to three ounces, in cold water in summertime and in warm water in wintertime.

But the second syrup which your servant saw fit to compound will loosen the stool very much and will often cause a bowel movement twice or three times, depending upon the preparation. It strengthens the expelling force in the stomach and in the intestines and removes the moisture and the black and red biles with ease, without harming the organs of digestion. As to the amount to be taken, that is from three to four ounces of warm water in which anise has been boiled until it is changed in appearance. One should not take it constantly, but only when he needs it to expel the retained superfluities. When one has accustomed himself to taking it once a week, it will strengthen the intestines and remove the factor that

causes dryness of the stools. The stools will become soft and return to their normalcy.

Its preparation: One takes shelled polypody, pistachio, broken and crushed—two ounces; senna Mecca and oxtongue—one ounce of each; crushed licorice and crushed althea—half ounce of each; moist fennel—a handful; and moist roses—twenty flowers. He should soak all these in four liters of warm water a day and a night. In the morning he should boil it, crush it and strain it over thirty drachmas of cassia fistula, purified and mixed with half an ounce of almond oil, strained and put away separately. And he should take myrobalan of Kabul in a polished form and amilegium myrobalanus emblici—ten drachmas of each. He should macerate the myrobalan and soak it in a liter and a half of warm water a day and a night. And in the morning he should squeeze the myrobalan very well and purify it and add to what he boiled, the cassia fistula which he prepared separately. He should mix the two fluids and throw into them four liters of violet syrup and place over a weak flame, and he should suspend over it a bundle of soft flaxen cloth or spikenard and mastic—two drachmas of each—and crushed rhubarb—three drachmas. And he should not forget to squeeze the bundle with his hand to bring out the powers of the ingredients which it contains. And

when the liquid assumes a syrupy thickness it should be removed from the fire and hidden in a clay vessel lined with lead. In time of need one should proceed as I mentioned.

#### DIGESTIVES, APHRODISIACS, SEDATIVES

The spice hinted by your servant is the great electuary which was prepared by his servant beforehand. It helps the triple digestion [in the stomach, the liver and the organs] and strengthens all the organs in general and the heart and brain in particular. It delays aging, liquefies the white fluid, prevents fumes from rising to the brain, strengthens the senses, removes their tension, helps sex life and expands the soul.

And this is the mode of preparation: One takes myrobalan from Kabul and India and belilegium—one ounce of each; myrobalanus emblici —two ounces; citron rind, oxtongue, lavender flower, bitter costus root and aconite—one ounce of each; red rose flowers—one ounce; ash, cunilla, asparagus seed, pistachio seed, hedge-mustard seed, white and red saw-leaved centaury anise, mastic, balsam bark—half an ounce of each; cubeb, cardamom, cloves, cinnamon, galingale, long pepper, ginger, musk, doricum, aloe wood—one-eighth of an

ounce each; the heart of pistachios—three ounces. The dry ingredients should be ground and sifted through a sieve until the drugs and the pistachios are thinned out. The myrobalan should be mixed with half a liter of sweet almond oil or pistachio oil, several times. And all this should be mixed and kneaded in three liters of a syrup that is made of water and sugar alone, and two liters of honey whose foam has been removed, and placed in a vessel lined with lead. And the amount that is taken from it is from four drachmas to half an ounce. Wintertime one should take it in hot water in which anise has been boiled. And in medium weather one should take it as thick as it comes. But when it is very hot, or in any climate, it should not be taken habitually, only once a week. These are the syrups and the electuaries which your servant felt should be found in the treasury of your honorable and august kingdom. Let the Lord extend it together with the long life of its king.

#### MIND OVER BODY

My lord, let God prolong his days, should know that emotional experiences cause marked changes in the body which are clear and visible to all and bear witness in clear testimony. You see a man strongly built whose voice is

powerful and pleasant and whose countenance is splendid. When he is affected all of a sudden by a feeling of great disgust, his facial expression falls and loses its luster. The light of his countenance changes, his posture becomes low and his voice hoarse and weak. If he wants to raise his voice with all his power, he is unable to do so. His strength weakens, occasionally he trembles from great debility, his pulsating [blood] vessels become thin and powerless. The appearance of his eyes changes and his eyelids are too heavy to move. The surface of his body becomes cool and the desire for food is lost. The cause of all of these manifestations is that the natural warmth and the blood enter deep into the body.

You see quite the reverse in a man whose body is weak, whose appearance is strange and whose voice is low. When something happens to him which causes him to rejoice greatly, you will see how his body becomes strong, his voice rises, his face brightens, his movements become rapid, his pulsating [blood] vessels become strong and wide, his body surface becomes warm and joy and gladness become manifest in his face and eyelids. His condition is clear, cannot be hidden and is recognizable without any effort. And the cause of all these events is the spread of the natural heat and of the blood to the surface of the body.

The reactions of all those who fear and hope and anticipate security and calm are well known, as are also the various reactions in the thoughts of those who are desperate or successful. Occasionally the man who is desperate and progresses from sadness to a feeling of misfortune cannot see ahead because of weakness and the turbulence of his foresight. But one who is successful increases the light in his eyes exceedingly, so that it seems that even the light around him increased and grew. And this is sufficiently clear and needs no elaboration.

#### HYPERSENSITIVITY

And therefore the physicians have commanded the observation of emotional changes and keeping them always under consideration, trying to equalize them in health or disease, without allowing any other behavior to take precedence. The physician must keep in mind that the heart of every sick person is narrow and that every healthy person has an expanded soul and therefore the physician must remove emotional experiences that cause a shrinking of the spirit. In this way the health of the normal person will be extended and this is the law in the cure of a patient, especially if the illness is concentrated in the powers of the soul and its parts, such as a disease of

the diaphragm or the brain, causing turbulent thoughts and melancholy. Special care should be taken in the observation of the emotional movements. When one is overpowered by imagination, prolonged meditation and avoidance of social contact, which he never exhibited before, or when one avoids pleasant experiences which were in him before, the physician should do nothing before he improves the soul by removing the extreme emotions.

#### PHILOSOPHY AND THEORETICAL MORALITY

But the physician as such will neither explore nor condemn with his wisdom hyperemotionality. One can obtain this from philosophy and theoretical morality. Just as the philosophers have composed books in the various sciences, so they composed many books on the improvement of conduct and the morality of the soul and the imparting of good habits from which only good actions can result. And they have warned against base habits and taught a way of removing from the soul every bad habit that contributes to the causation of evil. And all the theoretical moral teachings, chastisements and precepts that are taken from the prophets, their preachings and character, or from later sages, as well as knowledge

of their virtuous behavior, will help to improve the qualities of the soul until they reach such praiseworthy behavior that can produce only good acts. And you will find that those exaggerated emotions can only produce changes in the ignoble masses, who possess no wisdom, no philosophical principles and no theoretical morality, like children, women and the stupid. All these timid souls are easily startled and terrified and when injury befalls them or an inevitable misfortune occurs to them, you will find that their consternation increases. They pine and cry and smite their faces and their chests. And it may happen that the feelings become so intense that an ordinary man will die from them, immediately or later, according to the grief and distress he experiences. And when goodness is bestowed upon those inferior people by the favors of the world, their gladness increases and they think, at the expense of their morality, that they have obtained an exceeding benefit and will continue to crave and to boast, because of the pleasure they have had. They become excited, gay and happy above measure, so that some of them die from an overflow of happiness, as the spirit melts and dissolves, because of a sudden expansion outward, according to Galen. And this is caused by the softness of the soul and its ignorance of realities.

## THE EVEN KEEL

But those engaged in study and in absorbing philosophical habits and the moral teachings of the Torah, acquire strength for their souls, and they are the true heroes, as their souls are not subject to change and get very little excited. The more a man is disciplined, the less he is affected by both extremes, good times and bad, so that when he is favored by a great fortune in this world, called by the philosophers "imaginary goodness," he does not get excited nor appear particularly great and good in his own eyes. And when great misfortune and tribulation befall him, like the many tribulations that occur in the world and which the philosophers call "imaginary evils," he is neither startled nor terrified, but tolerates them well. When one contemplates the true essence of things and the knowledge of the nature of reality, he attains a wisdom whereby he understands that the greatest good in this world does not stay with a man all his days, because it is inferior in value, being perishable and destructible when a man reaches his end. For of what benefit is it to man, since he dies like other living creatures? And so it is with the greatest of the evils in the world. When he considers death from which he cannot escape, every evil is less than the evil of death, undoubtedly. And therefore a change for

the worse is less than a change for the worst, which one cannot escape.

#### IMAGINARY GOOD AND EVIL

And truly and justly did the philosophers call the good and the bad things of the world, imaginary good and imaginary bad things, because many things that one considers good are really bad, and many things that one considers bad are really good. For example: Very often a man collects a great sum of money and attains great prominence and power at the expense of his body and his soul through the acquisition of evil habits that shorten his days, thus removing himself far from God whose closeness is the true and the eternal good. How many times has a rich man been impoverished and a king lost his kingdom, resulting in the improvement of his body and in the perfecting of his soul with worthy habits, prolonging his days and bringing him close to God his creator, which is the eternal good?

However, your servant has to remark: Let his days be long or short, this is the opinion of the physicians, philosophers and some of the thinkers who antedated the Moslem religion.

Generally it may be stated that what people consider to be good is really bad and most of the things that are considered to be bad are really good. And it is not the intention of this chapter to explain the truth of these things, to comment on them or to learn their ways, because at every time and in every nation works have been composed that enable you to look into the sciences of the intellect.

#### EMOTIONAL STABILITY

But your servant has hinted all this to stir up and to habituate the soul to accept little things with a minimum of enthusiasm. He observes the books on virtue and the morality of the teachings, chastisements and regulations composed by the intellectuals, until his soul becomes strengthened and recognizes and knows the truth, that it is true, and the insignificant, that it is insignificant. The overexcitement in his soul will diminish and evil thought will be lacking. His seclusiveness and his avoidance of society will cease and his soul will expand so that his spirit can remain in any disposition. In this condition meditation alone can offer much help, as it decreases evil thoughts, sadness and woes. And there is a possibility that, considering everything with the eye of the intellect,

the sad thoughts will vanish. For whatever a man thinks that hurts him while thinking it, and that brings him sadness, sighing and mourning, can only be one of two kinds: either he meditates upon what has been, as when he meditates upon money he has had and lost, or upon the death of a person his heart grieves for; or he meditates upon what is going to happen in the future and dreams of what is going to happen, as when he imagines that he may suffer a loss.

And it is known through intellectual observation that reflection over what has happened and come to pass will be of no avail in any respect, and that mourning and sorrow over things that have passed are the activities of those who lack intellect. And there is no difference between a man who laments over the loss of money and the like, and he who laments the fact that he is a man and not an angel or a star or another of the things that are impossible.

#### BE OPTIMISTIC

And the thought that brings worry to the spirit over what is going to come or happen in the future lends itself to the following observation: Whatever a man fears may happen to him is only a matter of probability—either it

will happen or it will not happen. And just as it is possible that something painful, worrisome and fearful may happen, it is also possible that, because of his reliance on God, the reverse of what he feared may happen. Because both what he feared and its reverse are possible.

This is all that your servant felt is needed in this chapter.

#### CHAPTER IV

### *Helpful Hints in General, and in Particular, for the Healthy and for the Sick, in Every Place and in Every Season*

#### ON AIRS AND WATERS

To begin with, let us discuss the improvement of the air and then the improvement of the water and then the improvement of food. What the physicians call winds are delicate fumes that are found in living bodies. Their origin and main substance is derived from the air that is inhaled from outside. And the fume that is found in the blood of the liver and in the blood vessels that sprout out of it is called natural wind. And the fume which is found in the blood of the heart and in the pulsating vessels is called the vital wind, and the fume which is found in the ventricles of the brain and which is spread in the vacuum of the nerves is called the wind of the soul. Their origin and their substance is derived from the air that is inhaled from the outside. And if this air is malodorous, ill-smelling and turbid, the winds change and assume the

opposite character of what they should have been. Said Galen: One must pay attention to the type of air that one inhales into his body, that it should be perfectly balanced and pure of everything that might contaminate it. Said the author: The lighter the wind, the greater it is affected by changes in the air. The natural wind is thicker than the vital wind, and the vital wind is thicker than the wind of the soul. With the slightest change in the air, there is a marked change in the soul. And this is why in many people the amount of loss in their soul's function is equal to the contamination of the air, i.e., they develop a constant fear and incapacity of concentration and defective memory, even though their vital and natural functions suffer no perceptible change.

#### SUNSHINE AND FRESH AIR

The quality of urban air compared to the air in the deserts and forests is like thick and turbulent water compared to pure and light water. And this is because in the cities with their tall buildings and narrow roads, the pollution that comes from their residents, their waste, cadavers, and offal from their cattle, and the stench of their adulterated food, makes their entire air malodorous, turbulent, reeking and thick and the winds become

accordingly so, although no one is aware of it. And since there is no way out, because we grew up in cities and became used to them, we can at least choose a city with an open horizon, especially on the northeast and toward high mountains with limited forestation and outside water. And if you have no choice and you cannot move out of the city, try at least to live in a suburb situated to the northeast. Let the house be tall and the court wide enough to permit the northern wind and the sun to come through, because the sun thins out the pollution of the air and makes it light and pure. And one should place the privy as far as possible from his permanent residence and he should try to improve the air by drying it and perfuming it with balsam and fumigation to bring about a change. And this is most important in the care of the body and the soul.

#### LEAVE IT TO NATURE

In spite of your caution and carefulness, you will not be able to prevent minor things from developing in the human body. For example: Now the stool will be soft and now hard, one day one may find a change in his digestion or experience a slight headache or an ache in another part of his body, and many similar things. And be very careful

not to begin treating it medically, rushing to take a medication that is supposed to remove this minor ailment. The Prince of Physicians [Hippocrates] warned us against it. Nature takes care of all these things and one does not have to have recourse to medication, but should follow healthy and good behavior. Because if you undertake to medicate these minor conditions, there are two possibilities: Either your act will be erroneous, the opposite of what nature intends, and you will lose and suffer injury, or your action will be correct and you will restore to nature its natural function, but at the same time train your body to lag behind and to do the normal only with outside help. This has been compared to a beast of burden which has been trained to move with a bridle and so stands in its place until urged to go. You may likewise find that the stool becomes soft without any other changes in behavior. This may persist for two or three days without any feeling of pain or weakness. You rush to dry it up and prevent diarrhea and to regulate it with the help of medication. But it was all due to nature, impelled by the evacuating urge to expel what had to be expelled, making the stool soft for that purpose. We cause injury by interfering with nature's right function and we cause retention of what had to be expelled and ill health develops. Often one develops loose stools because of the

weakening of the retentive power. If let alone, it would return to a normal state and to normal activity. But because this power has always been helped and strengthened whenever it became weak, it becomes a habit, and when it stops, it is necessary to move it from the outside. It has already been explained that it is best to leave this to nature. And so it should be in everything that holds no danger.

#### ALFARABI ON HEALING, SAILING AND AGRICULTURE

Abu Nassar Alfarabi mentioned that the arts of healing, sailing and agriculture do not bring full results for the effort exerted. The physician, for example, does everything that he has to do in the best possible way, with no error either on his part or on the part of the patient; nevertheless he does not attain the desired result of restoring health. And the reason is that what affects us is not medicine alone, but medicine together with nature, and nature is not always successful in removing all the causes that have been mentioned in this chapter. The tiller of the soil also does everything that is required, yet has no success in sowing. And equally, the sailor guides his boat the best he can and builds it in the best structure and sails it in the proper place and yet he suffers shipwreck. And

the cause of this is that the results are due to two factors, one of which may do everything necessary while the other fails in its activity.

When you observe what we have said in the previous chapter, you will know that occasionally a disease is light, but the disposition to it is strong. If you try to remove the disease and do everything for the patient, while the physician or the patient fails in medication, nature's function will be interfered with. And herein lies most of the mistakes that are made in every place and every time.

#### AL RAZI: THE PATIENT AND HIS DISEASE

Al Razi said in one of his books: "When the disease is stronger than the patient, the physician will not be able to help him at all, and if the strength of the patient is greater than the strength of the disease, he does not need a physician at all. But when both are equal, they need a physician who will support the patient's strength and help him against the disease. Said the author: From the statement of this perfect practitioner it is implied that avoiding a physician is often better than engaging one, if all the events of the illness are taken into consideration. This rule applies only if the physician is wise and can

help nature and should not err in his way and deviate from his right habit.

#### SURPRISING MEDICAL DEVELOPMENTS

Many physicians treat their patients with criminal neglect; nevertheless the patients do not die but are saved. And I have seen those who have prescribed asparagus, a strong purgative, for one who did not need even a mild one, causing the loss of much blood from below. And they persisted in it many days bringing about tense tenesmus and diarrhea—yet the patient got well again. And I have also seen one who suffered of indigestion and was treated unknowingly by phlebotomy and he became helpless from pain in his heart and loss of strength, prolonging and worsening his disease, yet he was cured. But the physician should not take it for granted that a physician's error causes little injury and say: As this error in great measure did not cause death, it will surely cause no harm if the physician errs a little in the amount of food or drink. But this is not so and the causes that come from inside are the same as the causes that come from outside. You can see with your own eyes men whose arms were amputated up to the shoulder and their legs above their hips, or their eyes were removed or they were beaten and

smitten severely many times in battle, penetrating the insides of their bodies, yet they did not die but survived by the will of God. You can also see one piercing his skin with a thin needle or thorn that reaches one of his nerves causing a spasm and he dies. And the error of the physicians is equal in both directions, for sometimes they commit a grave error and the patient is saved, and occasionally the error in treatment is very mild and the patient thinks that it is of little consequence, yet it will prove the cause of his death. Let every intelligent man keep his eye on this.

Most people think that the rules for eating regular food and drinking regular fluids and ablutions in cold water that one is accustomed to, may be changed to the reverse without involving any danger for the patient. But it is not so. Galen has already explained that one who is in a febrile state and is permitted to drink a lot of cold water will lose his fluids, bringing about the fire of fever and he will die. And some, on the contrary, find in drinking cold water a cure, because it will soften the stools, extinguish the fire of the fever and the patient will become well, while without the water he would die. In some febrile states, if we permit the patient to enter cold waters, he will get healthy and be saved, and in others it will bring death. Some febrile patients will cleanse their bodies and

complete their cure if they will enter a bath, and in others it will increase their putrefaction and fever and cause their death. So also with foods: in some patients their avoidance will cure and in others it will kill. And the actions of all these things and the circumstances under which we should do things or avoid them, have already been explained and their causes pointed out.

#### MEDICINE A COMPLICATED SCIENCE

To understand all this, as it is described in books, is very easy for any intelligent person. But its practical application in time of need, in a case involving a particular patient, is quite difficult for the wise man with a settled mind. But laymen who are ignorant of the foundations of this science, yet talk with certainty and without restraint, consider the problem an easy one and do not believe there is an illness that requires much observation. Al Razi said in one of his books: The ignorant say that medicine is just a profession, that one can learn it through exercise. But how difficult it is for the good physician! Said the author: The item mentioned by Razi in this chapter is discussed at length in the works of Galen, who mentions, that while Hippocrates talks about its difficulty, crafty people consider this profession

light and easy. And the reader of my statement should not imagine that this attitude is limited to medicine alone, because he will find the same in all the natural sciences, practical and theoretical. The more perfect a person becomes in one of the sciences, the more cautious he grows, developing doubts, questions and problems that are only partially solved. And the more deficient one is in science, the easier it will be for him to understand every difficulty, making the improbable probable and increasing the false claims which he represents as certain knowledge, and is eager to explain things that he does not understand himself. And let me return to what I began to say about the ease with which men of good intelligence and understanding comprehend the medical science and how difficult it is for them to apply it. Galen has already stated as follows: It is easy to say that it is proper to anoint old people with oil and rub it in, but to do it properly is one of the most difficult tasks.

#### THE LEARNED ARE CAUTIOUS

Said the author: You who observe well, please note, if anointing and rubbing is a difficult task, according to Galen, who discusses the specific case of drinking or abstaining from water, as we have mentioned, how

difficult it is for the physician to use phlebotomy, purgatives like colocynth, and the juice of bitter cucumbers, hellebore, enema, castoreum, opopanax, cauterization and surgery with a scalpel! Said Ibn Zuhr: I never prescribed a purgative without taking it to heart several days before and after.

#### INTERCOURSE

The interest of most men in intercourse is well known. Not one of them has in mind the care of his health or the prolongation of the human race, but a craving after lust. They have no other intention but the satisfaction of their desire every time and at every opportune moment. And the informed already know that intercourse hurts most people, except the few whose temperament shows that a small amount of it will not hurt them. But the difference among men is only in the amount of harm; some will suffer in many ways and some only partially. Its harm to young men whose bodies are moist is little, and in the case of old people or convalescents or those of a dry constitution, the impairment of health is extensive. And we have seen the convalescent who has had intercourse and died the same day, while some developed a paralysis from a heartache and after a few days had a recurrence of

their fever and died. One may generalize and say that it is a bad thing because it kills the sick and the convalescent and harms old people and those whose temperament is dry. And it is not proper for a man to have intercourse before the food is digested in the stomach, and not when he is hungry or thirsty or drunk or has just finished his bath or exercised or had a phlebotomy performed a day before or a day after. Whoever wishes to remain healthy should chase the idea of intercourse from his mind as much as he can.

#### ON WINE

The benefits of wine are many if it is taken in the proper amount, as it keeps the body in a healthy condition and cures many illnesses. But the knowledge of its consumption is hidden from the masses. What they want is to get drunk and inebriety causes harm. The one who taught that intemperance is useful once a month is in error, because it causes only injury and abrogates the strength of the entire body, particularly of the brain. The small amount that is useful must be taken after the food leaves the stomach. Young children should not come close to it because it hurts them and causes harm to their body and soul. Galen has already said: A child should

abstain from it till the age of twenty-one. The older a man is, the more beneficial the wine is for him. Old people need it most.

#### THE BATH

The bath is very necessary for the maintenance of health and for the cure of diseases. The physicians prescribed a bath for illness according to its form, the season and the age. As to its place in health, it has already been said that it is proper to enter it once in ten days. The physicians reminded us that coming to the bath steadily every day putrefies the moistures. And this caution is correct for one who prolongs his stay in a bath until his perspiration flows. But if one enters it without staying there long, but only washes himself and leaves, he is doing the proper thing even if he does it every day. It is particularly good for old people and for those who have a bad constitution. It is not proper to enter the bath before the food leaves the stomach and it is best to enter it after the stomach is empty but before one has hunger pains. One can go in if he wants to lose weight. The regulation for the bath and its procedure is as follows: One must sweat first and remove his sweat with a clean flaxen cloth. And as long as he sweats he should wipe himself

with a cloth until it becomes wet. Then he should cleanse the skin, massage the whole body and wash it with warm water, as warmth is good for the body. Then he should reduce the warmth, little by little, until finally he washes himself in lukewarm water, as if exposed to the sun, until finally it is cold without causing the body to shiver. He should then go into a bathtub where the water has a similar temperature. But whoever wants to reduce his body weight and lose the fat of his flesh, should take hot water and enter it when it is as hot as he can stand it. The head must never be washed in either cold or luke-warm water, but only in water that is so hot that he feels he is scalding his scalp. Cold water will strengthen the brain but will retain its superfluities. It will chill it and all the nerves originating in the brain, and all the movements will become sluggish. It may cause hemiplegia, spasm or contracture of the hand, requiring special care. Luke-warm water will also cool the brain and soften it, making the movements and the sensations sluggish, but hot water hardens the substance of the brain, removes its superfluities, strengthens its nature and all its movements and sensations. And it is proper that a man should sleep after leaving his bath.

#### SAID GALEN: SLEEP AFTER BATHING

I cannot see a better way to boil what has been readied to boil, and to melt and heat what has been made ready to melt, than by sleeping after leaving the bath. But sleeping in the bathhouse is very bad. It occasionally causes a heartache through the contradictory effects of sleep and bathroom heat: the heat of the bath will draw the natural heat outward to the surface of the body, while sleep forces the heat deep inside the body. One must be very careful to abstain from drinking cold water soon after leaving the bath. Galen said: There were men who drank cold water after leaving the bath and they chilled their kidneys and swelled up their bellies. Therefore it is advisable for a man to suffer thirst until his body cools off and loses the heat that the organs absorb from the bath and then he should drink. If his thirst does not permit him to wait, then let him drink water mixed with a syrup of citron rind, mastic or rose. The drinking of barley beer made with pomegranate seeds and sugar tart, myrrh, aloe wood and cloves, harms one after the bath. But if he waits after the bath until its warmth leaves the body he may take it, and it is helpful. I refer to this beer or to the previously mentioned syrup.

## DISCHARGE FROM THE NOSE

There are many who take lightly the liquid discharge from the nose as in their ignorance they do not understand what usually develops from it if it goes down to the nose, or the hoarseness and coughing if it goes down to the trachea. It is best that one be careful and watchful of such discharges in winter and summertime and put on his clothes while he is still in the bathroom. And one should always protect his head from the strong cold that comes with a discharge and also from the strong heat that liquefies the congealed superfluities in the brain, that flow down afterward and cause the acute catarrhs. And all the discharges, the warm and the cold ones, usually run down into the cavities of the lungs and fill them up, because of the abundance of the moisture that flows down and because of the weakness of the receiving organ. They weaken the expelling force that would remove them by coughing and thus asphyxiate the man and he dies. Or they create a pause which is a shortness of breath in the lying position. Sometimes they flow down to the cavity of the stomach and cause intestinal irritation and this is a disease hard to cure. Occasionally they flow down to the joints and produce arthritic pain. They may also go down to the internal organs and their cavities and produce an

exudate in the organ, exudate of the pleura, exudate of the lungs, exudate of the liver, exudate of the stomach or an exudate of other organs. This explains how careful we have to be with these discharges.

#### STRENGTHENING THE BRAIN

Caution with these discharges consists in being careful not to overheat or chill the head, as we have mentioned above, and avoiding to eat that which fills up the head, such as milk or gas-producing seeds like beans and lentils. One should avoid sleep right after his meal and especially if he eats at night. One should avoid taking warm and intoxicating drinks, because their consumption affects the mind swiftly. One should also strengthen the brain by smelling balsam and flowers according to their strength and the season. One of the favorite medications to strengthen the brain is to grind cloves until pulverized and place them across half of the forehead during the winter. One should also anoint his forehead during the winter with saw-leaved centaury oil, which will strengthen it. But when it is very warm one should dip his head in rose water and in nilufar and he should dust his head lightly with nutmeg powder which has been finely ground.

## FOOD DETERIORATION

One must avoid, at any place and at any time, partaking of a food which has begun to decompose even slightly or become turbulent, malodorous, slightly warm [if it is naturally cold] or decayed, like fruits prepared in vinegar, small fish in brine, sour milk and like products. They are materials that produce fever and are like deadly poisons. And the good physicians warn against eating food that has remained overnight and meat a day after it has been boiled, because it has begun to deteriorate, even though it does not immediately appear so. And one should eat preferably sweet foods because it is the sweets that nourish, according to Galen. One should also prefer drinking water that is sweet and cold. And if the sweet foods have deteriorated and become inedible, one should improve their taste by making them a little sour with materials that give a salty and astringent taste, like cooking in gooseberry juice or acid or lemon or barley brine, sumac, quince or pomegranates. All these foods, when they are devoid of sweetness, also lack useful nutriments. First of all they are not nauseating and some of them liquefy the mucosa in the stomach and increase the appetite, such as a salty soup. Some fight putrefaction and cause dryness, like the foods to which vinegar and

lemon have been added. Some of them will strengthen the stomach and close its opening, like sumac, pomegranate seeds, quince and gooseberry juice. One can rely on these foods as much as possible.

#### AVOID SUDDEN CHANGES

Habit and regularity are great principles for keeping well and recovering from illness. It is not proper to change one's habits in health at once, neither in food, in drinks nor in intercourse, bath or exercise. You should stick to your habits. And even if your habit is in contradiction to medical law, you must not separate from it, but adjust to the law gradually and for a prolonged time so that the change will not be felt. And a man must never change his habit all of a sudden. If he does he is bound to get sick. But the acutely ill must not deviate from their habits, during the course of their disease they must not change their customs, even with the best of intentions.

#### GOOD AND BAD GARMENTS

It is well known that there are animals whose meat is constitutionally contradictory to the nutrition of men,

such as the meat of the wolf and the fox. And some, like lamb, is very fit. So it is with the various furs for garments. The best for human garments are sheep's hides and the most dangerous are fox's hides. The intelligent physicians have mentioned it and this is the truth. About this [your] servant noticed that the garment which the Arabs call *kirtas* is very bad, but the garment called in Arabic *alsanjab* [squirrel] is praised by the physicians. Then remember that the fur of cats is dangerous to wear, or even to inhale their odor, therefore beware of them and their odor. However, it has been advised to inhale the aroma of pigeons and to have them always in the house, because they insure one against neurological afflictions like hemiplegia, spasms, cramps and tremor of the limbs. As long as he sees pigeons before him he will be protected from the above illnesses, provided he removes their droplets and does not allow the latter to collect, because they pollute the air and spoil it. Equally good against neurological diseases is the eating of pigeon meat.

#### THE GAZELLE, RABBIT AND WILD ASS

The best of game is the gazelle. The rabbit also has benefits that have been proven by experience. Eating its brain helps against head noises, and its meat in general

helps against head noises and neurological illnesses. The rabbit's hide warms much and helps in neurological diseases, particularly in old men. And the wild ass has the property of greatly strengthening the vision, as has been proven by experience. When one eats its meat or holds the eyes over its meat when it is being boiled, he strengthens the vision and opens up the closed nerve cavities. This has been proven by experience. It will also strengthen the vision of an ass's eye and will be helpful to its weakness.

This is all that [your] slave wanted now for the needs of my lord. Let God in His mercy give strength to his kingdom for ever and ever. Let Him lengthen the days of my lord, keep him steadily in good health, and make him successful in both worlds [this and the world to come]. As [God] has promised His servants and the gathering of His friends. He created him and honored him with His grace and goodness. To the bestower of souls let there be endless praise. He sustains life with grace. Oh, God, Thou art our strength!

As is the wish of his servant Moses ben Maim-on, the Sephardi [Spaniard].