Chapter 3

Diet and Breathing

NO department of human life can be properly understood if it is considered solely from, the physical standpoint. Man is a two plane living organism, and all his functions and all the events which come into his life are the product of the interaction of both inner-plane and outer-plane factors. As his physical body is composed of physical cells and physical structures, so is his astral body composed of thought-cells and thought structures. The substances of his physical body have velocities which are low enough to give them material properties. The substances of his inner-plane body, whose organization is called the soul, or unconscious mind, have velocities greater than light. Such high velocities give them properties quite different from those encountered in physical things. Inner-plane energies do not contact or influence physical things, nor do physical things contact or influence inner-plane things, except through those boundary-line electromagnetic energies having velocities approximately that of light.

The thought-cell inner-plane body, whose organization is the soul, or character, affords the pattern which the physical body, in the process of growth before maturity, and in the replacement of tissues after maturity, at all times endeavors to fill in. And the physical body does thus follow the thought-cell pattern to the extent it has the physical materials with which to work, and has the facilities for manipulating them. The physical body which results is the product of the thought-cell activity and the facilities or resistances offered by the material environment, including food. Either a marked change in the diet, or a marked change in the thinking, shows before long in the countenance or general appearance. The change in diet gives the thought-cells different materials with which to replace tissues. The change in thinking gives activities to different groups of thought-cells, and these find it easier to handle some of the materials furnished in the food, and less easy to handle other materials, than they were handled before.

The birth-chart maps the thought-cell pattern. and the measure of thought-cell activity of each of the ten types, and the organization of these thought-cells into structures, so that in the birth-chart we have a diagram of the soul, or character, as it existed at birth. As revealed by their birth-charts, with the possible exception of certain identical twins, no two persons are like. No two birth-charts, with the exceptions mentioned, are the same. Therefore the inner-plane bodies which correspond to the astrological positions in their makeup, are different. Furthermore, because the physical form is modeled by

the astral, or thought-cell body, the same differences occur in the physical form. This means that the chemical composition of the body, to the extent physical elements are available, is mapped by the birth-chart and progressed aspects. The physical bodies of people are of different composition. And this has been fully demonstrated in the laboratory of the biological chemist.

Now if the chemical composition of people is different, the chemical requirements of people likewise must be different. The same food, or chemical ingredients, added to one chemical constitution may product exactly the opposite effect from that to be had by adding it to another chemical constitution. As-has been handed down from ancient times, what is one man's food may very well be another man's poison. Nor is this merely a figure of speech. There are, for instance, in the neighborhood of 200 different things that are used by man as articles of diet, and there is not one in all this list that all persons can eat with impunity. Investigation by experts indicates that each one of these foods acts as a poison to certain persons, while acting beneficially to others.

Most people can eat strawberries, yet most of us know people who always break out with a rash after eating them. Others cannot eat boiled cabbage without suffering acutely from gas. And thus has it been found by wide investigation that every food known to man causes certain persons discomfort. In fact, nearly every person has such an idiosyncrasy in reference to some particular food. And aside from idiosyncrasies, some people have a low fat tolerance and other people have a high fat tolerance; which means that some people cannot assimilate fat and that other people can. Others have a low protein tolerance in contrast to those with a high protein tolerance. Still others handle sugar well in contrast to those who have little ability to burn sugar as fuel.

As the handling of food and other physiological functions, as well as the type of events attracted into the life, depend upon the activity of certain groups of thought-cells within the finer body, whenever one group of thought-cells becomes unusually active it influences how these foods perform within the body. Thought-cell activity is coincident with similar trains of thoughts passing through the unconscious mind. And these unconscious trains usually in some degree influence the trend of objective thinking. And both objective thinking and the release of planetary energies by progressed aspects give rise to unusual thought-cell activity.

This means not only that people differ basically as to their food requirements, but that during one period of their lives they need foods in different proportions than they do at other periods. It is a matter of common observation that foods which have been satisfactory for years often cause discomfort and ill health during a certain time, and that to keep the health certain food substances must during such a period be supplied in comparatively large amounts. The objective thinking and the thought-cell activity due to the release of planetary energy of a specific type through a progressed aspect to a given planet, tends to cause over secretion or under secretion of the hormones of corresponding endocrine glands. These hormones regulate all the processes and functions of the body, including those of assimilation and metabolism. As a consequence, whatever the individual's average requirements may be of the food more readily influenced by a given planet, he needs more or less, as the case may be, of this particular food during the time a heavy progressed aspect to this planet releases its energy. He needs more or less then because the effectiveness of the unusual thought-cell activity to affect the body or affect events depends on the facilities or resis-

tance to their influence provided by the environment. If the food elements are present in ample amounts for the tissues to use, it is far more difficult for thought-cell activity to deprive the tissues; or if the food elements are not present to promote some disease, it is more difficult by far for discordant thought-cell activity to manifest that disease.

From this it will be apparent that menus showing just what the normal man should eat, and how much of it, are only practical in so far as they indicate an average condition. Yet people are not average. They are different. Some are fat and some are lean, some are active and some are sluggish, some are emotional and some are placid, and so on through many pairs of opposites. Furthermore, they are not the same in chemical makeup and therefore in food requirements at different periods of their lives. Thus a diet to be most effective must be adapted to the individual's body chemistry as it exists at the time. And this body chemistry, as revealed by the birth-chart, may be and often is basically different than the average, and at the specified time it may be temporarily quite different from its basic state due to thought-cell activity stimulated by a given progressed aspect.

But before we discuss the special diet needs, and why, of a person in whose birth-chart a given planet is afflicted, or when the thought-cell activity it maps is given great impetus due to a progressed aspect, we need to know something of the functions of the different types of foods and the general dietetic requirements.

Man requires food for two purposes: to build or replace tissues and to furnish energy. Food is thus technically defined as that which, taken into the body, builds tissues or yields energy. And according to this definition air is a food. In fact, it is the one we can do the shortest time without. Also, according to this definition, foods may be classified into two broad groups, those chiefly used for tissue building and those chiefly used for energy production.

Proteins! such as those obtained from egg whites, curd of milk, lean meat, gluten of wheat, legumes, etc., are chiefly used to build or repair tissue. They are also used in the manufacture of the various enzymes which act as catalysts. And although expensive fuels, some are used for this purpose commonly, and when the other fuels are lacking the lean tissues of the body are thus employed.

Fats, such as that of meat, butter, olive oil, oils of corn and wheat, etc., are stored as fats and thus become part of the body tissue. But they are chiefly used as fuel reserves for the production of energy.

Carbohydrates, which embrace the various sugars and starches, are the most economic energy foods. They are stored in small amounts as glycogen, or animal starch, and are transformed into fat for more adequate storage.

Air affords oxygen for the tissues, but is more extensively used in energy production. Water is used in energy production, but is more extensively used in the structure of the body which is more than half water. The mineral salts share in forming bone and blood, in the processes of digestion, and in energy production; and the vitamins exercise vital control over tissue construction and the production of energy.

For our purposes, because discords in the birth-chart and those induced by progressed aspects affect the foods ruled by each planet, a better classification is that of their planetary rulership, thus:

SUN: rules the life controlling vitamins.
MOON: rules the nutrient handling water.

MERCURY: rules the volatile and active air.
VENUS: rules the energy-yielding carbohydrates.
MARS: rules the muscle building proteins.
JUPITER: rules the opulent fats.
SATURN: rules the stabilizing salts.

Vitamins

Vitamins are organic chemical compounds found in foods which taken into the body exercise a profound control over its metabolism. Although their presence is required only in minute quantities, health cannot be maintained when certain of them are absent or deficient. Not only is their presence necessary if the endocrine glands are to function properly, but they resemble the hormones secreted by the glands in that minute quantities exercise so profound a control over the body.

Not all of the vitamins need special consideration, as many of those less well known or postulated are commonly associated with the essential ones which are now generally recognized. Thus if one eats the foods containing the recognized essentials, there will not be lack of these others. At the time of this writing a dozen different vitamins have been chemically identified. The one which previously was called G is now called B-2. Vitamin B has been resolved into numerous distinct vitamins. B-1, B-2, B-6 and P-P have been identified and their functions studied. There are more than a dozen other vitamins in what was at first called B whose existence is postulated on physical evidence, but which at this writing have not been identified chemically. The whole of them, including the four identified, are embraced in the term B complex. Here is brief mention of the vitamins so far chemically identified:

Vitamins A-1 and A-2, chemical name, activated carotene. It is fat-soluble. Carotene exists in plants as a pigment. When this pigment is consumed by animals or man the liver converts it into active vitamin A, two forms of which, A-1 and A-2, have been isolated from fish livers. It is not yet known whether carotene can be converted into vitamin A other than in the liver. Carotene is present in yellow root vegetables, green leaf vegetables, and fruit. It may be present either as carotine or vitamin A in butter, milk, cheese, eggs and fish oils.

Its deficiency lowers resistance to infection and tends to prolong colds; encourages the skin to get dry and scaly and lose its sensitivity to touch, the improper formation and maintenance of enamel on the teeth, the inability to see in a dim light and adjust vision quickly after glare, the inability to nourish a fetus in the uterus, and the development of bladder stone.

Vitamin B-1, chemical name, thiamine. It is water soluble, and thus may be lost if the water in which foods are boiled is thrown away. Also it is destroyed by heat if exposed a sufficient length of time. 61 percent is thus destroyed in roast beef, and 55 percent in beef heart which is stewed one hour. It is present in high degree in cereal germs and yeast, and in lesser degree in most nuts, fruits, meats and vegetables.

Its deficiency tends to loss of appetite, to certain types of nervousness, to poor functioning of muscles of stomach and intestines, and to certain types of constipation. At the date this is written many foods are being fortified with vitamin B-1 for the purpose of increasing the morale of people in face of peril, or to increase stamina under conditions of strenuous work.

Vitamin B-2, chemical name, riboflavin. It is water soluble, and thus may be lost if the water in which foods are boiled is thrown away, but is not readily affected by heat. Its lack promotes nervous depression, digestive disturbance, loss of tissue tone, an unhealthy condition of the skin, and perhaps one form

of cataract. Riboflavin is widely distributed in natural foodstuffs, one of the best sources being milk, or bread which has been enriched by the use of milk or milk powder. Vitamin B-2 was at one time called Vitamin G.

Vitamin B-6, chemical name, pyridoxine. Little is as yet known of its physiological function.

Vitamin P-P, chemical name, nicotinic acid. This is another member of the B complex, and should not be confused, because of similarity of name, with the nicotine contained in tobacco. It is present in many meats, in yeast and in wheat germs. Its absence gives rise to pellagra. It is used as a specific treatment for the lesions of pellagra.

Vitamin C, chemical name, ascorbic acid. It is water soluble and the juices of fruits and green vegetables are good sources. The citrus fruits are especially rich in it.

Its deficiency tends to prevent the proper formation and maintenance of teeth. tends toward bleeding of the mouth and gums, and toward making the capillaries fragile so that they bleed. If the deficiency is long continued, pains may develop around the joints, the food does not oxidize properly in the tissues, and scurvy develops. There is recent evidence that one of the two types of pyorrhea may be due to vitamin C deficiency.

Vitamin D-2, chemical name, calciferol.

Vitamin D-3, chemical name, 7-dehydro-cholesterol. There is no D-1, because that which was originally thus designated has been found to be a compound of more than one sterol. The irradiated 7-dehydro-cholesterol is the form in which it is found in cod liver oil and halibut liver oil and in the human skin. The irradiated calciferol is the form present in viosterols. The human skin contains vitamin D in the inactive, or pro-vitamin form, which when exposed to certain ultraviolet rays of sunlight become the active vitamin D, which is then absorbed and utilized by the body. Other than exposing the skin to sunlight, the fish liver oils, irradiated milk, and fortified cereals and bread are good sources of vitamin D.

Its deficiency prevents the proper use of the lime and phosphorus of the food, tends to affect the bones and teeth detrimentally, to promote faulty heart rhythm, to prevent proper clotting of the blood, and to prevent the proper transmission of nerve impulses to the muscles. In babies its lack gives rise to the faulty bone construction known as rickets.

Filtrate Factor, chemical name, pantothenic acid. Its lack causes dermatitis in chicks. Little is known of its action on the human body.

Vitamin E, chemical name, tocopherol. It is fat soluble, but its activity is rapidly destroyed when the fat or oil containing it becomes rancid. Its lack in the mature female leads to failure of the placental function and reabsorption of the fetus; in the adult male its lack may lead to complete sterility. It is found widely distributed in foods-which have not been artificially refined, in grains, vegetables, meat, milk and butter. As wheat germ contains it abundantly, whole wheat bread is a good source. Because this vitamin is so widely distributed among foods, it is seldom markedly deficient.

Vitamin K, chemical name, 1, 4 naphthoquinones. This vitamin occurs in several forms. The natural forms are fat-soluble and heat resisting. They are abundant in plants which show active photosynthesis, such as alfalfa, spinach, kale, dried carrot tops, oat sprouts and tomatoes. Their presence promotes the clotting of blood and helps prevent too profuse bleeding.

Vitamin P, chemical name, eriodictyol. It is present in fruit juices, and is believed to have an influence over the permeability of the capillaries.

Water

Not only does water form considerably more than half of the bulk of all so-called solid organs of the body, but the tissues require to be bathed in a solution about that of sea water. Common salt (sodium chloride), therefore, is very important in human economy. If, for instance, the body takes on too great a supply of water without the addition of a proportionate amount of salt, the cells become flabby. In fact, without salt they cannot retain water, and would ultimately burst. Too much water dilutes the chemicals of nutrition. Excessive perspiration carries much salt out of the body, and if fresh water only is taken to replace the loss, the salt content of the body becomes too low. This leads to water poisoning.

A great deal of nonsense is afloat both about the amount of water people should drink, and as to the injurious effect of using salt on foods. It is taught that to drink much water is the sure road to health, and that table salt is always detrimental.

As a matter of fact, both the water needed and the salt needed depend upon the individual requirements. The thyroid gland reacts to the thought-cell activity mapped by the Sun. The back pituitary gland reacts to the thought-cell activity mapped by the Moon. When either set of these thought-cells becomes more active due to a progressed aspect to Sun or Moon the water requirements change. A person who has an active thyroid (Sun) loses water rapidly, and needs more water than a person who has a sluggish thyroid and tends to retain the water he drinks. But the person who has an active back pituitary (Moon) retains water tenaciously, and consequently, needs less water than the person who has a sluggish back pituitary.

Air

Man can live weeks without food and days without water, but deprived of air for about five minutes he becomes unconscious. In such a case the heart goes on beating for hours, and the other vital processes continue, indicating that the brain is more dependent upon oxygen than any other organ of the body. Thus in drowning or asphyxiation the person may be resuscitated after being hours without air supply, but during all but a few minutes of the time the brain refuses to function.

By means of breathing we take into the blood, through the lungs, the oxygen that combines with the food to develop all the energy used in the human body. There are many kinds of food, some of which may be substituted for others, but they are all supplied to the tissues by the blood, and all must combine with oxygen to produce energy. And while the brain suffers most quickly from insufficient oxygenation, all organs of the body require oxygen, and the immediate cause of death in most cases is due to an insufficient supply of oxygen reaching the vital organs and enabling them to perform their functions.

The human body is quite an efficient combustion engine. Food is the fuel used with which to stoke this engine. Thus a pound of sugar burned in our body yields as much heat as if it had been burned in a chemical oven. But sugar will not burn in an oven, nor will coal burn in a furnace, nor gas in a range, unless sufficient oxygen is supplied to it for combustion.

We may eat ever so much, but unless we breathe sufficiently to afford oxygen for the combustion of this food that becomes stored in our tissues, it fails to afford us energy. Our physical and electromagnetic energy comes from the union of oxygen with this stored food. Excess of food beyond the oxygen supply to combine with it leads to sluggishness and inertia. In order to get an adequate oxygen supply, therefore, it is essential that the lungs perform their

duty fully. Deep breathing, because it disposes of the product of combustion and affords oxygen for further combustion, tends to dissipate fatigue and supply energy.

The physical energy generated by the combustion of oxygen with fuel is measured in terms of calories. The energy it takes to raise one kilogram (about two pints) of water from 0 degree to 1 degree C. is a calorie. Just to keep alive requires 1,700 calories a day. It takes 170 calories to digest a meal. Reading one hour consumes 5 calories. A 10 mile walk consumes 600 calories. One hour at a desk (being consumed in the work of muscles holding the body in position) requires about 21 calories. Yet it is found with the body so relaxed as to place no extra work on the muscles, but with the brain intensely active, that so little extra heat energy is consumed that it cannot be detected with a calorimeter.

The energy used in brain work (Mercury), that is, the real vitality of the body (Sun), and that may be diverted into any one of five other frequency systems—mediumistic (Moon), affectional (Venus), inspirational (Uranus), hypersensitivity (Neptune), and inner-plane (Pluto)—is electrical in nature.

The physical cells are composed of protoplasm, just as the substance of the inner-plane body is thought-organized psychoplasm. And each of these cells has a nucleus of protein, which is comparatively acid. Surrounding this nucleus is the cytoplasm, which is comparatively alkaline. Separating the acid nucleus and the alkaline cytoplasm of the cell is a semi-permeable membrane. Electrolytes are thus formed of the humors of the body in such a manner as to make of each cell a miniature electric battery. And material science now holds that the oxidation of the nitrogen fraction of these cells releases the electrical energies which runs the body and makes brain work possible.

The vital system embraces those phases of electrical activity which vitalize the physical cells and organs and express physical activity. The wavelengths of the electromagnetic energies radiated by this Sun type of activity are of lower frequency than those of the cerebral, the inspirational, the hypersensitive, or the inner-plane system. The potential of electricity used, however, is high, although not so high as that used in the inspirational system.

Many people who generate plenty of electrical energy never have vitality enough to maintain health or to do the things otherwise they would be able to do, because they have formed the habit of diverting so much of the total electricity generated into one or more of the other systems of activity. Too much is used up in sex, or in cerebral activity which accomplishes nothing, or in feeling things distressingly through the hypersensitivity system, in negative states which are partly mediumistic. If they would learn to direct their electrical energy in greater measure into the vital system, where it works to repair the cells, takes care of the organs, and directs the physical functions, they would have abundant vitality and longer lives.

It is attention which throws the switch from one electrical system to another, and it is mood which determines the frequency of the electromagnetic radiations. Both the mood and the subject of attention are powerfully influenced by thought-cell activity. Thus do people with different birth-charts differ in mood and their mental interests. And the same person is influenced in his intellectual interests and the amount of cerebral activity by progressed aspects of Mercury, and his mood tends to change to a type corresponding to the planet which at the time receives the heaviest progressed aspect.

For vitality, when weary or exhausted, hold the mood of indrawing vitality while breathing rhythmically. Some people successfully turn the switch to

the vital system and forget their other activities and problems in a game of golf, or in a stiff hike through the woods. The attention of the unconscious mind as well as that of the objective mind is taken from other forms of activity and directed largely to animal activities. The energies are thus diverted into channels which strengthen and vitalize the physical body and its functions.

Carbohydrates

The carbohydrates are the starches and sugars. The starches become sugars in the process of digestion. The carbohydrates are the most economical energy foods, but they are not all handled in the human body with the same facility. Starch is the form in which plants store the largest part of their carbohydrate material. It represents from one-half to three-fourths of the solid matter of the common cereal grains, and at least three-fourths of the solid matter of mature potatoes. Unripe apples and bananas contain much starch which is converted largely into sugar as they ripen, and young corn and peas contain sugar which is converted largely into starch as they ripen.

Starch is a polysaccharide, and some sugars are disaccharides, and in the process of digestion these must be converted into glucose which is a monosaccharide. Glucose, or blood sugar, is the form in which the carbohydrates commonly are carried in the blood stream. Fructose, which is contained in the juices of many plants and fruits and in honey, and galactose which is produced in the digestion of milk, are other monosaccharides which are readily converted into glucose. Also they are handled to some extent in the blood stream after the manner of glucose. And glucose itself is widely distributed, being abundantly present in plant and fruit juices, usually in association with fructose and sucrose. It may constitute 20% by weight of grapes; and unripe potatoes, onions and sweet corn are rich in it.

Mention of chemical technicalities would be unpardonable in a work of this kind were it not so important to point out that sucrose, commonly called cane sugar, which is obtained commercially from sugarbeets, sorghum canes, sugar maple, the sugar palm and sugar cane is a disaccharide which neither the saliva or gastric juice is capable of converting into glucose. Sucrose to be handled must be acted upon by the hydrochloric acid of the stomach, or split by the sucrose of the intestinal juice into glucose and fructose which are then readily absorbed into the blood.

People with a prominent Venus crave sweets. But they may not be able completely to digest cane sugar and some forms of starch if Venus is also afflicted.

Furthermore, if Jupiter is prominent and afflicted, too much of the sweets, and particularly those made from cane sugar, may lead to an impure blood stream and blemishes, such as pimples, which mar the complexion, or to the development of diabetes. This because of inadequate insulin supply to handle the great demands made upon it.

In the process of digestion both the starches and sugars must be converted into monosaccharides so -the blood stream can handle them. These monosaccharides are all soluble, crystallizable, diffusible substances not acted upon by the digestive enzymes. They thus quickly find their way into the blood to be burned for fuel or stored.- As they are soluble, if left in this state they would be washed out of the body in the urine. Instead they are converted into a form of animal starch called glycogen, which is colloidal and not soluble. Thus the sugar in the blood remains constant at about I part in 1000 and the glycogen formed from some of the excess is stored in small amounts in the muscles and other active tissues, and specifically in the liver, which is the

emergency fuel bin of the body. Yet as the amount of glycogen the body can thus store for emergency use is limited, the sugar of the blood also combines with fatty acids to produce fat which enters into tissue formation as a reserve fuel supply.

Proteins

For years a vigorous controversy has raged among the dietetic experts as to the amount of protein that should be consumed. The Battle Creek health experts show that for tissue repair there is required about 1.3 calories of protein per pound of body weight per day. Thus a man of 150 pounds should eat 200 calories, or about 1½ ounces of protein per day. And they hold he should eat little more than this because protein, unlike the carbohydrates which are stored as fat, are not stored, but that any excess must be eliminated. Eliminating such excesses overworks the kidneys and liver and clogs the tissues.

They believe that the system should get from some source an adequate amount, and little more, of protein. If 1½ ounces of protein is all that is required each day for a man of 150 pounds it may be obtained from any of the following: 9½ oz. walnuts, 8½ oz. almonds, 4½ oz. soy beans, 7 oz. peanuts, 8 oz. beans or peas, 3½ pints of milk, or an 8 oz. porterhouse steak. In one way at least, the vegetable and dairy proteins are superior to those derived from meat. Meat proteins are accompanied by putrefactive bacteria which in time tend to injure the colon. On the other hand some people who handle the meat proteins readily have digestive systems that find trouble in handling beans, peas, nuts and peanuts and some are even allergic to milk.

At the opposite extreme of the protein controversy are the dietetic standards of the U.S. Department of Agriculture. They hold that the optimum of protein intake for a man is about 3½ ounces per day. The man they consider may be larger, and they specify that he is in full vigor and engaged in moderate muscular work. They estimate that of the food consumed about 95% is digested, and that such a man should develop 3,200 calories. A man leading a sedentary life uses some 2,500 calories, mostly derived from fats and carbohydrates. At hard work he burns about 4,000 calories, and at excessively hard labor, such as a stevedore sometimes performs, he may use 7,000 calories per day, and in all day racing contests possibly 10,000 calories or more.

Based on the high protein intake advocated by the U.S. Department of Agriculture, a man doing light work requiring a little less than 2,800 calories needs 3½ oz. proteins, yielding 406 calories, 3½ oz. fats, yielding 920 calories, and 12½ oz. carbohydrates, yielding 1,140 calories. However, this takes no account of individual differences in ability to use protein not merely for tissue building, but also as a fuel which stimulates the burning of fat and sugar at a higher rate than when protein is not present.

People vary in marked degree in the amount of stimulation which is thus caused by the protein foods. The proteins themselves are ruled by Mars, but those with strong thyroid and front pituitary glands (Sun) increase their ability to burn sugar and fat conspicuously after eating proteins. Those with weak thyroid and front pituitary secretions show almost no increase in the ability to handle the other fuels as a result of protein stimulation.

Certain people remain thin, even when unemployed, no matter how much they eat, because the added protein stimulates them to greater burning of sugar and fat The stimulating effect of protein in the diet ordinarily raises the fuel consumption three times a day by twenty to forty percent above normal But in these constitutionally thin people, Plaut found, by his experiments, that the fuel consumption thus increased from forty-eight to sixty-three per-

cent. That is, the increase in the combustion of fuel due to protein stimulation was from one-hundred to two-hundred percent above that of the average person.

On the other hand, the people who remain fat, even when doing the hardest physical work, do not react to the proteins by extra burning of fuel. The proteins do not have any pronounced stimulating effect upon them.

Fats

Fat from a calorie point of view is the most economical food, one pound being the equivalent in fuel value of 2½ pounds either of the proteins or the carbohydrates. But fat, when eaten, must be subjected to a treatment in the process of digestion which splits it up into fatty acids and glycerol, even though these shortly recombine into neutral fat which is carried by the blood in tiny particles to the tissues. Some digestive systems, such as those of the Eskimos, are able to digest large quantities of fat; and others, such as some of the lean people we know, are unable to assimilate fat in any quantity, while still others find even a little extra fat in the food overworks their digestive powers. Nevertheless, in one pat of butter there is energy enough that if used will enable a man to walk more than a mile. And this one pat of butter a day, in excess of what a man actually burns, if assimilated as it commonly is in those people with a tendency to become fat, in the course of some years will double his weight.

Now to burn sugar in the body requires a relatively small amount of oxygen. That is, it will burn in a small draft. But fat requires more oxygen, and is slow burning. It is a reserve fuel, and only burns when there is sufficient sugar present to burn with it. The sugar acts like kindling, and the fat burns as long as there is adequate sugar, yet when the sugar gets low the fat does not burn completely, but just smolders. Diacetic and other fatty acids thus incompletely burned are added to the blood stream, and these narcotic and poisonous fatty acids accumulate throughout the body, producing ketosis, which is one form of acidosis.

Ketosis is not brought on through lack of minerals, although in this instance as well as in the mineral-poor acidosis, the acid-alkali balance of the system is upset. It is due to a diet too high in fat in relation to sugar, or to inability to burn enough sugar effectively to take care of the fat combustion.

This condition is promoted by the thought-cell activity mapped by an afflicted Jupiter, which encourages the use of too much of certain rich foods in proportion to the basic body chemistry. This state of affairs, often observed in overly-fat people, causes them to be chronically tired even when doing nothing. In fact, they often feel greater fatigue when they do nothing than when they work hard, because the exercise brings about better combustion and helps to remove the excess acids through better elimination.

Mineral Salts

Saturn is the planet of work, and it is appropriate that the mineral salts, or their lack, play a most important part in fatigue. When a muscle is stimulated by a nerve (electric) current, lactic acid is liberated from the muscle, changing the hydrogen ion concentration in the cell of the muscle, and thus shortening the muscle, the glycogen (sugar stored as animal starch) of the muscle being called upon to supply the energy through combustion. Some of the lactic acid also is oxidized, the balance returning to the compound from which liberated.

Tissue metabolism adds other acids to the blood stream, and when it becomes filled with lactic acids and other toxins the symptoms of fatigue ap-

pear. Thus a sprinter, running at his best, produces nearly half a pint of lactic acid a minute. He therefore quickly becomes very tired, and remains so until the lactic acid that fills his blood stream becomes neutralized. Then whatever alkalies are in his blood, or enter his blood through eating alkaline producing foods, combine with the lactic acids and other acid toxins and burn them up. As the blood becomes free of these toxins he begins to feel refreshed and ready for further effort.

It is easy to confuse strength and endurance. Strength is due to the size and quality of the muscles. A small man may be unable to move a weight that a large man can lift easily; but in spite of this the small man may be able to work longer at some work within his strength without feeling fatigue than the large man. Endurance is ability to continue with some activity over a long period of time. It is not dependent upon the size of the muscle, but upon the purity of the blood stream.

Irrespective of the size of the muscle, its use liberates lactic acid into the blood, this produces the effect known as fatigue, and when the blood becomes too filled with lactic acid the muscle refuses to respond to stimuli, its power being exhausted.

If the blood stream carries a reserve of alkaline elements, some of the lactic acid combines with these and is burnt up and the person is not so readily fatigued as if his blood stream had not carried this alkaline reserve. Certain foods, notably fruits and vegetables, are rich in alkaline elements, and give the blood stream just such an alkaline reserve as has been mentioned. And in carefully conducted endurance tests in which nurses at Battle Creek who had been living on a diet designed to give an alkaline reserve, were brought into competition with Yale athletes, these athletes made an average of only II minutes, while the nurses made an average of go minutes.

If, as this indicates, we are to work strenuously without becoming tired, we must have a pure blood stream, and one that is slightly alkaline. Yet if a man eats too much acid forming starches in proportion to the alkaline forming foods, his blood has no power to neutralize the toxic acids it receives, and he remains tired even when at rest. He remains tired even though doing no work other than keep alive. Or, if for some reason, he fails to eliminate from his system the products of biologic activity, he continues tired, even though he does nothing but rest, because his blood contains the materials which cause fatigue. In fact, it may refresh him greatly if he gets to work at some violent exercise, provided this exercise causes him to perspire and eliminate waste products more rapidly.

White bread, meat, potatoes and coffee when not balanced with fruits and vegetables, form a diet likely to develop the complaint known as acidosis. White rice, corn meal and white sugar also lead in this direction; for in processing not only are the vitamins removed, but the mineral salts which in small amounts enter into the composition of healthy tissue and contribute to the alkalinity of the blood stream.

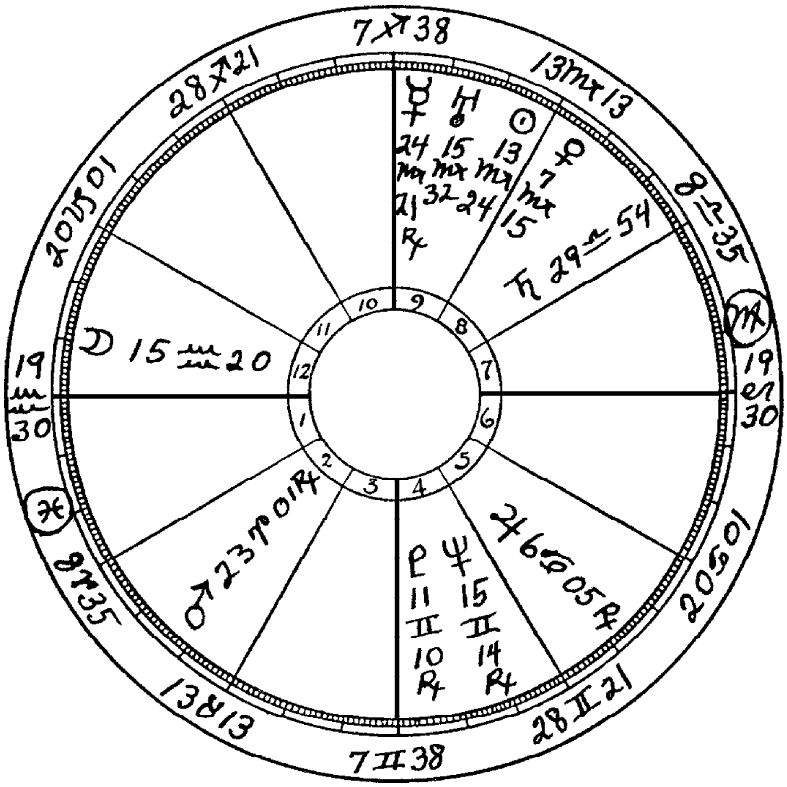
While various mineral salts must be present in the food for vigorous health, this matter of acid-alkali balance is of tremendous importance to every person The accompanying table will indicate which foods; and to what degree, contribute acid or alkali to the blood stream.

Yet it is apt to be confusing to those unfamiliar with organic chemistry to be told that the starches produce an acid reaction in the human system and that fruit juices produce an alkaline reaction. He is aware that white bread and white sugar do not taste like acid, but that fruit juices are pronouncedly

so to the taste. The mystery lies in the chemical process which takes place after the food enters the body. As the flesh of animals normally contains the bi-products of combustion in rather high degree, these toxic acids are naturally taken into the human system when these animals are used for food. Meat, therefore, ranks rather high in acid forming properties. White bread, white sugar, polished rice, coffee and white corn meal also rank high in acid forming properties, because acid is formed from them in the process of digestion.

Acids, however, are of two kinds; those that quickly combine with oxygen in the body and are thus burnt up, and others that do not thus combine with oxygen readily but continue in the human body as acids. Of the latter type are the inorganic acids: hydrochloric, phosphoric and sulphuric, and certain organic acids such as butric, oxalic, benzoic and acetic. Those acids found in fruits, with the exception ,of prunes, plums and cranberries, such as citric and malic, not only oxidize quickly in the human system, but they are combined with organic soda and potash, which are alkalies. When fruits are eaten, consequently, unless in too great quantity for the oxidization of their acids, their acids are quickly burnt up through combination with oxygen, leaving in the blood stream the alkalies with which they are associated as a reserve for combining with lactic and other toxins that lower resistance to infection and cause fatigue.

To those who get tired between meals because the fuel supply taken at regular meals is not sufficiently assimilated to last in full vigor through the interval, fruit juices are a great boon. In the first place these juices—apple, grape, orange, grapefruit, lemon, pineapple—contain the mineral salts in high degree, as well as vitamin C. They furthermore add alkaline reacting elements to the blood. And finally, they place no strain upon the digestive powers of the stomach, but enter at once into the blood stream and give it a valuable and immediate fuel supply. A glass of fruit juice contains immediately available energy to tide one over until the next regular meal; and acid juices, such as lemon, orange, grapefruit and pineapple, because of their effect upon the digestion of other foods, should be taken thus between meals, or not less than half an hour before mealtime.



BEARDSLEY RUML
November 5, 1894, 1:30 p.m. C.S.T. 91W40. 41N59
Data from his father.

1915, B.S. degree at Dartmouth: Sun inconjunct Jupiter p.

1917, Ph.D. University of Chicago: Sun inconjunct Jupiter r.

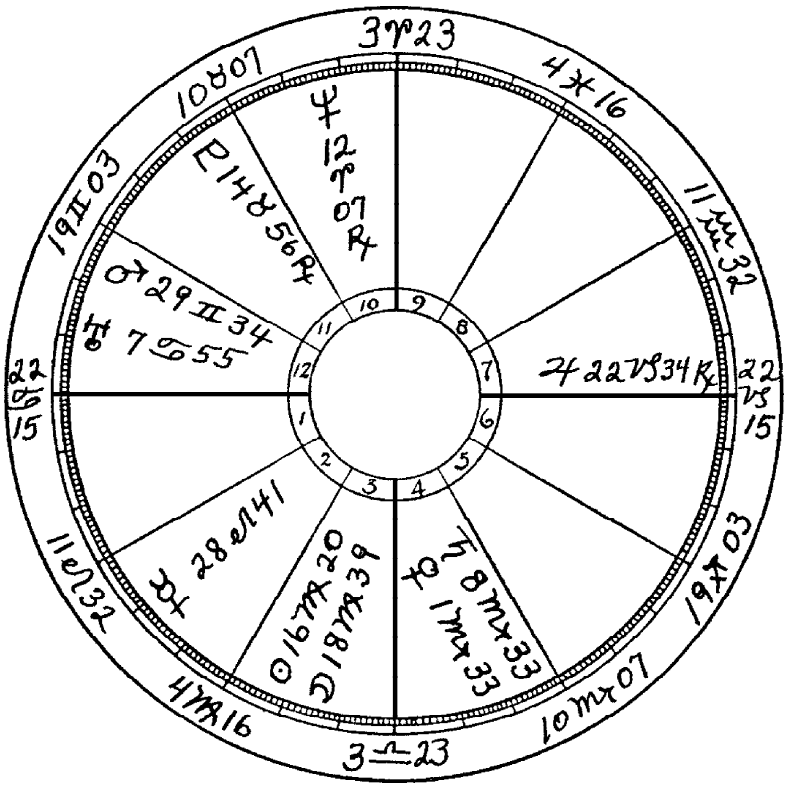
1919, Secretary The Scott Co., Pa.: Sun conjunction Venus p, both conjunction M.C. r.

1921, Assistant to President Carnegie Corp. of New York: Sun conjunction Venus p, both opposition Pluto r.

1922, Director Laura Spelman Rockefeller Memorial: Sun conjunction Venus p, both opposition Pluto r.

1929, Dean Social Science University Chicago: Sun semi-square Saturn p, Mercury inconjunct Jupiter p.

1943, author of controversial pay-as-you-go tax plan: Mercury trine Mars r: Venus p sextile Venus r.



RALPH WALDO TRINE
September 9, 1866, about 1:00 a.m. LMT. 89W22. 42N02
Data from astrological student.

1891, A.B. Knox College: Sun semi-sextile Saturn p, Mercury opposition Neptune r.

1892, graduate student John Hopkins: Sun opposition Neptune p, Mercury square Mars p.

1893, A.M. degree: Sun opposition Neptune r.

1896, wrote What All the World's Seeking, next to his most popular book: Sun semi-sextile Sun, Sun square Mars p.

1897, wrote In Tune With the Infinite, most popular of his many books: Sun semi-sextile Sun, Mars sextile Sun r.

1908, wrote On the Open Road: Venus trine Neptune r.