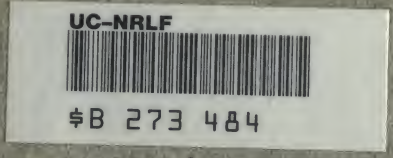

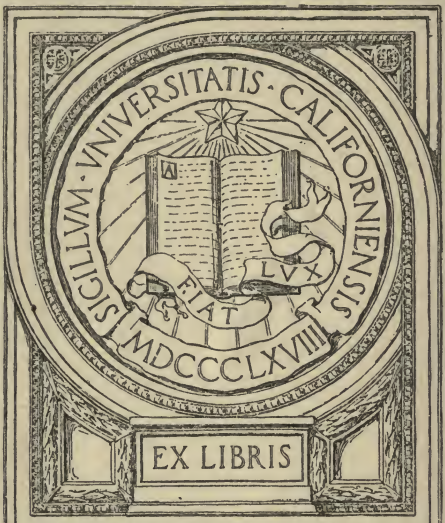

With Compliments from
the Author.

Wilfrid Gibson

Nov. 17 - '22

FACTS AND FANCIES IN HEALTH FOODS

BY
DR. AXEL EMIL GIBSON
LOS ANGELES, CALIFORNIA

I have come to the conclusion that more than half the diseases that embitter the middle and latter half of life are due to avoidable errors in diet, and that more mischief in the form of actual disease, impaired vigor and shortened life accrues to civilized man from erroneous habits of eating, than from the habitual use of alcoholic drinks—considerable as I know that evil to be.

—SIR HENRY THOMPSON, M. D., F. R. S.,
London, England.

ONCE we have mastered the laws and principles of Diet, we shall find ourselves in the possession of a key that will open to us every dietetic complexity, equipping us with knowledge of how to select a practical course of diet, at once gratifying to taste and health, beauty and strength, satisfaction and efficiency.

Preface

IN our struggle with disease, the organism needs just one thing to hold its own—more fighting power. But this power can be obtained and rendered available only through the reciprocal association with life itself, as furnished in terms of sun and air, of food and action, of moral principle and self-control. And, perhaps amongst them all, self-control is the most important, as without the moral discipline of self-governing power, permanent health is unobtainable. Adjustment of demand to needs, of indulgence to necessity, of activity to usefulness, under the directing influence of reasoning intelligence and individual self-mastery in relation to food and drink, to work and recreation, to duty and pleasure,—bring us the only guarantees for permanent health and beauty, of body and mind.

Now if we apply these principles to our indulgence in eating, which at the present stage of our evolution gives rise to more tempta-

tion of the mind and body than perhaps any other indulgence, it must be realized that the chemistry of the stomach differs in no way from the chemistry of our clinical laboratory, and that reactions arising from incongruous food mixtures, inside the body, are in no way less hostile to life and health than those that take place outside the body. A mixture of acids and starches, of sugar, cream and cereals, of milk with meat, will give rise to reactions in terms of alcohol and alkaloids, which by charging the system with poisons, weaken our vital powers of resistance, and sooner or later bring upon us physiological collapse. Ruskin was right: "We realize what we suffer, but not always what we lose." The silent leakages of our constitutional reserves, if allowed to continue their sapping influence will, before we realize it, pass beyond the limit of repair and restoration.

DR. AXEL EMIL GIBSON

June 15th, '21.

528-529 Bradbury Building
Los Angeles, California

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APPRECIATION:

Santa Rosa, California.

Dear Mr. Gibson:

I have received from time to time various magazines containing your very interesting articles—articles that go to the very foundation of things and should be read by every human being who cares for himself or others. . . . . .

I feel that I owe you a debt of gratitude, not only personally, but for the good you have done in these articles placing the facts so squarely before the people.

Faithfully yours,

LUTHER BURBANK.

I.

BASIS FOR LONGEVITY—TRUE OR FALSE

RECOGNIZING the fact that catarrh has its basis in alimentary fermentation, and that fermentation in its turn arises from starchy foodstuffs, the adherents of the "mucous-free" or raw-food diet aim at a more or less thorough exclusion of cooked as well as of general starch-bearing plants or grains from their dietary. The plants which we thus have been asked to avoid are principally made up of tubers and pulses, such as the potato, bean, pea, squash, rice, pumpkin and the cereals in general. On the other hand the foods considered "mucous free" and dietetically reliable, are contained in the green, leafy vegetable, the nuts and fruits of the season, and the cereals, bread and crackers made up of bran and cellulose.

That the human body can be sustained on a strict "mucous-free" diet can be subject to no doubt. We admit freely that fruits, nuts,

lettuce, cucumbers, turnips, carrots, celery, cabbage, bread and milk contain all of the tissue salts that have been considered indispensable to the sustenance of human life. In fact, we may even go so far as to assert that a complete discharge of every vital function can be maintained on a diet of grain alone, or on fruit alone, or on milk, and even on vegetables alone. For the cells of any kind of food have potential energy sufficient to sustain, for longer or shorter time, every form of life; the question being merely to what extent the constitutional power of individual assimilation can penetrate and absorb the latent nutritional energy and transform it into biologically available power. In other words, it devolves upon the individual organism to polarize the potential energy of the food cell into the kinetic power of organized, physiologically dynamic life.

For, after all, the problem of diet has not its solution either in the quantity or quality of the food itself, but in the processes of nutritional chemistry, at work in the individual. The same food which saves human life may also wreck it, according to the biologic and

physiologic condition of the individual himself; just as the same physical-culture exercises may break down one individual and build up another. It is not in the minimum of food that we encounter the danger of tissue destruction, but in its maximum; not in the lack of calories and grams of proteids, but in the mixtures of incompatible foodstuffs, and in the fermentation and auto-intoxication arising from the inevitable chemical reactions. For, above all, we must never ignore the fact that the stomach is a chemical retort, and subject to the same processes of reaction that take place in the chemical laboratory. And these reactions, whether we realize them or not, take place whenever chemically heterogeneous substances are allowed to enter the stomach, though the immediate disastrous effect upon the system may be diverted by the constitutional reserve power of the individual, or by some saving personal idiosyncrasy which may keep him away from a given form of food.

The conditions that affect digestion may thus be summed up in two groups of reactions; those related to the food itself—its

amount, quality, combination and temperature, and those related to the individual, his temperament, nerve-power, occupation, disposition and previous modes and habits of living.

From this it is self-evident that the problem of diet is not solved on a basis of mere individual sustenance, or on his position and character as a vegetating organized creature in evolution. The question is considerably deeper and involves the balance between a maximum of available, constitutional energy and a minimum of vital and nervous expenditure. The business of life is based on the same principles of profit and loss as that of sociological, organized industry; in either case the determining issue is to insure a continuity of production upon a self-sustaining basis. The expenditure of energy involved in the digestion, peptonization, emulsification, assimilation, ionization and vitalization of the food in its transit through the nutritional exchanges, from potential elemental energy into kinetic muscular power, must not exceed the available vital sum-total of the physiological resources of the body itself, or the ulti-

mate result will be ruinous, notwithstanding its apparent, though temporary success.

Brought to the stress of expediency, while yet backed up by the heredity of a vitally powerful ancestry, nature becomes a true miracle worker, and may again and again reproduce the ancient miracle of Canaan, in feeding the numberless hosts of her cells with the mere salvage of her physiological wreckage. Heredity is a factor which must be seriously reckoned with in the relation of an individual to his food, and his general power of endurance. Thus we may frequently find how one individual may triumph in the very indulgences that result in the ruin of another. Yet the ultimate result, however long deferred, will be the same: foreshortening of the vital perspective of the individual, through the premature degeneracy and breakdown of his organism.

Nor does the real danger to life lie in underfeeding. Innumerable are the reports that come to us from individuals who have been able to sustain life on a menu which, from an ordinary dietetic point of view would mean disaster. Most of us, perhaps, are acquainted

with Prof. Yates' experiment with the Hammam Bath attendant, who, during a fifteen hour fast, while continuing his work as masseur, lost three pounds of weight. At the end of the fast, he was placed in front of an open window, where after two hours of complete rest and relaxation, and with no other form of nourishment than a glass of port-wine, he regained every ounce of his loss.

Another case is reported by Horace Fletcher of a well-known Boston author, who for fifteen years sustained an active existence on a diet of three whole wheat biscuits a day, with a glass of fresh milk at each meal. Not less strange is a case reported by a German medical journal, of a Hungarian peasant who for three years had been living on alfalfa and milk; while in a number of the London Lancet, dated 1910, mention was made of a lawyer, carrying on a prosperous practice in a suburb of London, who for over ten years had been living on a menu of apples, either in their natural, raw state or prepared in different forms of cooking. We all know about the old Scotchman, attaining the age of 105 years on a diet of oatmeal and milk; and the

Irishman reaching the same milestone on a staff of life made up of potatoes and salt. Again we have the old Dutch woman living over a hundred years on a "pumpernickel, pickled-herring and small-beer diet;" while macaroni, onions and cheese accomplished the same feat with the Italians; and rolls, wine-soup and lettuce salad bring longevity to the French. Finally, we find the Bulgarians reach an almost incredible longevity on black bread and onion-garlic-barley puree—while last, but not least, comes the famous case of the Irish Mayor, Clarence MacSwiney, performing his 75 days fast under the most adverse conditions, on a diet of mere sips of water!

What at once captures our attention in this array of long-lived men and women, is their disregard for any rule laid down by the canon of the "mucous-free" or any other specialized "health-food" diet. The Scotch oatmeal, the Irish potato, the Italian macaroni and the French roll, are the very substances which the "mucous-free" dietician especially warns against, and which go to prove that the premises for his food system are wrong

and unreliable, overlooking facts which are of enormous significance in the science and practice of a rational life-prolonging diet.

II.

THE FAILURE OF THE CALORIES

THE question which sooner or later must rise in every logical mind is where to place the limit for food mixtures, so as to insure the health and efficiency of the individual consumer. For, as is well known to every chemist, the combinations of certain substances, whether organic or inorganic, whether in the chemical or gastro-intestinal laboratory, bring about certain changes in the constitution of the different elements, involving reactions, intrinsically different, both in structure and character, to the original substances themselves.

By inorganic chemistry we are constantly made to realize the danger attending the mixtures, of in themselves inoffensive elements. Thus while sulphur, hydrogen and oxygen are in themselves not only harmless, but positively vital and life-sustaining elements, when combined in certain proportions give rise to sulphuric acid, a corrosive poison.

Glycerine, nitrogen and sulphur, as separate bodies, can be handled with perfect safety, even by a child, but if brought together under certain chemical conditions, they evolve two of the world's most destructive explosives: nitro-glycerin and dynamite.

Now physiological explosions can be brought about in accordance with the same laws and conditions as those that obtain in chemical explosions, though the effect of the former does not spring into so immediate evidence. A substance, both in appearance and character, resembling dynamite, is found in our cane or beet sugar, which being extracted from its parent compound enters the stomach under the strain of an unsatisfied affinity, and by the force of the ensuing cellular vacuum, breaks into the digestive process with the violence of a veritable physiological explosive.

From this it becomes self-evident that whenever we mix sugar with our food this law of chemical affinity will spring into operation. Hence sugar on our breakfast foods, syrup on hot cakes, jam on biscuits, through the inevitable fermentation will turn out reactions of various acids which in their turn

will result in fresh departures of degeneracy in accordance with the additional foodstuffs indulged in at the same time. For it is natural that in a receptacle, seething with chemical reactions, every additional substance precipitated into the mass is caught in the general breakdown. If cream, grease, milk, eggs and bacon are added to the sugared breakfast cereals, fresh reactions will take place in terms of fatty acids, lactic acids, butteric acids, carbonic acids, oxalic acids, ammonia and cheap grades of alcohol—each ingredient constituting grave, life-threatening poisons.

Notwithstanding the fact that digestion is governed by physiological chemistry, the "food scientist" continues to turn out his "health menus," in serene disregard of the elemental antagonisms of foodstuffs which his system of "balanced calories" jumble together in the stomach. Gauged by fictitious standards of nutritional needs, the food scientist may prescribe a midday meal of sliced tomatoes (100 calories), lamb stew with vegetables (400 calories), mashed potatoes (175 calories), stewed prunes (150 calories), strawberry shortcake with cream (160 cal-

ories) or ice cream (200 calories), glass of milk or buttermilk (130 calories), to make up the one-third of the 3,500 calories supposed to constitute the daily amount of fuel required for the maintenance of the fires of the human furnace.

The reason that such a heterogeneous mass of foodstuffs and subsequent reactions of formidable poisons does not instantly strike death to the individual lies in the fact that nature has provided her creatures with constitutional reserve forces to meet recurrent accidents in the course of everyday existence. Especially are these reserves intended for the needs of old age, when the fires of life begin to burn lower, and the self-generative power of the organism is weakening. Carefully managed, these reserves should easily carry the human individual across the century mark in the full possession of the philanthropic interest, and enthusiasm of service characteristic to normal humanity.

Now the accumulations of poisons in the system beyond its ordinary powers to subdue or neutralize them, strikes the signal for these reserves to be called into action, and

the grand rush of these life energies, pursuing and eliminating the ensuing poisons from the endangered organism, gives rise to that glow of high vitality arising from artificial stimulation. For stimulation means the spending of vital reserve forces in the effort of the system to eliminate life threatening poisons; and the high flush of energy, if imparted to us from any other source than that of natural, unfermenting food, exhilarating air, pure water and useful exercise, means a serious loss to the constitution—involving a force-draft of precious vital reserves which sooner or later must lead to premature physical and intellectual breakdown.

But perhaps the greatest mistake in the calorie-governed system of diet lies in the fact that the organism of the individual never receives the calories represented in the incongruous combinations, as the ensuing chemical reactions change the character and food value of the entire mass; and the different forms of digestive disturbances against which the fully eighty per cent of modern society is waging a more or less losing campaign, are in themselves evidence that we

are under the influence of a grave misconception as to the true needs and necessities of human existence.

The capricious processes of condensing, extracting, dextrinating, predigesting, "fruiting," "crinking" and sterilizing the grain, is not more legitimate or sane, from a standpoint of nature and physiology, than to double and treble the output of cloth by teasing and refibrinating wool or cotton into shoddy and unsubstantial wearing fabrics. The effect of chemicalized food upon the organism is no less devitalizing than acids or other corrosives on manufactured fabrics. Nature should be enjoyed only in the full and harmonious entireness of her products, as these represent the perfected efforts of biological adjustment during the incalculable ages of creative evolution.

On the other hand, as a simple, easily comprehensive rule for a constructive diet, it is enough to observe that acids of any form should never be taken with food; that fruit is antagonistic to any other foodstuff with the exception of nuts; that milk and cream must be left out in cooking; that frying turns

meat into an alkaloid; that ordinary meat-soups are uric acid extracts and weakening to digestion; and as cooking changes a food from an electric to a magnetic energy, requiring different lengths of time for digestion, the raw and the cooked foods should be grouped into distinct and separate meals. The constitutional dissimilarity of the different grains and cereals makes the mixtures of bread and mushes at the same meal often a source of gastric fermentation and distress. As an ideal diet, at least in California, the breakfast should consist of fruit and nuts, the luncheon of whole wheat or rye bread and raw vegetable salads, and the suppers of cooked vegetables, which may or may not be combined with fish, eggs, or meat. An apple or orange at the time of retiring would wind up the dietetic program.

But even if enjoyed in its unadulterated form, the different foods, if mixed unjudiciously, neutralize and destroy each other. A great dietetic error is the custom of using milk as a table beverage at meals. The physiological fact with milk is that its place of digestion is not in the stomach, but in the

duodenum or "second stomach." Hence the stomach does not respond with its secretion in the presence of milk, a fact which prevents the digestion of any other foodstuffs introduced at the time of the milk. At its best, the digestion of proteid-foods in the presence of milk, proceeds under severe handicaps and at a great loss of energy to the system. It is this fact, with regard to the digestion of milk, that renders it a valuable antidote in cases of poisoning, as it prevents the stomach from acting upon the poisons. The normal way to enjoy milk is to follow the system of nature as practiced by the young of the animals, who, during their period of nursing, have milk exclusively for sustenance, and, in no way mix it with other forms of nourishment.

The opinion that ice cream, malted milk, egg nogs and other popular mixtures are nutritional foodstuffs and sanctioned by nature as wholesome and constructive, is a fallacy that causes more breakdown of liver and kidneys than any other dietetic error. They are hostile to every process of real constructive life, and derive their sensation of strength

from the alkaloidal poisons they generate in the system. Like all poisons they necessitate quick efforts of elimination from the system; and this effort, with its rush of vital reserve energy, like all other forms of intoxication, gives rise to a sense of stimulation and apparent strength.

III.

FOOD MIXTURES THAT DISTURB DIGESTION

IN a study of diet it is well to realize, that all natural foods are in themselves wholesome to a healthy organism; while on the other hand, all foodstuffs, even when in themselves most nourishing and wholesome, if combined incongruously, may react chemically on the system as deadly poisons. And any form or system of diet, which does not consider the all-governing influence of physiological chemistry, is not reliable, and will never succeed in solving the problem of human nutrition.

It is one of the strange paradoxes of life that the most delicate and precious food of our diet—the fruit—under certain conditions may turn into a fatal poison. For any mixture of fruit with other foodstuffs—especially if these be starch bearing—results in fermentation and subsequent alcoholization of the mass, which may often require all the availa-

ble nerve power of an individual, aided by his vital reserves, to make it possible for him to survive the physiologic ravishes arising from the combinations of the average family dinner. And it is in the light of these facts, verified by the experiments of Prof. Pavlow, that the term "mucous-free" diet, to the extent it disregards the discrepancies of promiscuous food mixing, loses every vestige of scientific and practical value.

According to this distinguished scientist, each kind of food has the power to excite a specific secretion for each particular type of it taken into the system. And so different in character are the secretions in each case, that Pavlow speaks of "milk juice" as the secretion necessary for the physiological splitting up and emulsification of the milk-fat; of "bread-juice" with its amylolytic secretion for the digestion of bread-stuff or cereals; "flesh-juice" with its strong proteolytic secretion for the treatment of meat; while there are yet other distinct secretions required for fruits, vegetables and pulses—plainly bringing out the difficulty experienced by digestion in furnishing the different se-

cretions, which the corresponding fields of physiological chemistry call for, in order to meet the emergencies involved in the indulgence of promiscuous and heterogeneous food mixtures. Thus the problem of nutrition is by no means solved by so vague and unqualified a system of diet, as the mere elimination from the bill-of-fare of cooked foods, or foods containing starch. The chemistry of digestion, in conjunction with human individuality, can alone safeguard us in our choice of diet.

IV.

THE "PSYCHIC FACTOR" IN DIGESTION

PROF. Pavlow does not limit his dietetic factors to the purely physiological field of individual digestion; he finds in mental attitudes a still stronger determination in the efficacy and specialty of human secretions. Any attempt of solving the problem of diet without due regard to the mental attitude of the individual is bound to fail. Thus what Dr. Pavlow calls the "desire element" in the appetite is the all-important factor which must be present with all successful digestion, as an opening agency for the initial gastric secretions. With a duration of from five to ten minutes this agency exerts an all powerful influence over the vagus nerve whose subsequent excitation at the second stage of the gastric secretion, is entirely determined by this initial impulse. Hence it is natural that any strong emotion of the individual at the time when he par-

takes of his meal, exerts the greatest influence either for good or bad over the ensuing process of digestion. For in the wake of the first or psychic stage of the digestive movements, with an intermission of some thirty or forty minutes, comes its second or specific stage, which arises in consequence of the stimulation from the entrance into the stomach of the different kinds of food. In other words, while the first stage of digestion is subject to the "psychic" influence, due to individual emotions, and consequently may be made to change the entire nature of its secretions by and through the conditions of the mind, the second stage of digestion is determined by the integral character of the food itself, and hence depends for its composition and efficacy on the mixtures indulged in by the individual in the course of his meal.

On the basis of these observations it is quite possible to work out a constructive system of diet, by which all ingrediencies can be eliminated from the meals which might chemically interfere with the normal workings of digestion. The elements which according to Prof. Pavlow especially interfere

with the digestive process are not the so-called "mucous-bearing" foods, but the fats, grease, soda, acids, sugar and the pungent extractives which have a place in modern cookery. Furthermore, we find that an abnormal temperature of the food, either in excessive heat or excessive cold, interferes with the efficacy of secretions, while any distinct acidity such as vinegar, pickles or lemon juice, mixed with the food, acts as a severe check on the hydrochloric secretion. For while lemon juice while taken by itself, is of the greatest value as a uric acid and bile acid solvent, when taken in connection with food, not only loses its therapeutic value, but becomes a positive menace to digestion, and by introducing adverse chemical processes in the glandular secretions may give rise to the very bacterial acids which in its free state it would have destroyed. And on the same principle as acids, taken with foods, interferè with the hydrochloric acid in the stomach, so on the other hand the presence of sodium or any other hydroxyl interferes with the pepsin secretions; while fats and greases act as a powerful deterrent both upon the hydrochloric and

pepsin secretions, and capable of lowering the entire digestive tone more than 50 per cent.

But if a right combination of foods is important for a successful digestion, the right temperature of the food is not less so. Beverages or soups connected with meals should not rise above the temperature of the body. In this connection Dr. Thompson, in his exhaustive treatise on "The Action of the Digestive Glands," has demonstrated with great clearness that digestion is seriously disturbed by either hot or ice cold beverages indulged in at meals. The life of the secretory glands is at its highest power when working in a temperature conforming to that of the body itself or at least not exceeding in warmth 105 degrees Fahrenheit. For through the influence of hot beverages the capillaries of the stomach dilate, causing an influx of blood into the stomach in excess of its need. And in the life of every organism we find that every degree of temperature, and every atom of energy, in excess of actual need—so far from aiding the individual, becomes a positive hindrance to his evolution. Stimulation beyond

the capacity of the glands to utilize the increased supply, becomes an irritation followed by the inevitable reaction of a corresponding lowering of the vital tone of the organism.

The usual gastric stimulants or "appetizers" for the table, as furnished by our condiments, spices, pickles, preserves, conserves; cured, candied, smoked and deviled food-preparations, have no other value than irritants, with power to whip the stomach into digestive spasms. Their action on the stomach is that of a lash, as the very fact of their indigestibility compels the system to furnish an extra supply of nervous energy to reenforce the exhausted digestive batteries. And it is this rush of released nervous reserve force, sweeping through the digestive field, that gives rise to sensations of heightened digestive and assimilative powers.

V.

DOES BRAN AND HULL CURE CONSTIPATION?

IN a cure of constipation our "health-food" specialists unanimously recommend mechanic irritation as a proper treatment for the exhausted bowels. In place of the justly condemned chemicals and condiments, we are asked to use the not less indigestible substances of bran, hull, ground up straw, mill-sweepings, grain, cracked into sharp, irritating angularities, skin and seeds of fruit. The irritation of these indigestible substances as they are tearing down the delicate membranes of the intestinal canal acts as a whip on the already overworked bowel, forcing it into renewed action, as the welfare of the system demands a speedy elimination of the irritating agent, by an enforced and strained evacuation. It is the behavior of the toxins to produce the same effect of diarrhea upon the bowel as shown in the peristaltic con-

vulsions following ptomaine poisoning, whether in the painful spasms, gripping the bowel under the irritation of a typhoid fever, or a membranous colitis. And unless the organism is very strongly fortified by hereditary animal vitality, the nervous system must sooner or later break down under the strain, and smother the cell-world of the organism with physiological wreckage.

The plea for bran as a natural food is based upon the supposition that the system for its orderly functioning requires the gastric and intestinal irritation of the sharp-cut lacerating hull of the grain. Bran is made up of the same indigestible substance as the straw, and is valuable not as food, but as the natural protective covering of the food. The very imperviousness and indigestibility of cellulose renders it a fit protection to the delicate pulp of the fruit or vegetable enclosed within. The same qualities that give to the hull and skin their power to resist attacks of insects, and the dissolving influence of rain, parching sunlight and shriveling cold, cause this cellulose also to resist the dissolving influence of digestion with its chemistry of se-

cretory fluids—a fact instinctively recognized by rodents and birds which by a quick rotary motion of their teeth or beak, succeed with great dexterity in peeling off the outer covering of the grain. The same caution is observed with regard to the peels of fruits, which the birds are always avoiding by carefully carving out the pulp from its intractable and valueless covering.

The theory that bran is valuable as a laxative is based upon the same principle that a whip is a good tonic for a tired horse. The bran moves the bowels by sheer force of irritation—causing the injured tissues to exert a special effort to remove from the alimentary canal the offending agent. A similar effect is produced by sand or fine gravel, which actually has been sprung upon the public by perambulating therapeutists as an infallible remedy for sluggish bowels. And there is no doubt of the effect of the remedy; the objection lies merely in the untimate result on the system. For an agent which has the power to move the bowels, yet does not possess the vital elements necessary for the re-generation of the weakened nerve power,

in place of adding energy to the organism becomes a positive loss to its reserves. There is only one safe, biologically justified method of moving the bowels, and that is through adding nerve power to the peristaltic center, which again is possible only through the administration of such vital agencies as water, air, food, rest and appropriate physical culture. Any agent which causes the bowels to act by stress of irritation expends vitality in place of generating it.*

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*Furthermore as the coarse hull of the grain begins to cause irritation in the lining of the stomach, the latter, as a means of self-protection, proceeds to flood the injured parts with secretions of hydro-chloric acid, which in the course of time will give rise to an excess of acid in the system with corresponding symptoms of acidosis, muscular soreness and neuralgic pains in shoulders, chest and neck, or wherever the pneumogastric or splanchnic nerves come to the surface. And as the general public is not in a position to trace the connection between the coarse breadstuffs in the stomach and the neuralgic pains in the neck, they will soak their interior with tonics and their exterior with ointments, without any other benefit than prospects of future complications in stomach, liver and kidney—while the mere elimination of the offending "Health-foods" and the introduction of a sensible diet would have restored the system to its natural condition of health and usefulness.

If one feels inclined to utilize the streaks of phosphorus and nitrogen contained in the hull it is easy to extract them by soaking some clean bran in a pitcher of water and then allow it to drain over night. The best proportion is a mixture of one-half pound of Bran to one quart of warm water. Taken on an empty stomach or between meals a valuable beverage is obtained without the need of encumbering the digestion with a mass of intractable cellulose.

The experience by Mr. Hoover during the European war in supplying the starving Belgians with bread made from bran and graham millings sufficiently proves the pernicious effect upon the ordinary stomach from an indulgence in coarse, irritating foodstuffs. After a few weeks the population began to suffer from the effects of the bread, developing symptoms of gastric and intestinal ulcerations, followed by cramps and spasms which continued until Mr. Hoover, on the remonstration of the Belgian physicians, decided to stop the import of the "health bread." On the other hand it is extremely questionable whether the patent sifted substitute known as white bread, which was made to replace the bran bread, was in any way an improvement on the ultimate health conditions of the people. For if the coarse substances are pernicious through the irritation of the intestinal surfaces, the patent sifted flour on the other hand deadens the sensibility of the absorbing glands, and at the same time fails to furnish the vitally important tissue salts contained in the fourth layer of the grain, which is lost in the patent sifting processes of

the modern mill. There is only one safe and sure way to health and that is in the maintenance of the original design introduced by nature in the biologic completeness and vital poise of her products. The ideal bread should be made from the entire grain, finely ground and with the coarse, outer covering closely peeled off and eliminated.

To most dietitians the main object of diet seems to be to prepare such food-mixtures as increase intestinal peristalsis. This, however, is a misconception of the real value of diet. As there are two ways of increasing the activity of your horse, so there are two ways of stimulating a sluggish bowel: by whipping or feeding. The one is irritation, the other nutrition; and to stimulate a system into a physiological heightening of its activities, without imparting a corresponding amount of nourishment, is no less ridiculous than the notion that a worn-out horse can be strengthened by a freely applied whip.

Peristalsis is due to a wave of nervous energy, arising in the semilunar ganglia and solar plexus, from which center the ensuing momentum is dispensed throughout the in-

testinal coil. The process resembles the mechanical movement of a watch, in which the wheels receive their impulse from the movement generated in the static, high-tensioned power of the coiled-up mainspring. And, furthermore, just as in the case of a weakened mainspring, the watch may occasionally be made to move up to the correct time by an appropriate manipulation of its hands and wheels, so intestinal peristalsis may be temporarily regulated by mechanical or chemical irritation, due to coarse, indigestible foodstuff, while in reality not a single momentum of vital energy may have been added to the nerve life of the organism.

VI.

TEMPERAMENT AND HUMAN NUTRITION

AS a further failure to cope with his problem, the "health-food" dietitian in most cases ignores the temperamental aspect of his subject. Yet Pavlow, backed up by such authorities as Prof. Gauthier of Paris and Sir William Robert of Edinburgh, have proved with scientific certainty that the secretion initiating the digestive process is fundamentally modified by the "psychic impulse" of the individual, and that the success of his digestion will depend upon the mental and moral attitude of his mind. In other words individual temperament is an all-important factor in nutrition, as there exists a positive relationship between the mental polarity of the mind of the individual and the vital polarity of his food. In our complex system of living, where artificial conditions are constantly interfering with the

orderings of a constructive and biologically poised natural evolution, there is an ever increasing need to keep a close account of the mental and moral attitude of the individual in his relation to food. The true dietitian must endeavor to bring about conditions of harmonious interaction between the chemico-vital character of the food and the mental-nervous tendency of the individual, and thus make it possible to provide a physiological shock-absorber for the idiosyncrasies that govern personal sensibilities in relation to certain foodstuffs. Hence the highly strung nervous system of one individual may and does require an altogether different class of food than the lymphatic and sluggish temperament of another. And to the extent foods divide themselves in acidic and alkaline groups, with their vital synonyms expressed in electric and magnetic polarities, they should be recognized and adapted to corresponding individual temperaments. It should, furthermore, be recognized that temperaments in themselves have power to generate in their own system such secretions as express their own vital type. In other words

the nervous and high-strung, by the very intensity of their mentality tend to give to their alimentary secretions the ascendency of the electric or acidic predisposition; and to give acid or acid-producing foods to men of this type of temperament would naturally result in a serious accumulation of acids in their system, and thus add to their already predominating nervousness. On the same principle it would be very unscientific to treat the opposite type of mind—the lymphatic and sluggish—to a diet made up of alkaline foods, as these foods would tend to slow down the vital currents of this type of temperament to the very point of stagnation. Thus an almost unlimited fruit diet, which might prove quite beneficial as a needful stimulation to the sluggish and lymphatic individual, would in most cases become disastrous to high strung and nervous natures. What is food for one may thus prove poison to another.

VII.

THE PSYCHOLOGY OF MEAT-EATING

AS meat should be regarded as a passing expediency in the order of individual evolution rather than as a fixed and permanent necessity, its indulgence in most cases is far beyond the physiological needs and necessities of the individual. It is safe to say that any true physiological need can find complete satisfaction in the indulgence of three flesh meals per week. Nor, after all, should we forget that it is not the indulgence in meat itself that is back of the great dietetic bugbear called uric acid, but the excess, which makes it impossible for the human furnace to combust its food fuel into physiological ash, in place of pathological clinkers. It is not the meat that destroys us, but the excess of meat, coupled with its inseparable and life-menacing train of soup, gravies, spices, grease and deserts.

To remove meat from a person's diet, the

conditions back of it should first be removed. For inasmuch as there is a mental and moral basis for every physical tendency, so it is as futile to try to remove the beefsteak from a person's dietary, as long as the friction and irregularity in the movements of his intellecual engine are in need of this biologic shock absorber, as it would be to remove houses of correction and insane asylums from the commonwealth, as long as there are people who have not yet found the straight and narrow road. It is in the very effort of an individual to stop meat-eating while three-fourths of his nervous system is yet vibrating to the strains of ancestral biology, and the digestive secretions still under control of carnivorous cell habits, that we find a cause of the nervous dyspepsia and pathological sensitiveness which is so frequent a condition with our strong-principled but ill-advised vegetarian devotees. On the other hand, as already observed, we are frequently confronted by people whose indulgence in flesh eating is altogether in excess of their biologic needs. The one case is as serious a mistake as the other; for while the former burn up their

vital furnace in lack of adequate fuel, the latter, through an excess of fuel, fill their fire-box with clinkers and their draught-pipes with soot.

In our transition stage of historical evolution, when humanity has reached its culmination of high tensioned, nervously overstrung state of social, political and commercial life, the question of meat or no meat in our diet is as much a proposition of psychology as of physiology; of conditions of the mind as of the body. And in view of the constantly increasing number of premature deaths, which unmistakably have their main cause in dietetic errors, it is supremely important that a food scientist should study his subject from a psychological not less than from a physiological point of view. Self-knowledge, self-respect and self-government should be the end as well as the means of individual evolution, and any attitude of life—physical or mental—which interferes with this principle should be eliminated from our life, whether it be the violation of physiological or psychological laws, in excesses of flesh foods or non-flesh foods. A vegetarian diet, if not

based on self-control and ethical refinement, is far more immoral and detrimental to health than a flesh diet, gauged by a recognition of physical laws and moral principle. In place of meat poisoning the man, it is in most cases the man, who by his vicious mind, poisons the meat. When the individual is true to his principles and lives in accordance with his best knowledge, self-governed and self-respecting, his position is as safe, as calm, enlightened judgment can make it. Nor must we fail to realize, that as the body is a mere instrument, it is as detrimental and wasteful to the larger life of social duties and human service, to spend time and effort on the body for its own sake, as for an artist to devote his entire time and talent to the tuning and rehearsing of his instrument, at the neglect and sacrifice of his public performance. Eating for its own sake, and for the pleasure and indulgence of it, is as selfish and vicious as to obtain industrial or professional advantages and incomes, while evading the legally official taxation of the personal revenue. In either case it is a theft from life and humanity and must be atoned for sooner or later in individual sacrifice and suffering.

VIII.

THE LAW OF INDIVIDUALITY IN DIET

AFTER all, is it not a mere juggling with dietetic principles for a physician to attempt to prescribe a rational diet unless he takes into due account the mode of living and the type of food indulged in by his patient, previous to the decline. For every organized being is brought to this world with an equipment of vital reserve forces—a constitutional emergency fund, so to speak—intended to cover up recurrent deficiencies arising in the system from accidents and general adverse conditions. As long as these reserves are intact they continue to cover up the offences which the individual, in the course of his indulgences, commits against his own nature, enabling him for a longer or shorter time to mask the symptoms of interior functional disorder. But when in the course of time these reserves become exhausted, and powerless even to render tem-

porary adjustment, the system finds itself in the condition of a vessel, full to the brim, where every drop added to its contents means overflow. To recognize this emergency and keep the patient off such foodstuffs as have caused the excess—no matter how natural and valuable these foods otherwise may be in themselves—is one of the fine points of diagnosis, which our diet-experts and health-food specialists, in their generalizing enthusiasm, so often overlook. A diseased system means a broken physiological balance due to an excess of certain food elements by which the industry of the body finds itself glutted; and the first and only successful, step to take, is to decrease the foods of excess, and increase the foods neglected—whether they be starches or acids or "mucous-free."

In view of these conditions it is self-evident that there can be no general, cut-and-dried system of diet, prepared to cover every type of digestive infirmity. The dogmatic adherence to a certain dietetic rule, because of the fact that it has proved successful to its author and perhaps to some of his patients, is as illogical and unscientific as to advise the same

kind of clothes for different seasons and altitudes, or the same mode of occupation for every mind. Hence while the passive minds and placid bodies of the Hindu can subsist and thrive on a flesh-free diet, the highly organized and often overstrung minds of the intellectuals of the Anglo-Saxon type of mind, have proven by unmistakable results the insufficiency of an exclusive fruit and vegetable diet, to sustain the high-tensioned strain of the deductive processes of modern constructive thought. Hence it was not a mere caprice or idiosyncrasy of Herbert Spencer, when after a series of determined efforts to maintain his literary labors on a vegetarian diet, finally was compelled, by sheer biological reasons, to return to a modified, animal diet. In his autobiography, where he refers to this experiment, he even mentions the recognition of a difficulty of concise, concentrated thinking, while on his vegetarian diet, and that several treatises, produced at that period, had to be reconstructed in the light of the recurring powers of a sharper logic, broader scope and keener analysis of thought, which came to him on his return to the more stimulating and yet

non-irritating meat-diet. The same experiences have been recorded by other strong intellectuals like Gladstone, Edison, Roosevelt, Woodrow Wilson, Luther Burbank, and scores of others; while on the other hand minds like William Jennings Bryan, Bernard Shaw, Ella Wheeler Wilcox, and a large number of metaphysical devotees, mental healers, people of emotional and impulsive temperament, governed by high ideals, and determined to force their way to greatest height of mental powers, but in their soaring ambitions fail to recognize the power of biologic and physiologic handicaps. This often means that the foundations of concrete, practical safeguards in the modes of living have to be dispensed with. Yet this ambition has a great evolutionary value, as it introduces a sifting process by which the chaff of an unreasoning, overwrought emotionalism is eliminated from the great sweeping ascent of a vitally and mentally balanced individualized evolution. Mental balance has its guaranties in physical balance, and this again can only be sustained on a basis of dietetic balance. Hence the large number of biological irreconcilables—extrem-

ists in diet: "fruitarians," raw or "unfired food-eaters," "vegetarians," "mono-dietarians," and a constantly increasing host of unique and fanciful food specialists, prompted by the dream-ideal of attaining some vague, physical immortality without establishing the nervous and mental balance required to reach it. They belong to that class of egos who think they can conquer life by a trick of diet, and attempt to coerce the evolution of their physical nature into achievements beyond the very possibilities of their elemental makeup. This of course does not mean that we should neglect the evolution of our physical bodies in their development towards ideal heights; but rather to consider that as an instrument in the service of man, the body occupies the same position to the individual as a musical instrument to the artist; that while there will be continued opportunities for the improvement of the instrument as such, its existence will always be subject to the laws of its own elemental and constitutional makeup, and destined to perish in the very changes that spring from the basis of its phenomenon.

Thus while we cheerfully agree with the

great Oxford savant, Professor Huxley, that the future belongs to the vegetarians, we may yet be compelled by an invalidated or undeveloped health-condition to take recourse to the expediency of animal diet. For in the order of evolution the flesh-diet precedes the vegetable and grain diet, just as the latter precedes the introduction of fruit as an element in the human dietary. Hence as a means of restoring failing physical energy we are often compelled to return to primitive stages of life, and associate the weakened organism with sources of the easier obtainable virility and vital magnetism contained in the animal itself. For it is generally conceded by dietitians that an enfeebled digestive system can obtain an adequate sustenance with far less exertion from the ready-made, vitally polarized animal flesh, than from the securely encapsulated slowly dissolving cellulose of the grain and vegetable. The same diet which increases the strength of the healthy individual may prove to be a source of weakness and breakdown to a diseased and impoverished one.

IX.

ACID-FREE DIET MORE IMPORTANT THAN "MUCOUS-FREE" DIET

FROM a standpoint of biology, there are no reasons why a perfectly healthy human organism may not acquire the power to sustain the highest degree of strength and usefulness on a diet of nuts, fruit and milk; or even, by a conscientious obedience to the highest moral and physical laws, be able to purify the cells of nutrition and intensify their sensitiveness so as to make it possible to respond directly to the force currents of the vital reservoir itself and its vitaminous energies, and thus be able to suspend the functions of the gross physiological processes involved in ordinary food. But between such nutritional possibilities of the future, perfected man, and the present disease-smitten, fermenting, pyorrhetic, tubercular, rheumatic, catarrhal, hypochondriac, neurasthenic and generally degenerat-

ing individual, who drinks and smokes and overfeeds, so as to vitiate and corrupt the entire physical and moral atmosphere of his nature—is a gulf which can be spanned only by a life of sustained dietetic and ethical balance. Above all, we must learn to distinguish between real and assumed evolutionary needs. Evolution does not proceed in jerks and spasms, by unbalanced excursions of nature into unblazed, undeterminable paths of fancies and theories. *Natura non saltet*—"Nature takes no leap"—is a term which indicates that already the ancients were conscious of the necessity of carrying abreast our entire nature, not in vacillating spots, or half projected advances of unrealizable enthusiasms, but under the guidance of a physically and morally balanced individuality.

For the thoughtful reader it must at present be self-evident that the expression "mucous-free" diet in most cases is a misnomer, defeating its own propositions by introducing, through incompatible mixtures, the very fermentations and catarrhal menace which it was its object to eliminate. Not-

withstanding the positive findings by Prof. Pavlow with regard to the demoralizing influence of acids—fruit acids or fermentative acids—upon digestion, the majority of health-specialists recommend lemonade and sour dressings at meals.

As long, however, as the system has yet vital reserves at its disposal, strong enough to overcome the disturbances due to such indulgences the latter may go on without apparent breakdown of the organism; but at the exhaustion of these reserves, the reactions appear suddenly and when least expected. Or distressful symptoms may rise to the surface in types of persistent colds, gastric neurasthenic, and intestinal catarrh, which, like a fungus, may spread all over the alimentary canal, invading nose, ear, throat, bronchia, etc.; while the continuing weakening organism at any time may become the victim of an acute and fatal attack of pneumonia, typhoid, appendicitis or gastritis.

X

THE "BULGARIZED" MILK INDULGENCE

THERE is a tendency in the ordinary appetite-governed mind to continually question the integral value of natural foodstuff, and the adequacy of unadulterated nature to sustain human life. In our staggering conceit we undertake to improve upon Nature's output, and to introduce food-substitutes for her evolutionary processes. Thus with perfect disregard for natural balances we undertake to extract, separate, chemicalize, conserve, preserve, concentrate, dilute, sift, distort, extort, acidify, saccharinize and alkalize the products of Nature,—interrupting in a thousand ways the intelligence, order and law manifested in every natural process, inside or outside the human organism. With unreasoning boldness we proceed to break up and disorganize the infinite poise and balance contained in the natural compositions of the grain, the

fruit and the vegetable, and to substitute them with the haphazard and capricious combinations introduced in the food-market as shortenings, oil and butter substitutes, "health-foods," promiscuous dressings, "constipation foods," sterilized flakes, "branita-biscuits," "crimps," "granose," "gluten" and a host of other innovations in which the manufacturer sports with life, juggles with nature, artifices the true, and naturalizes the artificial; shatters with a fool's audacity the marvelous results of Nature's profound efforts, in order to change and to rearrange them with no other guidance than a crude, vulgar, vitiated sense of taste.

One of the most inconsiderate and harmful innovations in the realm of "health-foods" is the introduction of putrifying baccilli into natural milk to serve as food for human beings. A perfect food in itself, we have in milk an extraordinary vehicle by which the vital principle of nature transmits its constructive energy into the human organism. For what is milk but the emulsified form of living "tissue salt"—constructive elements in organic nature, biologically

standardized and biochemically poised through its vital association with water, which is the cradle, nursery and laboratory for the first manifestation of organized life upon this planet. This diffusion of a structural and creative substance into the universal solvent and primitive supporter of all organized life, has made of milk an indispensable food for every creature of evolution, whose age and condition renders it too feeble for the more concentrated and coarser cell-structure of animal or vegetable food-products. Hence milk is the logical and self-prescribed food for all infantile, sick, enfeebled or senile forms of life.

Now to introduce the action of "bacillus Bulgaricus" into this pure and vitally uncontaminated element, is as unscrupulous as to thrust a scorpion in place of bread into the face of the hungry. Milk occupies the highest plateau of organized life; the bacillus its lowest. The former vitalizes, energizes, construes; the latter breaks up, disintegrates, destroys. The one, under the aid and guidance of oxygen, sunlight, electricity, vital magnetism and inter-etheric associations,

carries on a continuous advance on the ladder of evolution toward ever higher levels of life and power, the other, as an agency of dissolution, fermentation, alcoholization and acidulation, brings in the night-side of nature, with its issues of disorganization, degeneracy and death.

The stupendous blunder of introducing such a remedy in the realm of human therapeutics has its sole explanation in the hurry of our present age to take things and phenomena on their surface or face value without examining the deeper effects they produce on the organism. A glass of whisky, or a shot of morphine, may produce all the evidences of increasing vigor and strength; but the strength is departing from the system in place of entering, representing the situation of a spendthrift, who, no longer satisfied with the income from his yearly interest, proceeds to improve his finances by checking on the principal itself. The "Bulgarized" milk concoction, by the very virtue of its poisonous character, becomes a stimulant to the system, while the latter in order to neutralize the alien attack is compelled to call upon the

vital reserves for assistance—a process which always starts a great flush of systemic invigoration.

The advocates of the "Bulgarized" milk theory claim benefit to be derived from the bacillus itself on the basis that this bacillus is supposed to attack the systemic bacterial acids, from which most individuals are found to be suffering. As these acids, however, arise from gastric and intestinal fermentation, due to error in food combinations, the only rational method to remove them from the system, is to eliminate from our diet such indulgences in food and food mixtures, as have caused them—a method which is certainly superior to the introduction of fresh poison in terms of the "Bulgarized" milk, and take chances on the outcome of the fight between the two offenders. The theory is that the putrifactive bacillus of the "Bulgarized" milk is able and willing to destroy the putrifactive bacillus of the domestic brew—the "enemy of our own household." But in order to proceed with any scientific accuracy however, it must be first ascertained whether in a given individual

case, the bacterial acids of the system represent the type which can be successfully dealt with by the bacteria of the laboratory-microbe culture. If not, this culture will attack the living tissue of the individual and start a process of promiscuous and entirely uncalled for reductions of the invaded organism. In the case of a fat and sluggish subject, the first effect often shows surface symptoms of great improvement, but if the attack should be waged on the system of a highly organized, super-sensitive or neurasthenic individual, the results invariably are unfavorable, and may often lead to serious nervous breakdown. In either case the ultimate effect is disastrous, as the system must not only furnish the battle ground for the bacterial offensive, but also pay for the vital energy, destroyed tissues and nervous shock, involved in the encounter. Pathologically considered the system is practically under martial control, and may remain so indefinitely, while held in demoralizing vassalage by the alien invaders. Humanity pants for life, not for death; for advance towards higher forms of organized energy,

not for a descent into the low levels of fermentation and putrifaction—the maggots and vermin, fungoids and nondescript, destructive agencies of a microscopic underworld.

XI.

THE MAGIC OF FLEISCHMAN'S YEAST

AND what is true about the "Bulgarized milk" preparation, is equally true about that other "all-cure" remedy known as Fleischman's yeast. In either case we meet the agencies of decay and degeneracy introduced in the defenseless organism. It is poison fighting poison: the "enemies of the household" being fought by the enemies of the frontier. It is the old story of a commonwealth, failing to subdue the industrial upheavals of its own brew of anarchy, inviting the still less tolerable lawlessness of nondescript savage tribes to rout the social rebellion. The business of the Fleischman bacillus is to introduce into the human stomach colonies of spores and fungi by the oxidation of which the acids of gastric fermentation may be neutralized and chemicalized into crystals of insoluble elemental salts —a process which in the course of time must

run the system into a blockade of calcareous sediments, filling the capillaries, lymph-ducts, and general vascular exchanges with intractable obstructions. Gallstones, kidney calculi, gravel in the bladder, hardening of the joints and arteries, chronic rheumatism, neuralgia, endocarditis, etc., are some of the ailments that spring from the chemical reactions which the introduction into the system of these alien poisons give rise to. In place of being improved, the situation has thus grown incomparably worse. For while in the first case an acid stomach is readily made normal by a conscientious avoidance of the dietetic errors causing the affliction, on the other hand, after the organism starts its career of crystallization, due to the influence of the oxidation of the yeast, the individual faces a long agonizing career of lumbago, sciatica, urinary complications, or some one or other of the ailments and infirmities which assail a physiologically undermined and demoralized organism. And to the extent that Dr. Lindlahr is right: "That all disease is caused by something that interferes, diminishes, or disturbs the normal in-

flow and distribution of vital energy throughout the system"—every element introduced into the system which does not add regenerative, tissue-producing power to the body, is a drain on its life.* In biology as in theology the sentence holds good: Who is not for me is against me.

*In relation to the Fleischman yeast-theory, the further fact must be observed, that the yeast, through its alkalinity, greatly reduces the natural acidity of the gastric juice, which in order to regain its disturbed balance must bring about a very severe stress upon the nerves of the hydrochloric acid secretion. For unless the normal acidity of the stomach is restored, the digestion of the muscle-forming elements of the blood—the proteids—become disastrously weakened—a fact which seriously undermines the boasted qualities claimed for the yeast as a carrier of soluble vitamines. One of the symptoms of cancer of the stomach is the increase of its alkalinity, due to the presence of the malignant tumor, which like Fleischman's yeast has the power to absorb and neutralize the hydrochloric acid secretion. In either case, the stress of the secretory nerves to overcome the menace sooner or later leads to their permanent exhaustion, which means a growing inability of the stomach to digest but a small percentage of its proteids. What the consequences will be to a system with a ruined digestion is easily foretold, and will always remain so as long as the greed and ignorance of man will manipulate and distort the orderly processes of Nature's methods.

XII.

SUGAR—FOOD OR POISON?

THE popularity of sugar has been quite strengthened by its recommendation by the food administration for the soldier in the last war. Yet this recommendation has its basis in the expediency of the abnormal situation, not in the sugar itself, as a wholesome article of diet, and is no more advisable for ordinary situations than the trench equipment of the soldier to citizens in ordinary times of peace. Sugar for the soldier, whose life was keyed to a strain of mind and body, out of all relation to ordinary existence, is entirely different to sugar as an agency introduced into normal physiological chemistry.

Extracted from the beet, cane or corn, sugar in its very nature is a broken out fragment, distorted and unbalanced, and enters the system with no other virtue than that of a physiological irritant, whipping, by its mor-

bid affinities, the system into unwonted vital strains, while having no power in itself to replenish the losses suffered by the overtaxed organism.

Being an extract of high chemical concentration, sugar is practically a form of physiological gunpowder and explodes in the digestive tract very much like ordinary gunpowder would do if put in a burning furnace. And just as the explosion of gunpowder, if not severe enough to shatter the furnace itself, would certainly reduce the fire of its fuel into smoke and half-burnt cinders, so the explosion of sugar in the stomach breaks up the physiological combustion in the digestive field where living food holds the place of fuel, and the resulting fermentation, with its gas and bacterial acids—uric, carbonic, oxalic acids and alcohol—bring out in a striking way the same processes of smouldering fuel that take place in our house furnace.

Now, however, it is the presence of these very acids, and especially alcohol, that compels the system, by way of self-defense, to bring out a "hormone," equipped with the power to lift the physiological "brakes" that

regulate the normal supply of vital energy in the system. The "brakes" being removed, the organism, both physically and mentally, becomes temporarily flushed with a current of great vital power by which the menacing poisons are neutralized and eliminated from the circulation. It is the physiological mobilization of these constitutional reserves of nerve power, sweeping through the organism in its pursuit of the circulating poisons, that give rise to the sensation of vigor and high spirits which follow any artificial stimulation, whether directly by indulgence in alcoholic beverages, or indirectly in the form of fermentative foodstuff, such as candies, pastry and jams, with its output of acidity and alcoholization.

It may thus be readily seen why there should be such a strong demand for free sugar, white bread and sugar-coated doughnuts in the bill of fare of trench-life. The extraordinary strain upon vitality and nervous energy, due to the high-tensioned strain on every function responsive to thought and action, requires food whose stimulating power should be equal to sustain the draft. Here, if

anywhere, the end justified the means, as the gravity of the situation demanded the sacrifice of vital reserve forces, even with risk of subsequent nervous debility and premature constitutional breakdown.

But such powerful reasons cannot be claimed by the candy and pastry eaters who are engaged in the peaceful walks of normal life, and whose indoor sedentary occupations, with scant office supply of oxygen-bearing air, cause indulgences in extracted and concentrated foodstuffs to be doubly dangerous. It is amongst these injudicious feeders that we find the traditional "walking pictures of health," with their faces ruddy and round, bloated from the fermentation of retained physiological sewerage, with livers clogged from an excess of sugar and starch, while their kidneys are slowly torn to pieces by the crystals of half burned clinkers of uric and oxalic acids—pictures, indeed, but clinical pictures—not of health but of premature decay, forming the rank and file of those victims of high living, that are mowed down at the rate of half a million per annum by recognized preventable diseases. For what are

those deadly foes to human life, masquerading as typhoid, Bright's disease, pneumonia, tuberculosis and cancer, but fundamentally food diseases, due to wrong eating or overeating. And as alcohol, the great destroyer of nervous life, springs from fermentation due to sugar-charged food, it follows that sugar and its mixtures hold the position of major cause to the constantly increasing number and deathliness of modern diseases.

In an article: "Is sugar consumption increasing?" recently published in a current medical journal, the inference is made, that in view of the increasing consumption of sweets in states "gone dry," sugar is claimed to be a positive substitute for alcohol. This would explain the fact of women being held accountable for more than three-fourths of the world's sugar consumption.

This accelerated craving for sweets in the absence of alcohol shows unmistakably the true interrelation between the two. Introduced into the stomach, sugar starts the processes of fermentation that lead up to the formation of alcohol, which again has the same stimulating influence on the central

nervous system as the direct consumption of liquor has upon the cerebro-spinal nervous system.

In fact, from one point of view, the substitute is even more disastrous than the real thing, in so far that while respectability sanctions the intoxication arising from candy indulgence, the inebriety due to liquor is yet, in the better class of society, regarded as a vice. And yet when considered in the light of the medical statistics, recently obtained in one of the largest communities of the Pacific Coast, in which it was found that over 80 per cent of school children where threatened by degeneracy of the optic nerve, and the remaining percentage suffering from incipient cardiac insufficiency—it is readily seen that from a standpoint of health and efficiency the present reckless indulgence of candy, especially among our school children, is almost more fatal to the organism than alcohol itself!

XIII.

THE RIGHT AND THE WRONG SIDE OF COFFEE

DURING the four hundred years coffee has been recognized in the western world as a popular beverage, its power to control the minds and palates of its devotees has constantly increased. Its immense popularity as a world-beverage has not its basis in its taste, however, as is the case of sugar, nor in the cerebral intoxication with its unreasoning and unreal functional exuberancy, as that of alcohol; but in the energies generated in the bean itself, and imparted to the system in the form of muscular and vascular release. Hence the vital difference in the effects on the body, between alcohol and coffee, lies in the fact that in the former case the system has to pay for its over stimulation, but in the latter—if rightly enjoyed—the bean itself pays for the expense. This accounts for the weakening, exhausting reactions of the whisky stimula-

tions, unknown to the "cup that cheers but not intoxicates."

The effect of coffee on the system, however, is largely determined by the conditions under which it is prepared and enjoyed. Suspended in the bean is found a volatile substance—the empyreumatic oil—which gives taste and aroma to the coffee, and at the same time exerts a reducing and modifying influence over the stimulating power contained in its twin-principle—the caffeine. Taken together, these two elements, hold in a safe balance the stimulating and invigorating impulse contained in the coffee bean.

But this fine adjustment is available only when the coffee has a truly hygienic preparation. Exposed to boiling, the caffeine decomposes into an acid—caffeic acid—which through the empyreumatic oil breaks down into an alkaloid. This changes the entire character of the coffee, which, from a bracing, self generative invigorant, is turned into a nerve-lashing, exhaustive stimulant, in which the adjustment or balance between the stimulating and regenerative powers of the bean has been destroyed. Hence coffee should be

zealously guarded from the boiling pot, and should be prepared solely by the process of infusion through steaming, or the percolating process.

But apart from these constitutional qualities of coffee there are other conditions connected with its use, of which the coffee-drinking public cannot afford to be in ignorance. Barring a mere trace of nitrogen, the coffee bean contains no element of nutrition—consequently is not a food—and must, therefore, remain classed as a systemic stimulant. For an element which has no cell-building power, has not the vital or physiologic legitimacy in the system held by food, and hence should not share the regularity of the latter as a means of replenishment.

Coffee is a remedy—a medicinal agent—introduced by nature in the service of man, under conditions when his system demands it. Furthermore, as a tropical plant, its sphere of virtue must naturally and evolutionally be connected with environmental influences. This will readily be seen when we recognize that the circulation of the system in general is under the influence of the qual-

ity of pressure received respectively from without and from within the organism—from without, in the low temperature of the atmosphere, assisting the blood from the circumference to the center—and again from within, by the pumping action of the heart, forcing the blood from the center back to the circumference. In the tropics, however, where the temperature is higher outside than inside the body— the blood, in its course from the periphery, would be assisted in its exchange if an agent of expediency were introduced as a modifying force in the organism. Such an agent we find in the high percentage of the quick combustible sugar in the tropical fruit; in the high stimulant of the native spices, and in the re-invigorating principle contained in the coffee bean. In other words, coffee by its power to stimulate the innervation of the central vessels and tissues, and thus direct the blood-stream center-ward, accomplishes the same result from within the organism, as the lower temperature of the temperate zone does from without.

This makes of coffee a tropical beverage, not only genetically but also conditionally

and qualitatively. But as on the other hand each individual is a world in himself, with needs and necessities all his own, we may expect to find in the general temperament of man, such tendencies and characteristics which may demand for their modification and adjustment the same expediency which is represented by coffee in the tropics. Hence, as an occasional nerve stimulant and temperamental adjuster, coffee may be enjoyed even in the temperate zone by those whose temperament is subdued, and whose nervous exchanges are under control. By the high-strung, highly organized and nervously poised individual, coffee should not be used.

Moreover, in the philosophy of nutrition there is a principle which should never be lost sight of—that the only stimulant which can be safely enjoyed as part of our daily menu, is the stimulant contained in the food itself. As an intregal part of its nature, every foodstuff contains a stimulant, so poised and adjusted that it imparts a natural impulse of power to the processes of digestion and assimilation. Divorced from this combination, the stimulant becomes a mere lash or irri-

tant, which has needs and uses only as expediency, when environments and conditions make such adjustments necessary.

For those, whose temperaments permit the use of coffee, no admixture of sugar and cream should be allowed to interfere with its virtue. Cream especially perverts the nature of coffee by reducing its empyreumatic oil into a tannic acid compound—at once indigestible and toxic, giving rise to the formation of bile acids in the liver, with the subsequent appearance of a muddy complexion—due to bile pigments deposited in the skin. Another precaution of no less importance to the safe enjoyment of coffee is its temperature. From strong physiological reasons no beverage should be permitted to enter the system at a higher temperature than blood heat, and it may be safely said that the greater injury wrought by the consumption of coffee lies in its admixtures and temperature, rather than in its native disqualifications.

XIV.

THE USE AND MISUSE OF HONEY

AMONG the great temptations which, like the fabulous Sirens of old, try the self-mastery of the individual, we find honey—the chief representative of the "sweetness of the earth." The persuasiveness of this, at once natural and manufactured product, has its basis in the duality of its nature: a sedative sweet, and a penetrating acid—a combination that accounts for its intense cellular impressiveness, and its power to give rise to reactions in the associated nerve-centers, in terms of taste-experiences that amount to veritable gustatory ecstasy.

Honey is the extract from what is called "nectar"—a physiological waste product, which, according to Charles Darwin, is thrown off from the sap and pollen of the flowers, at the end of their fructification process. Chemically analyzed, honey is found to

be a very complex substance containing dextro-glucose, laevo-glucose, cane-sugar, mucilage, wax, essential oils, coloring bodies, mineral matters, pollen, manite acid and water.

It is the presence of this manite acid in the honey that demands caution in its use, as it has been physiologically demonstrated that this acid, when brought in touch with nitrogenous substances is found to precipitate the latter into states of alcohol, ammonia and carbonic acid gas—elements which when set free in the system mean nervous intoxication and systemic poisoning. This action of honey upon nitrogen has early been observed, and from time immemorial made to serve certain purposes by different races and types of men. So for instance the old Norse people, by soaking malted grain in solutions of honey brought out a brew called "mjod"—an alcoholic beverage which when indulged in too freely, was capable of producing a profound and lasting intoxication. And as "mjod" is a derivative from the Sanskrit "mead"—a word of corresponding meaning—it is evident that even in Old India, honey was recognized

and utilized for its stimulating and intoxicating characteristics. In our own days its power of fermentation is utilized in Abyssinia, Russia, Poland, the Balkan states and Austria, where it continues to form the basis of very intoxicating beverages.

The fact, however, must be recognized that honey receives its more distinct toxic qualities from the nature of the flowers used in its production. In East Nepaul where the fields are covered with Rhododendron the bees turn out a honey which is not only intoxicating but throws the indulgent into a state of stupor resembling the effect of opium. In Brazil the honey drawn from the plant Lechaguano—a red-colored honey—may, if used habitually, produce hallucinations and delirium. In North America the Mountain Laurel has been demonstrated to contain a honey-yielding nectar—a positive toxic element—which may seriously disturb the nervous equlibrium of the consumer.

The old Greek geographer and scribe Herodotus, who lived and wrote in the 4th century before Christ, mentions incidentally that honey, on account of the preservative princi-

ple contained in its acid, was used in Egypt as an essential ingredient in the embalming of their dead.

From this it naturally follows that honey should be enjoyed with care and moderation, and always with a view to its medicinal value. The ancients were well aware of the medical properties of honey. Thus in the Materia Medica of the old Greeks, the Romans and the Saxons, honey held a very important place, especially in afflictions of the throat and chest, and in this respect it has by no means outlived its value and usefulness. For being a vigorous stimulant, honey promotes expectoration, and aids nature in breaking up the physiological fungoids, which in catarrhal afflictions cover the mucous lining of the respiratory tract. Its employment is indicated in hoarseness, colds and congestions of the bronchia and lungs. But its dosages, to avoid fermentation, should be taken on an empty stomach and judiciously diluted with hot water, or weak tea or coffee.

Used in connection with starchy or nitrogenous food, honey will give rise to gastric disturbances,—directly or indirectly. Its

saccharine element starts processes of fermentation in the starchy part of our foodstuff, while its manite acid breaks up the nitrogenous compounds. The gas, which is always present in weak stomachs after mixtures of honey with meals, is an unmistakable indicator of the presence either of fermentation or decomposition, according to the predominating starchy or nitrogenous character of the food. And it may be stated right here, that the laxative virtue accredited to honey, has its main basis in this very fermentation, as the system, by its constitutional instinct of self-preservation, is compelled to eliminate, through the bowels, the toxins and ptomaines generated by the mixture of honey with food.

It is a common popular belief that honey is a legitimate sweet, and can be used with dietetic safety where other kinds of sugar are regarded as dangerous. Nothing is more delusive. The presence of manite acid in the honey, renders its combination with foodstuffs even more injurious than ordinary cane sugar. For while it may be physiologically legitimate to sweeten incompletely ripened

fruit with a complimentary of free sugar, and thus assist a process of ripening, which nature, on account of too little sunshine, warmth and other necessary environments, failed to complete; yet, however, if in this sweetening, other ingrediences than chemically pure sugar are added to the fruit, the latter will change its entire nature in consequence of the complexity of the ensuing chemical reactions. And as honey is a highly complex compound, its combination with fruit means the chemical engagement and eventual precipitation of every element subject to the several affinities.

It is the acidulation of the saccharine matter of the honey which gives rise to its intense sweetness, and at the same time accounts for its great stimulating and invigorating power. But as stimulation has its basis in cellular combustion, and the latter means a wholesale destruction of oxygen, it follows, that unless atmospheric oxygen is in abundance, the indulgence in honey as a daily food —even if the stomach proves strong enough to stand the acid test—must gradually lead to general cellular and nervous breakdown.

And as the liver and kidneys are the stokers, so to speak, of the human body-furnace, on whom it devolves to remove the physiological clinkers, the uric acid and other half-burned material, etc., from the circulation—it follows that it is on these vital functionaries the greater burden of isolating and removing the nutritional excess is placed. In this connection it is significant to observe that the bees prefer the mountainous countries, with an oxygen-laden air, for their field of activity. It is also noticeable that wherever we read of people enjoying honey as a means of nourishment, we always find them to be dwellers of highlands and mountains. Hence, it is readily seen that a food, which may be tolerated and endured by persons mostly engaged in outdoor physical activity —as farming or stock raising—if indulged in by people living in a crowded, oxygen-impoverished city, must mean a serious strain and gradual weakening of their entire metabolism.

In spite of these facts we find individuals living in crowded cities, engaged in indoors work, indulging with seeming immunity in

the most concentrated forms of natural and unnatural diet. The immunity, however, as has already been referred to, is a mere sham battle, and simply indicates the powerful resistance of an originally well fortified constitution, equipped with splendid functional resources, which may defy half a lifetime of severe vital stringency before the final grand physiological smash occurs. For immunity to nutritional excess, with its inevitable chemical poisoning—means the emergency call for constitutional reserve forces demanded by the system, in order to subdue a life-threatening attack from external or internal foes—the cancelling of unconstitutional expenditures, so to speak, by a reckless checking out of the very principal of the investment. Every time the system overcomes the natural consequences of an unnatural indulgence, be it smoking, drinking, eating or any form of direct or indirect physiological poisoning—means a foreshortening of the life perspective; the fortification of one vital center by the corresponding weakening of others; the conscription and sacrifice of national energies for the smothering of a

local insurrection. The only immunity which has not to be paid back in terms of compound vital interest is that immunity which has its focus and motive in an increase of personal service and usefulness. Vitality has its only safe and enduring compliment in morality; and when in our relation to food we allow ourselves to be gauged, not by palate-tempting, unnatural food mixtures for the mere sake of indulgence, but by an ardent desire to add to our stock of health and worthy citizenship, we shall sooner or later evolve that natural health-instinct which like the ancient Greeks and Romans required no hair-trigger-balanced, common-sense-bewildering standards of physiologically incompatible calories, to make perfect, full-orbed physical and moral manhood, the common heritage of men.

To make honey a safe part of diet, it should be enjoyed only with well toasted rye bread, unsalted butter, nuts or eggs, lettuce and olive oil—and only then twice a week. No milk, meat or fruit in connection with honey.

XV.

"HEALTH FOODS" THAT SPELL HEALTH

TO insure integrity and health to physiological life a certain care with regard to food combinations is indispensable; and as a general, and mostly safe line of food-mixtures we may suggest combinations of whole-wheat bread enjoyed with green, salad vegetables, such as lettuce, celery, endive, watercress, dandelion, mustard greens, carrots, turnips—served raw in suitable combinations, and dressed with pure olive oil. As a proteid ingredience to be added to the meal a free choice may be had between nuts, eggs, meat or fish—minus any form of gravy, dressing, soups, pastry or fruit—raw or cooked.

As to starch food the patient may be allowed to choose between rye bread or the Irish potato, whole wheat bread, undressed rice or squash.

Another safe combination is found in a

fruit salad made up by orange, banana and apple, well cut up, and served with a home-made acid-free mayonnaise dressing with no other ingredients than olive oil, beaten egg, one-half teaspoon lemon juice and a touch of nutmeg or cinnamon. Bread should be substituted by walnuts or pecans—though a slice of well zweibacked rye-bread and unsalted butter is permissible, if the digestion is normal and robust.

A third meal should cover the cooked phase of diet in form of baked tubers, pulses or vegetables, viz., baked Irish potatoes, beans, peas, squash, spinach, asparagus, celery root, corn on cob, carrot, beet, turnip, cabbage, onions, garlic—though only two or three of these vegetables should be taken at each meal. At this meal bread should be substituted by some other form of proteid food such as beans, peas, lentils, fish, eggs or meat —some two or three times a week.

If the meals are small and well digested, a raw, crisp apple or a glass of warm, raw cow's milk, according to disposition and conditions, is permissible at time of retiring.

XVI.

THE SCIENTIFICALLY BALANCED BILL OF-FARE

Dried Fruit Salad

DRIED prunes, peaches, pears or apricots, soaked over night and simmered some 15 minutes in the morning. Enjoyed with nuts or eggs and lettuce salad.

Fresh Fruit Salad

(1) Orange, banana, apple, equal parts sliced up and mixed with the meat of four walnuts, one heaping teaspoonful milk-sugar, one teaspoon olive oil and enjoyed with lettuce salad.

(2) Arizona grapefruit, fresh pineapple, equal parts and prepared as the one above.

(3) Ripe grapes, pineapple, pecan meats —served as above.

(4) Cranberry, milk-sugar, lettuce, melt-

ed cheese or toasted crackers, served as above.

(5) Strawberries, blackberries, blueberries, raspberries, or any kind of fresh, ripe fruits or berries may be enjoyed if prepared in the above fashion and allowed to constitute a meal in themselves with the addition of egg, nuts or cheese with toasted crackers, unsalted butter and sugar of milk.

NOTE: If the stomach is normal the salads may be taken with one-half dozen soda crackers, dextrinated by thorough toasting in an oven and upon cooling covered with unsalted butter.

If the stomach should not tolerate raw fruit, the latter may be stewed and combined with head lettuce, nuts and home-made mayonnaise dressing. No sour fruit should be used. Milk sugar is the proper sweetening, though cane sugar by cooking into the fruit becomes inverted and neutralized.

No fruit salads should be eaten more than once a day, or four times a week. When the fruit salad is omitted a raw apple can be enjoyed at time of retiring.

VEGETABLE SALADS—RAW

Like fruit, the vegetables may make complete meals in themselves, suitable to take the place of either supper or luncheon, or breakfast, served with rye bread or whole wheat bread, well toasted, and unsalted butter.

(1) Lettuce, two heaping tablespoons of raw, grated carrots, parsley, the meat of four walnuts or equivalent measure of pecan nuts, zweibacked rye bread, unsalted butter. The salad should be prepared by adding some chopped parsley, a pinch of salt, two teaspoons olive oil, with a small cup of hot water, stirred quickly into the pulp.

(2) Watercress, turnips, parsley, four walnuts, almonds or pecan nuts—served in the same combination as above.

(3) Mustard greens, dandelion, lettuce, soft boiled egg, rye bread toast and unsalted butter. Combined as above.

(4) Bermuda onions—soaked 15 minutes in salt water, served with lettuce, parsley, crisp bacon, corn bread made from well cooked corn meal mush. (No bread.)

(5) Fresh cucumbers, lettuce, tomatoes, green onions, parsley, boiled egg and olive oil dressing. (No bread.)

PREPARED COMBINATIONS:
(Cooked and Raw.)

(1) Steamed spinach, baked potatoes, roast beef, parsley, lettuce. (No bread.)

(2) Steamed or broiled fish, young green onions, boiled undressed rice, parsley dressing. (No bread.)

(3) Vegetable stew: Onions, carrots, parsley, garden peas, garlic, soft boiled egg. (No bread.)

(4) Steamed artichoke, roast chicken, raw celery, parsley, ryebread toast.

(5) Roast lamb, cabbage slaw (no vinegar, mustard or cream dressing), parsley, lettuce, rye bread.

(6) Buttered beets, summer squash, lettuce, parsley, cornmeal mush, unsalted butter.

(7) Beans, peas or lentils, with stewed carrots, onions, parsley, garlic and baked potatoes. (No bread.)

(8) Spinach, with egg; carrot, parsley, ripe black olives, undressed rice, sweet butter.

(9) Asparagus, baked potatoes, fish, parsley-gravy. (No bread.)

(10) Cauliflower, string beans, egg, parsley, buttered toast.

(11) Steamed young onions, roast lamb (no gravy), sweet potatoes, parsley. (No bread.)

(12) Artichokes, roast beef, rice, turnips, parsley gravy. (No bread.)

(13) Stew of garlic, parsley, onions, barley, joint of lamb, chili pepper, crisp toast,

(14) Macaroni with onions and cheese, carrots, parsley and spinach. (No bread.)

(15) Beets, summer squash, parsnips, mustard greens, rice and sweet butter.

(16) Puree of green peas or lentils with onions, thyme, garlic, barley, carrots and parsley, strained. Served with lettuce sandwich.

(17) At 10:00 P. M. a raw, crisp apple or orange, and grapes, according to season.

XVII.

THINGS TO BE AVOIDED

EXCITEMENT, worry, nervousness, hurry, temper, despondency, criticising attitude, heated discussion at meals affect the system as positive poisons. No unkind word should ever be spoken at meals. The gastric secretions are as sensitive to conditions of the mind as the sensitive plate of the camera is to light. Joy exhilarates digestion; gloom depresses or vitiates it. Eating is a business in itself and should be separated from all other mental or physical engagements. To eat with the end in view of health, usefulness and service, insures the greatest return of strength and joy to the eater.

Avoid:

Fruit with meat.
Fruit with cereals and mushes.
Fruit with starchy vegetables.
Mixtures of raw and cooked vegetables.

Mixtures of raw and cooked fruits.
Potatoes in any other form than baked.
Cereals and potatoes at the same meal.
Drinking at meals.
Alcoholic beverages.
Extracted, concentrated, fermented foods.
Shortened, spiced, patent-sifted breadstuffs.
Grease, gravies, soups.
Milk as a table beverage.
Nuts, with meat, eggs or beans.
Salmon, lobster, oyster, shrimp.
Canned meats or fish.
Candy or pastry in any form.

REMARKS

In the preparation of foods or salads of any form, it is essential to realize that fruits and the starch-bearing foods such as tubers, grains and pulses, potatoes, beans, peas—should never be mixed together. Hence it is advisable never to combine fruit salads with any other foods than egg, nuts, cheese or thoroughly toasted soda crackers, as intense baking destroys the starch molecule, or rather converts it into the non-fermentable dextrin. To this, however, may be added the starch-free, sedative and neutral vegetable known as lettuce, rich in iron and magnesium, and containing a principle of attenuated nerve-soothing opium.

As to vegetable salads only the raw species should be used. This because of the fact that the vital electricity, constitutional to all raw fruits or

vegetables, is depolarized into the opposite phase—magnetism, when exposed to a temperature exceeding 212° Fahrenheit. As raw food, owing to its storages of high tensioned vitality, yields quicker to the digestive process than in its cooked or depolarized form, it follows that the presence of the two types of foods at the same time in the stomach, often gives rise to unmanageable situations, which in the case of a weak digestion must lead to fermentation and distress.

There are vegetables, however, which should not, even in their raw forms, be used in the same meal. The high-tensioned onion, with its volatile oil, if mixed up with the starch-and-sugar-laden carrot, or the sulphur-and-phosphorus-charged turnip, gives rise to veritable physiological explosions. When cooked, however, these barriers are all removed, and the groups can be safely handled in the same kettle. Exception to this rule, however, we find in the tomato, which owing to its halfway position between the fruit and the vegetable, should never be cooked with either fruit or vegetable, though in its raw state it may combine with the lettuce, onion, parsley, cucumbers and nuts.

As to mush porridge, and breakfast cereals in general, it should be recognized that oatmeal and cornmeal being very heating, are serviceable only in cold weather, and should then be boiled for two hours, and always with an onion cut up and cooked into it. No milk should be used in connection with this mush, though cows' butter and sometimes even a little nut-butter may be enjoyed with it.

On the other hand all manufactured breakfast foods should be avoided. Any treatment of cereals such as flaking, sterilizing, pre-digesting, denaturing, crimping, malting, glutenizing, etc., without in any way lessening the digestive labors of the sys-

tem, offer nothing but devitalized husk in return. The ancient rule of union is right and applicable to all phases of life—in dietetics no less than in matrimony: "What God has united, shall men not separate."

XVIII.

GENERAL CONSTRUCTIVE THERAPEUTICS

IN the knowledge and application to the human body of the laws and principles that operate in the pharmacopoeia of nature, lies the only guaranty for a safe adjustment and cure of bodily ailments. And as the movements, actuating and stimulating physical growth and dependent conditions of health, involve the operation of every known principle of chemistry, mechanics and dynamics, it follows that the science of healing must continue to extend its researches, and become acquainted with every field or phase of life where such knowledge may be obtained. All the kingdoms of nature: air, water, fire, earth, should diligently be brought to bear upon the diseased body. In place of spending mental and physical energy on the composition or decomposition of natural, God-given foodstuffs, by reducing the precious

grain into super-processed, chemicalized, sterilized, devitalized "Health-foods," denatured soup-tabloids or meat extracts, etc., our great food chemists might concentrate their minds on discovering the vital connection between certain plants and certain physiological functions; between the idiosyncrasies of human nature and the corresponding potencies of physical nature; to ascertain with scientific accuracy the true curative value of certain "home-cures," old-fashioned nature-remedies and herbal compounds; why and how, for instance, parsley and watercress are good for the kidneys, tomatoes, dandelion and onions for the liver, celery and garlic for rheumatism, cranberries, internally and externally, for eczema, raw carrots for stomach, skin and intestines, lettuce for the nerves and blood, and beets for the heart and muscles. In other words to find scientifically determinable values for nature herbs by ascertaining their intrinsic chemical-physiological relation to the functions and organs on which they seem to exert an influence; and to establish a standardized terminology between these relations. Such a study would be of epochal value to humanity.

Nor should the purely mechanical phase of human nature be neglected: the stretching of muscles, vibratory stimuli for slow circulation, adjustment of sprained or strained tissues through massage treatments, etc.—employing every measure that aims at restoring man's true relation to nature, and thus to render his body a more worthy, more fit instrument for the service of humanity. The elements of the body are the elements of the universe, performing their functions under the sway of identical laws.

But while the means and instrumentalities of health belong to the molecular, tangible, rationally and scientifically determinable plane of existence, the gauge of judgment and standard of motive must be located on the moral and spiritual planes. The physician must draw his learning from the mental plane, his feeling from the spiritual plane, and his motives from the moral plane; while the patient should be treated on the particular plane of his disease. If his mind be affected, to that extent the treatment must be mental; if his feelings are deranged, approach him from the plane of soul and con-

science; if his motives are confused speak to his moral nature—but in any and all cases, the appeals to his conscience and mentality must involve his reason and self-conscious powers of judgment. And as all diseases, with the exception of accidents and congenital disorders, have their root and genesis in the moral plane, in terms of desires and appetites, the road to cure and health must naturally lead through the fields of conscience and morality.

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