Herald of Health

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Three Signs of Health

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MEDICAL books all deal more or less with that part of the science of medicine which describes symptoms and causes of disease, while little or nothing is said concerning the signs of health. We do not, when we are in good health, go to the physician and say, "We are well, thank you!" and hand him a fee. It would be better if we gave the physician a fee for studying health instead of disease, since he prefers the former, while the present condition is due to our own shortsightedness.

If physicians were paid according to the rise and fall of the scale of the public health,—that is, to say, if their salaries were increased when the health of the public is high, and decreased with the increased amount of sickness—sanitary conditions would be very carefully watched; instead of having a few specialists or scientists working along these lines, every practitioner of medicine would study symptoms of health and the prevention of disease.

Health in a human being is the perfection of bodily organization, intellectual energy, social activity and moral power. It is entire freedom from pain of body and discordance of mind. The first constituent principle or symptom of health is beauty.

Beauty

Health gives development, and harmonious development is beauty. Every vegetable and every animal is beautiful, after its own type of beauty, when it is most perfectly developed, in man or woman the exact development of every part and function being the highest possible beauty.

Ideal beauty must have the following: symmetry, proportion, curvature, colour, and expression. Especially in woman does one look for these elements. She is the highest type of beauty on earth. Her form is moulded and finished in exquisite delicacy of perfection. Beauty is revealed in her sweet voice of sympathy; sparkles on her brow of wisdom; adorns her maternity; shines in her virtuous life; breathes in her pious spirit; and flashes in her loving eyes. No animal on earth has a better proportioned body, features and curves more symmetrical, colour more exquisite, expression more defined, movement more graceful.

The ancients regarded beauty as a mark of divine favour. Socrates called beauty a short-lived tyranny; Plato, a privilege of nature; Cameades, a solitary kingdom; Theocritus, a delightful prejudice; while Aristotle claimed that it was better than all the letters of recommendation in the world. Ovid said that beauty was a gift bestowed by the gods, and Caoneades represented it as "a queen without soldiers." Diogenes called beauty "woman's most forcible letter of recommendation." While many of the

old philosophers denounced beauty as worthless and mischievous, though they were none the less its slaves. A beautiful woman is a natural queen in the universe of love, where all willingly pay homage to her reign.

Yes, beauty is the greatest indication of superb health! All who desire it for self and offspring should study the laws of health; for this is the only way it can be obtained. It is to be sought, admired, and loved.

Activity

Another attribute of health is activity. This is one of nature's greatest laws. Activity changes the uninhabited barren wastes into beautiful cities of habitation. It tunnels under rivers for the traffic of a people; it converts lightning into electricity, and provides daily sustenance for the one thousand millions or more of the family of man. Health comes from ceaseless activity; it is the prize of a constant struggle. It cannot be had for nothing, since there is nothing in the world possessing any value which can be had free. One must work to get health, then work hard to keep it. Cicero said, "It is exercise alone that supports the spirit and keeps the man in vigour."

Health is our capital, and muscular activity tends to give us health and strength. It, like money, can be accumulated, invested, and thus doubled and redoubled. We should reinforce our physical "bank account," or capital, with a "surplus" of stored-up energy, and thus begin to get interest. If we use the mind to excess, and do not "bank" energy, but keep drawing on the "principal" of vitality, the day will come when we shall be forced to the wall, with the inevitable outcome—physical bankruptcy.

Let us begin a bank account, *now*, by indulging in a little daily systematic exercise. "Nature knows no pause," said Goethe, "and attaches a curse upon all inaction." Still water becomes stagnant; sloth like rust consumes faster than labour wears; the bicycle falls the moment it stops; and activity of mind and body keeps many a life from falling.

Strength

Another sign of health is strength, or energy. History shows that the successful men in all walks of life, in both ancient and modern times, were of strong physique. David, Moses, Jacob, Paul, in fact, all of the leaders of Biblical times, were men of power. Socrates, Plato, and Aristotle were three of the strongest men of ancient Greece, while Cicero and Cæsar were Rome's strong men. Washington, Lincoln, Jefferson, and Webster were men noted for brain and brawn. Likewise Shakespeare, Byron, Goethe, Bismarck, and Gladstone were admired the world over for their strong bodies and master minds. The names of hundreds of great men of our present day, who possess strong lives and are recognized by the world as leaders, might be cited in connection with the illustrious ones of the past.

History through all the ages shows that men and women with strong wills, strong desires, strong passions, and who are noted for their longevity, have lived strong lives, and that strong lives come from continual activity of mind and body.

"THE average length of life in Berlin has increased nine years since 1880, over one year in four. At this rate of increase, what would the average length of life be in two hundred years? The general average was increased by the reduction in infant mortality."

Racial Hygiene and Vigour

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MODERN eugenics claim virtually that through the unnatural conditions with which modern civilization has surrounded us there is no such thing to-day as real natural selection; physical degeneracy is on the increase. False social standards are responsible for false mating and lack of individual and national vigour, and the only possible cure for this condition is rational scientific human breeding for the welfare of the race.

The principle factors which influence the development of racial vigour are racial stock, occupations, sports and pastimes, systematic physical education, social and religious customs, political quietude or the opposite. These factors are in any age not constant. They have their rise, development, and decline, but they leave behind a certain definite impress upon all human development. Race history reads differently because of their existence and influence. All history presupposes the physical background. Written history has been largely the record of the conflict of individuals and of the principles which animated them.

Until the present century the masses have made little showing on the annals of any people. It is the quarrels, the blood feuds and spoils of the great leader of the time or times which the historian tells us moulded the whole trend of the times. It is the profligacy of a Cæsar which feeds the mouths of the common people of Rome and robs them of their self respect; makes of them a race of professional paupers and idlers, which by public games and amusements, by the constant pampering of the appetite for the excitement of the scenic, the cruel, and debased, robbed them of the earliest birthright of the Roman, of his rugged health, of his sense of justice and fair play, of the sacredness of human life, of the physical basis of virtue and and religion. The utter ruin of his race is nothing to a Nero if by it he can reign a Cæsar.

In spite of the fact that history has been largely written to record the doings of great leaders, yet the background and the setting of the picture is always the personal power of the pawns, or translating into the proper social term, of the peons, and we are learning in this generation of growing democracy and freedom that in the average man of the middle class, the man who is still counted as the pawn in the great political chess game, lies the power and the perpetuity of a nation and of a race.

Let me review briefly, therefore, the hygienic habits and racial vigour of a few peoples in order to point one or two practical truths. Let me dwell longer on the hygiene and racial vigour of the Greeks from the fact that they, of all primitive peoples, present an instance of racial vigour gained in two ways, primarily through natural selection, and later during the Golden Age preserved through the conscious self-direction of their great philosophers; in other words, the Greeks first defended and practiced the modern science of eugenics.

Of ancient races the Greeks never lost the games of childhood. The Greek obeyed no hygienic law as such, but followed a natural impulse to live to the full his physical life and to perfect to the utmost, beauty of form,

face, and physical expression. In the earlier period he indulged in martial games in preparation for war-ceremonial, funeral, and religious games.

During the second period the natural interest in religious festivals grew to national importance. In the Golden Age her statesmen and philosophers apprehended the secret of the strength of the race and of the weakness of individual, and attempted by perpetuating certain beneficient customs and by the enactment of laws, to preserve the vitality and beauty of the race (eugenics).

Formal gymnastic training grew up out of recreative games. Preparation became essential to the winning of honours, and gymnasia had the regular stadia, palestræ, boxing areas, baths, trainers, etc. which belong to modern training. Out of the observation the effects of baths, of massage and certain movements gone through during exercise grew up the first system of medical gymnastics under Hippocrates (Herodicus first showed the relation of exercise to health). Of these hygienic habits of the Greek, regular exercise proved to be the most vitally essential to national health, whether it has taken the form due to occupation, war, gymnastic training, or national sports and pastimes.

In ancient history the Hebrew is the only marked instance of national health attained primarily through public legislation, through obedience to the laws of hygiene, although the early pastoral life of this people has doubtless been conducive to perpetuity of the race.

The Persians owed their vigour during the centuries of their greatest power to racial stock, pride and traditions of physical prowess, and to the systematic physical drills which grew out of their martial spirit, to the hunting, riding, running, spear throwing, shooting, work on fortifications, and drill with arms and nets.

The Greeks had much the same racial experience as the Persians. They came of the same sturdy stock. The earliest games of the heroic age of the Greeks were characterized by the same martial elements. The funeral and other ceremonial and religious athletic festivals of this period were largely made up of military exercise.

From the heroic age of the Olympic festival was the incentive for the whole athletic festivity of Greece. Around it turned the forces which determined the health and vigour of the whole people. Out of this idea grew physical perfection with the growing symmetry of the form of the athlete through the centuries developed the final concept of the perfection of physical beauty of face and figure. This led ultimately in the Golden Age to the final concept that the beautiful is divine. Athlete, philosopher, statesman, poet, maid, and sculptor alike sought the chief end of life in the beautiful as the good, as the divine. The Spartan was perhaps an exception to the statement that the love of the beautiful as divine was the ruling motive of every Greek during the Golden Age. The chief motive for existance on the part of the Spartan was war, and all physical training was in preparation for war. The Greek philosophy advanced one step further and proclaimed that this beauty must include not only symmetry of form and face and grace of movement, but of beauty of mind and character, and that he who sought the beautiful in all things alone pleased the gods and at the same time attained the highest degree of good from life.

The natural means by which the individual was to attain the beautiful was by a life most replete with enjoyable forms of activity. To experience all the fulness of physical joy in simple living, the man must be clean in physical habits—baths, etc.—simple in diet, and above all things systematic in his physical training. The preservation of the play instinct in the physical training of the Greeks, the spirit of sport for sport's sake among men as well as children, and the preservation and development of a vast number of games for childhood, appears to be both the cause and the effect of this ever-growing principle of action among the Greeks, this living at one's best by enjoying at one's fullest capacity the form of physical activity suited to each period of life.

The first real history of systematic physical training begins among the Greeks. It is important to study this system thoroughly for its own sake, but it is even more important as a standard of comparison for the study of the physical habits of ancient peoples and as the source of all leading modern systems of physical education.

During the Middle Ages physical vigour was almost a matter of racial stock, habits, purity of life, and religion. Racial vitality was then and is now one of the most important factors in history making. The Hebrew has outlived all his conquerors, and that without any national existence. He owes his racial vitality largely to certain religious and hygienic observances. The little island of Britain rules the world to-day because of her racial heritage. World supremacy has always been due to the physical prowess and superior intelligence. In the nations of the past it has lasted as long as that physical health and power, no longer.

Intellectual cultivation, esthetic sense, and political shrewdness are good yoke fellows for physical prowess in a nation. They have always been powerful aids in the establishment of world supremacy for a people, but they have never been able to advance or even to maintain a civilization long after the physical vigour of the race has declined. Greece perished as a world power from lack of racial vigour; so also did Rome.

Treatment of Chronic Rheumatism

THE diet is of first importance, and the popular notion that a fruit dietary is to be strictly avoided in rheumatism has no foundation in fact. For many years the writer has practised placing rheumatic patients upon a strictly fruit diet whenever evidences of auto-intoxication were marked. Not infrequently the patient is required to eat exclusively fresh apples, grapes, or any other seasonable fruit for several days in succession.

A fruit diet is certainly incapable of increasing the accumulation of uric acid, as it does not furnish the necessary material for the production of this toxic element. It is not sufficient simply to withhold flesh meats in cases of rheumatism. The patient must be furnished with an ample supply of easily digestible foods which he can relish, and which will furnish to the body the needed nutritive elements with the least outlay of vital energy. If dyspepsia be present, which is true in many cases, cereals must be used in a dry and well-dextrinized condition (zwieback and other cereal food pro-

ducts dextrinized by heat). Mushes must be carefully avoided, also starchy vegetables. Purees of peas and beans may be eaten in moderate quantities, but the skins of these legumes must be excluded. Mustard, pepper, and condiments of all sorts must not be used; the use of tobacco in any form must also be strictly prohibited for the reason that the nicotine not only depresses the heart, but greatly taxes the liver and kidneys,—first, in the work of oxidizing and destroying the poison; and, second, in eliminating it.

Water Drinking Essential

To the great thinning of the blood which follows copious water drinking, is due the remarkably increased activity of kidneys, skin, and bowels. Examination of the urine not only shows that the quantity is increased by water drinking, but that the urea and other solid constituents are increased in amount. By the continued employment of this measure, the tissues may be thoroughly washed free from accumulated waste, and to such an extent that uric acid, urates, and a number of other products of imperfect oxidation may be reduced to almost imperceptible amounts. The quantity of water taken should be from two to three quarts daily. Distilled water is preferable to mineral waters of any sort. Distilled water, or water containing the smallest possible amount of mineral, is most readily absorbed. In most cases it is best to take the water at the ordinary room temperature. Deluging the stomach with hot water relaxes the organ, and lessens its digestive power. Hot water drinking is to be recommended only in cases of gastritis accompanied by a profuse secretion of mucus, and in cases of hyperpepsia.

The Value of Exercise

Next in importance to diet and water drinking is exercise. Every chronic rheumatic must be made to perspire daily. It is not well to produce constant and profuse perspiration, but the highest activity of the skin short of actual sweating may be maintained with benefit. The skin ordinarily eliminates from an ounce to an ounce and a half of liquids an hour. In profuse sweating, this amount may be increased to from fifty to sixty ounces hourly. Such an increase for a short period is highly beneficial. Rheumatics generally do better in a warm, dry climate, and suffer less in clear, dry weather, than at other times, as activity of the skin is promoted under these conditions.

Rheumatics need exercise more than almost any other class of persons. This is one of the most efficient means of burning up wastes. Vigorous exercise increases the amount of oxygen absorbed, and the output of carbon dioxide. This is evidence of the improved oxidation of the nitrogenous wastes. Although rheumatic patients need exercise more than any other class, they are unfortunately so crippled that general active exercise, such as walking, horseback riding, etc., is out of the question. Exercise is also likely to be followed by an exaggeration of the pain. Rheumatics suffer from other embarrassments in relation to exercise, among which may be mentioned shortness of breath and general muscular weakness. These difficulties must be overcome by carefully graduated muscular work, beginning, if necessary, with the more gentle forms of massage, gradually increasing the vigour of the manipulation. As soon as able to do so, the patient must be encouraged to take active voluntary exercise. The

amount of exercise to be taken each day should be increased as the patient's capacity for muscular work increases. The outdoor gymnasium, affording an opportunity for exposing the body to the air and sun, is of the highest value in cases of this sort. Sand baths are particularly helpful. The patient should be very careful to avoid chill from evaporation after exercises which produce perspiration.

Hot Baths

The value of hot baths in rheumatism, both chronic and acute, has been recognized from the earliest ages. There are, in various parts of Italy, the ruins of many ancient Roman baths, in which the rheumatic and obese gormands of the degenerate days of ancient Rome were daily subjected to hot-water baths, as well as vapour and hot-air baths, followed by massage and exercise, for the purpose of combating the effects of their luxurious living.

All forms of hot baths are beneficial in rheumatism; but the hot-water bath, the vapour bath, and the electric bath, especially the latter, are to be preferred, for the reason that these are the quickest and most efficient means of securing an elevation of bodily temperature, and thus increasing nitrogen oxidation.

But hot bathing alone is not sufficient in this disease. Hot baths of all sorts are attended by the inconvenience that they produce a decidedly depressing effect. All the vital processes are depressed; the heart action, in particular, is diminished in vigour. The relaxed condition of the blood-vessels of the skin, produced by the hot bath, exposes the body to danger from rapid loss of heat, resulting in chill. These several inconveniences may be wholly avoided by a proper cooling procedure immediately after the hot bath. The method must depend upon the various circumstances. If a hot-bath immersion has been administered at a temperature of one hundred five degrees to one hundred eight degrees (about the proper limits), the temperature of the water may be lowered, within one or two minutes, to eighty degrees. The patient may be kept in the tub with gentle rubbing for from two to five minutes, by which time the temperature of the skin should be sufficiently lowered to make it safe to remove him from the bath, wrapping him in a Turkish sheet and woollen blankets, and permitting him to be quiet until his skin is thoroughly dry, and the equilibrium of the circulation restored.

The hot-blanket pack may be followed by a short wet-sheet rub, the vigour of which may be gradually increased from day to day by lowering the temperature of the water employed, starting at sixty-eight degrees, and lowering the temperature one or two degrees daily to fifty-five degrees, and by increasing the duration of the application from one-half minute at the beginning to two or three minutes later on. In very feeble cases, the cold-towel rub or cold friction may be employed.

The building up of the general health is a matter of primary importance in chronic rheumatism. Every effort must be made to improve the general physical condition of the patient.—*Modern Medicine.*

"A Texas physician asserting that the cause of inebriety is located in the stomach, and that the difficulty can be relieved by surgery, cites a number of cases to prove his thesis, where operations on the stomach caused a cessation of the drink craze."

The High Price of Meat

JUST now there is bitter complaint in some parts because of the high price of meat, which the newspapers tell us costs more than at any previous time. To the diet reformer, the rise in price of meat gives no alarm: for he knows very well, not only the utter uselessness of flesh food as an article of diet, but the harmfulness of this class of foodstuffs. Horace Fletcher, and the experiments of Chittenden and Mendel, as well as numerous other scientific investigators, have clearly established the fact that people have for centuries been consuming a great excess of protein. Professor Chittenden has, indeed, shown beyond any chance for question that an ordinary diet of fruits, grains, vegetables, and dairy products furnishes an ample supply of protein, the element of which meat chiefly consists.

The high price of meat is, then, not a matter which need give any one concern or inconvenience. Indeed, if the high price of beefsteaks and other flesh foods has the effect to lessen the consumption of these objectionable articles, the public will in no way suffer any injury in consequence, but will be actually benefited.

The studies of meat as an article of food which have been made in recent years by Bunge, Professor Sherman of Columbia University, and other experts, have shown that meat is indeed a very imperfect and unreliable foodstuff. It contains a very great excess of protein which the body does not need, because this element is abundantly furnished by other foodstuffs, and is almost totally deficient in lime, a substance which is indispensable. So when meat enters very largely into the bill of fare, the body is damaged by a great excess of protein, which fills the body with poisons, while, on the other hand, an almost equal or possibly even greater damage is suffered by the deficiency of lime, the result of which is, in the young, rickets and various deformities of the bones, and in older persons, a lowered vital resistance and vulnerability to disease.

So no one need worry because of the high price of beef. Cut it out of the bill of fare, and thus cease the expenditure of money for that which brings, not health and vigour in return, but disease and infirmity.

The wise Intelligence which rules the great laboratories of Nature knows how to proportion the various elements of food one to the other so as to supply our nutritive needs. The flesh of animals was never intended to be eaten as food, and so it is not surprising to find that it is both an inadequate and a dangerous source of nutritive material.—*Good Health.*

The Pomelo

THE shaddock, pomelo or grapefruit, is rapidly taking a place as the most popular fruit produced in our country. It takes a little time for one to become attached to it, the bitter twang at first deterring the user, but in a very short while one grows accustomed to this, and after that finds it delightful. Even an orange tastes musty after one has become familiar with the indescribable freshness of the grape-fruit.

The bitterness depends upon the presence of an alkaloid, nectandrine,

which, however, has never been isolated for experimental use as a medicine. One can only judge of its effects from those of the fruit in which it is found.

Here is a personal experience. Some years ago, when I commenced to find that three meals a day weighed too heavily upon my gradually subsiding digestive capacity, I commenced taking a grape-fruit in place of anything else for breakfast. I found that when I used the grape-fruit in the morning, I could work until noon or half an hour longer before having lunch, without any sense of relaxation or debility. But if an orange was substituted for the grape-fruit, by eleven o'clock I would be "all in," and compelled to get something to eat or stop work.

A very decided tonic effect ensues from the following procedure: Cut a hole in the end of the shaddock and squeeze out the juice, then fill the shell with water, and let it stand from morning until noon, when the infusion thus obtained may be used as a pleasantly bitter beverage with the lunch. The tonic effect is most decided. No special laxative action is experienced from this any more than from other fresh fruit, excepting that the nectandrine appears to contribute a slight degree of added tonicity to the intestinal musculature, peristalsis being slightly increased. This, however, is exactly what many aging persons need. —*Clinical Medicine.*

Drugs in Tuberclosis

THE constant exploitation of drugs which are claimed to be capable of curing pulmonary tuberculosis or consumption renders important the wide diffusion of certain newly ascertained scientific facts which show the consummate folly of trusting to any drug as a curative agent in this disease.

Dr. Wright, of London, the famous discoverer of the opsonic index, showed several years ago that all drugs lower the tuberculo-opsonic index. Alcohol and the various so-called tonics were found to be particularly active in lowering it. The worst of all was nicotine. This poison in one case reduced the index to zero, and in a short time the person was dead.

The occasional use of iodine in certain cases of consumption makes of special interest some experiments made with iodid of potash which showed the influence of this drug to be to greatly increase the activity and fatality of the disease. It may be said in general that all drugs are equally incapable of curing pulmonary tuberculosis, and hence that the drug treatment of this malady should be regarded as dangerous and inadvisable. Simple, outdoor living, with proper diet and the rational use of baths, rubbings, and respiratory exercises, will accomplish all that can be done in this malady.

Hydrotherapy or Water-Cure

A MODERN TERM FOR AN OLD-TIME PRACTICE—HOW WATER SERVES AS A REMEDIAL AGENT

Among the natural agencies used in the treatment of diseases probably the most prominent is pure simple water. Little value, except in the case of the effervescent bath, is obtained from mineral waters. Water has a large place in the vital economy, since three-fourths of the weight of the body is composed of water, and there is a demand for a constant supply of this life-giving fluid. But the vital use of water as a food or tissue builder is distinct to a great extent from its use as a medicinal agent. In the latter character, its utility consists entirely in the manner in which it affects the body and its functions when applied according to scientific principles, which have been formulated into a system by painstaking study and investigation, and long years of experience.

In a word, it may be said in general terms that the therapeutic value of water consists very largely in its adaptability as an agent for conveying desired degrees of heat and cold. There is no other medium so available, so easily applied, and so effectual in its work as is water in many of the uses to which it is devoted in hydrotherapy. To be sure, water is used extensively and effectually as a depurating agent. No other substance has such qualities for flushing out impurities, for cleansing effete matter, and rendering various operations of the human system facile and effectual.

THE SPINAL POUR

The uses of water for conveying the sensations of heat and cold to the body, or to portions of the body, are legion in their forms and manners of application. Hydrotherapy is indicated and

employed in a great majority of the ills to which flesh is heir. Whether it is desired to cool the body or to heat it, whether it is desired to stimulate or retard the activities of the body or any of its organs, water is the thing ready at hand, cheap and reliable, and always effectual when intelligently applied.

It would be impossible here to go into a detailed treatise upon the uses of water in the treatment of disease. There are a few general and universal principles with which everybody should be familiar. Heat expands tissues and cold contracts them as readily as heat and cold expand or contract metals. Heat accelerates activity, and cold retards it. Quick, short applications of cold are stimulating, and continued application of heat is depressing. Not only may the surface of the body be treated effectually by the application of water, but the internal parts may be effectually and instantly reached through the medium of the multitude of nerves which have their peripheral terminals in the skin and form an intimate connection with the various internal organs. Each internal organ is represented on the surface by an area, the nerves of which are reflexly related to it. This area is called the "face" of the stomach, or heart, or liver, or whatever organ we may wish to reach. Generally this area is over the organ or adjacent to it, but not always is it so.

THE WET SHEET RUB

Congestion, either external or internal, is controlled by the use of hot and cold water most satisfactorily. Fevers are subdued and the circulation of the blood is regulated with great readiness and almost unvarying exactness by the use of heat and cold with water as a medium. The term "water" includes in this discussion both ice and vapour. The application of cold in the form of ice contracts the blood-vessels and retards the vital activities. It subdues the action of the heart; an application of ice over the heart serves the purpose of slowing down its violent action most effectually, while the application of moist heat serves the opposite purpose. Congestion of the brain or head, causing headaches, is removed by heating the feet and lower limbs, thus enlarging their blood-vessels and attracting the blood away from the head. At the same time application of cold to the head, and to the arteries leading to the head, contracts the blood-vessels and causes less blood to flow to the head.

Heat is a great reliever of pain by dilating the blood-vessels and thus causing a freer flow of the blood, permitting it to escape from the con-

gested parts. Heat also acts directly upon the nerve fibres, lessening their irritability or sensitiveness to pain.

The action of water upon the nervous system is pronounced and definite. And through this action the quality of nerve energy may be intelligently controlled, and this is an important consideration in the management of any case of illness.

This potent and practical agency has a great advantage over other measures in that the practice of hydrotherapy does not fill the system with poisonous substances which must be eliminated. The stimulus is perfectly in harmony with the natural functions of the body, and only serves to promote normal activity. We present herewith some of the methods for applying water in common use and many others might be shown. But perhaps enough has been said to impart some general impression as to the philosophy upon which hydrotherapy has its basis. and it will be found to be perfectly sane and sound from every point of view. Its use and its results are commended by all intelligent physicians.

A COLD FRICTION SPUNGE BATH

Is Alcohol a Food?

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In answering the question which stands at the head of this article, it will be necessary, first to consider what alcohol is, and its influence upon the organism; then we shall be in a position to say, once for all, whether or not alcohol is a food. One of the earlier definitions of a food is that given by Hammarsten, Professor of Physiological Chemistry in Upsala University, Sweden. He defines food as any substance which does not injure the body, and which may be built up into body material for growth or repair. A somewhat later definition is that of H. Newell Martin, Professor of Biology in the Johns Hopkins University. Professor Martin gave the following conditions which a food must satisfy: First, it must build up

new tissue or repair old tissue; second, through its oxidation it must supply the energy which the body requires; third, neither the food itself nor any of its products within the body can be injurious to the system, otherwise the substance is not a food, but poison. These definitions clearly exclude alcohol from food substances.

More recent definitions are those of Professors Woodbury and Egbert, of the Medico-Chirurgical College of Philadelphia, and Professor Howell, of Johns Hopkins University. Without giving every definition in detail, we may mention the points in which they all agree; namely, that food materials must be assimilated into the living cells of the body, and through their oxidation furnish the energy for the various activities of the body. Now, inasmuch as no one contends that alcohol is assimilated into the living cells of the body and becomes a part of the substance of the tissues, it follows that alcohol is just as clearly excluded by the definitions of these men as by those given by the others.

If any one will give the matter a little consideration, he will be convinced that mother nature herself has given a very clear definition of a food. Every human child is provided by nature with a food for its first year of life. This food is milk. The food that nature intends the young of the human family to eat is thus clearly pointed out. Nature provides a similar food for the young of all mammalian animals. Nature provides food also for young birds. Before they are hatched they are nourished by the substances contained within the egg. Eggs and milk, then are nature's foods for young birds and young mammals. If milk and eggs are analyzed chemically, we find that both contain a nitrogenous substance (egg albumen or milk casein), and a carbonaceous substance represented in the egg by oil, which is contained in the yolk, and in milk by the cream and the milk sugar. Both eggs and milk contain also mineral solutions which are placed there to build up the bones of the young growing animal. Both of these foods are absorbed and digested by the animal. They are assimilated into the living substance, and lead to the growth and repair of the tissues of the young animal. When these tissues are oxidized, they liberate the energy which the animal uses in its activities.

If we were to make a chemical analysis of corn, barley, wheat, oats, rice, or any of the cereals, we should find that they contain exactly the same substances that we find in milk and eggs differing only in the proportions of these substances. If milk and eggs are natural food, then the cereals should be natural foods. If we think for a moment, we shall see that they are nature's foods for the young cereal plant: wheat, corn, oats, or rice. When these foods are taken into the system, they undergo the same changes as those described above for the milk and eggs, and serve the same purpose in the body. They should, then, be included among natural foods. If the hen eats corn, a part of the substance which she eats builds up egg material, and a part builds up the tissues of her own body. If the body of the hen is analyzed chemically, we find the same substances that we find in eggs, differing only in the proportions, and in the fact that the flesh of the animal contains uric acid and other leucomaines or other waste substances which result from the normal activities of the animal. It has been shown that in eggs these waste substances are not

found until after the process of incubation has begun.

At some time in man's history he added to his dietary the products of the chase; and not being satisfied with the eggs of the bird or the milk of the cow, he began to eat the birds themselves and the flesh of cattle.

All the foods previously mentioned are fairly uniform in their composition, and all produce the same results within the body. All of them conform perfectly to the conditions imposed by all the definitions given.

Professor Atwater and some others have shown that where alcohol is given in small quantities and for a short time, there is a slight gain in the carbonaceous substance of the body. This is urged as a very strong argument in favour of alcohol's being a food. In this connection it must not be forgotten that the administration of morphine or phosphorus would have a similar effect upon the system. The case is simply this: That while alcohol given in small doses acts as a poison, one of the effects of the poison is to cause not only fatty degeneration of the tissues, but also the accumulation of fat in the body. This is very noticeable in those who use the malt liquors freely as beverages. There are other very important considerations which Professor Atwater and his followers persistently ignore; namely, the effect of alcohol upon the nervous system. Alcohol is said to act as a narcotic poison to the central nervous system. No true food could have such an action. This shows another of the weaknesses of Professor Atwater's position.

If alcohol is a carbonaceous substance which is readily oxidized within the body, why is it that it cannot be a food? Is there anything in the nature of alcohol which debars it from being a food product? A few words regarding the nature of alcohol will reveal at once its true relations to life.

Alcohol is one of the substances formed by the yeast plant. This plant is a live organism, conforming in many respects to the low forms of animal life. It lives upon sugar. It eats sugar, and this becomes decomposed into alcohol and carbonic acid gas. The yeast plant throws alcohol and carbonic acid gas out of its body, or excretes it, in order that it be not poisoned by retaining the excretion. In a similar way the human body excretes urea and carbonic acid gas in order that the body be not poisoned by the retained excretion. A substance which would poison the yeast plant if retained will poison any of the higher plants or animals. This is in accordance with one of the laws of life: namely, that a substance which poisons one form of living organism will poison any living organism of higher rank. This reveals to us the reason why it is that alcohol is a poison to all forms of animal life, and it also reveals why it cannot, in the nature of the case, serve as a food. That it possesses some qualities in common with food cannot be gainsaid. The fish possesses some qualities in common with the bird, yet we do not say that it is "to a certain extent" a bird, nor do we say that it is a bird "in limited quantities."

We can therefore answer the question at the head of this article by the decided statement, *Alcohol is not a food.—Good Health.*

"It is said that a London physician, noting the excess of females in England, has urged that special measures be taken to prevent mortality among male infants."

The Liver Injured by Tobacco Smoking

Doctors Guillain and Gy recently reported before the Society of Biology of Paris the results of some experiments to determine the effect of tobacco smoke upon the liver. Their experiments were conducted upon rabbits and guinea pigs, upon whom the effects of tobacco were exerted in different ways: in some the nicotine was injected beneath the skin or into the veins; in others injections were made of water holding in solution the poisons of tobacco smoke; to others the tobacco poisons were fed; and still others were placed in an atmosphere laden with tobacco smoke. The present report deals with the injuries produced upon the liver. According to the authors, of all the glandular organs of the body, the liver is the most often and the most profoundly affected by tobacco intoxication.

In studying acute tobacco poisoning, observations were made upon seventeen animals who had received less than twenty injections. The injury of the liver most often noted was very marked congestion and hemorrhages into the interior of the organ and into the portal spaces. Fatty degeneration of the liver substances was frequently observed, and in not a few instances areas of dead tissue were seen. The hemorrhage and degeneration were found co-existing in a great many cases.

Lesions of sclerosis were most often found in animals suffering from chronic tobacco poisoning (the experiment animals, forty in number, having been subjected to the poison for five or six months). The frequency of sclerosis, or hardening of the liver, in animals subjected for several months to the influence of tobacco smoke, and the absence of all sclerosis in the acutely intoxicated animals, prove the causal relation between the intoxication and the sclerosis, and the authors assert that, experimentally, tobacco exerts a marked tendency to cause hardening of the liver.

These effects of tobacco upon the liver are easily understood when we recall the arresting action of this organ upon nicotine, abundantly proven by the experiments of Heger, Schiff, Jacques, and Roger. In human beings, no one has yet made a pathological study of the influence of tobacco upon the liver, but there have been noted in habitual smokers various symptoms; such as, a dull ache in the region of the liver, an earthy tinge to the colour of the skin, jaundice, biliousness, diarrhœa, and digestive troubles associated with congestion of the liver. Certain physicians have also pointed out the relation between diabetes and tobaccoism.

Take Life Like a Man

It is a pitiable thing to see a young man whining over his lot in life, and excusing indifference and inaction because of hard luck or some cruel fate which has put difficulties in his way.

No matter what your environment, or what you may be called upon to go through, face life like a man without whining. Turn your face to the sun, your back to the shadows, and look the world in the face without wincing. Make the most of your situation. See the beauties in it and not the ugly features. This is the way to improve an unfortunate environment. —*Success.*

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MERITS OF RAW FOOD

THAT no diet should be without its share of such raw foods as are easily digestible, is the opinion of Dr. J. H. Kellogg, who writes on the subject in *Good Health*.

"Unquestionably, man, with other members of the animal kingdom, was originally designed to take his food in an uncooked state. The comparative anatomists generally agree that the natural dietary of human beings consists of fruits, nuts, and soft grains; that is, grains in the milk state, in which the nutrient portion, which in the ripe, hard grain is found in the form of starch, exists in the easily assimilable form of starch and dextrine. . . .

"Experience has shown that adherence to a diet of cooked food, to the entire exclusion of uncooked foods, for some length of time, invariably results in great impairment of nutrition; symptoms resembling scurvy make their appearance, with other indications of decided malnutrition. This has been especially noted in the feeding of infants. . . .

"It has also been discovered that the harmful results which accompany a cooked dietary may be obviated by taking care to administer with the cooked food daily a certain amount of raw food. . . . Certainly in many of these cases a wonderful change is brought about by introducing into the dietary suitable raw foods; such as, fresh fruit juices, whey, buttermilk, and even fruit pulp. . . .

"Still another advantage of the uncooked dietary is the fact that vegetable proteins are not readily attacked by the putrefactive or poison-forming organisms. Whatever may be the reason for this, the fact is recognized and admitted by authorities in dietetics. There is reason also for believing that uncooked or living vegetable tissues are much more resistant to the attack of parasitic bacteria which abound in the intestine and which feed upon the undigested and unabsorbed residues of foodstuffs. The living cells of plants, as well as those of animal tissues, have the power to resist the attacks of invading organisms. This is why a cooked potato will sour in a few hours, while a raw potato will remain intact for a long time. The same difference exists between cooked and uncooked vegetable products of all sorts."

"The form in which raw food should be taken is a matter of considerable importance. Fresh fruits are a most acceptable and natural form of raw food. Fruits and nuts are readily digestible when taken in the raw state, provided, of course, that they are properly masticated. It is a question, indeed, whether the nutritive properties of nuts and fruits are to any extent improved by cookery. . . . It has also been shown that the freshly formed green parts of plants, such as the leaves of lettuce, the heart of cabbage, and the tender parts of asparagus, are readily and practically completely digestible. This is not true, however, of the coarse and fibrous woody material found in the envelope of wheat, oats, and other grains. It is equally untrue of the cellulose found in the coarser vegetables. Experiments have shown also that raw starch in the form in which it occurs in a potato and in the various cereals is not easily digestible. . . .

"As regards the practical application of the foregoing facts, sometimes it may be said that an exclusive dietary of uncooked food may be followed for brief periods with advantage. . . . For the average individual, however, it is only necessary to exclude flesh foods of all sorts from the dietary, and to increase to a moderate degree the amount of uncooked food contained in the form of fresh fruits, nuts, lettuce, celery, and similar products, and to take care to make these uncooked foodstuffs a part of every meal."

TYPHOID FROM FISH

THE health officer of London has in a recent report confirmed the suspicion that fish from contaminated waters may cause typhoid fever. A very careful investigation showed that in an epidemic in East London a considerable proportion of the cases could be definitely traced to the use of fish purchased from fried-fish shops.

House We Live In

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