GOOD HEALTH

◇ EDITED BY FRANKLIN RICHARDS, M.D. ◇

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A Mountain Torrent.

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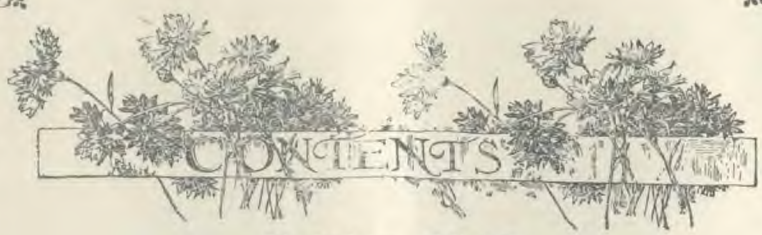
CANVASSERS for GOOD HEALTH are meeting with encouraging success. There is still territory available for new recruits.



October, 1908

"It is a goodly sight to see
What Heaven hath done for this delicious land!
What fruits of fragrance blush on every tree!
What goodly prospects o'er the hills expand!
But man would mar them with an impious hand."

GOOD HEALTH

A Teacher of Hygiene

Vol. 12. Cooranbong, N. S. W., October 1, 1908. No. 10.

Luxurious Dinners.

SPEAKING on the subject of luxurious dinners in London recently, Sir J. Crichton-Browne said that in the last century it was redundance in nutrition that was in vogue, but now frugality was in the ascendant, and a spare diet was insisted upon. We hope Sir James is right in his opinion, and that the dinners of the rich will soon be "frugal repasts."

Child Poisoned by Nicotine.

A PECULIAR poisoning case occurred at West Tamworth. On Monday the six-years-old son of Mrs. H. Whitten picked up an old pipe, which he placed in his mouth and sucked. Subsequently he became very ill. A doctor was called in, but his efforts were unavailing, and the lad died the next day. Nicotine poison was given as the cause of death. As many similar cases of poisoning have been recorded, to permit a filthy old pipe to remain within reach of a child should be considered an act of criminal carelessness.

The Infectiousness of Consumption.

DR. LANDOUZY, at the meeting of the Academy of Medicine, has declared that no class of persons in Paris was so subject to consumption as washerwomen. Of 100 laundry patients treated, ninety nine had consumption. He proposes, as a remedy, that a declaration of the authorities of all cases of consumption be made compulsory, as in other infectious diseases.

The Doctors of the World.

THE number of doctors in the world has just been estimated at 228,234. Of this number 162,234 are in Europe, the distribution in the different countries being as follows: Great Britain and Ireland 34,967; Germany 22,518; Russia 21,489; France 20,348; and Italy 18,245. For every 100,000 inhabitants in Great Britain there are 78 medical men; in France 51; and in Turkey 18. How could so many people be expected to agree? And yet we often hear surprise expressed that doctors differ.

Advancing Microscopy.

BY a recent invention the wonders revealed by the ordinary microscope are increased a hundredfold. Henceforth students may use a high-power lens as large as six inches in diameter, thus bringing the whole of objects, instead of details only, under observation. By this means a common housefly is magnified all at once, till it appears to be as large as an ostrich. Being enclosed in an open space, where it is kept directly within the field of the glass and yet has ample room, considering its size, to move about and engage in its usual occupations, the opportunities for observation are immensely in advance of anything previously enjoyed by scientists.

Hunting Microbes in the Streets.

A SERIES of interesting tests, designed to show the great reduction in the number of microbes floating about in the atmosphere after city streets have been cleaned, has been conducted in a foreign city. Sensitized plates were held exposed above the streets for fifteen minutes, and then were prepared and their contents examined. Plates exposed over an unclean street showed so many colonies of various types of germs that it was impossible to count them. Following a superficial cleaning of the street, three plates showed respec-

tively 800, 900, and 1,000 colonies. When the street had been cleaned by a squeegee machine, the plates showed only 135, and 140, and 150 colonies.

Poisonous Tobacco Smoke.

THE *Apotheker Zeitung* contains a valuable article which gives in detail the results of a thorough analytical study made by Thorne of the constituents of tobacco smoke. He found the three chief toxic or injurious constituents to be nicotine, pyridine, and an ethereal oil. The pyridine is thought to result from the destruction of the nicotine. The oil was obtained only in small quantities, but was so exceedingly poisonous that it could with difficulty be handled without so impregnating the air as to cause quickly violent headache, vertigo, nausea, and trembling of the limbs. The question of adulteration is of importance as related to foods, but there is certainly no need of searching for injurious adulterants in so poisonous a narcotic as tobacco. Any ordinary poison added to tobacco would improve it by making it less deadly.

A Mosquito-Trap.

ALL those whose lot unfortunately casts them in regions where the mosquito thrives, fully realize the ravages of this pest, and the discomfort experienced from their attacks—not taking into consideration any maladies, such as malaria, which they disseminate—if proper precautionary methods are not practised. A simple and inexpensive little trap which Mr. Maxwell Lefroy, of the Indian Entomological Department, has devised and found highly effective, is a distinct acquisition to every tropical residence. It is a small box some twelve inches square and nine inches deep, fitted with a hinged lid provided with a small orifice, over which moves a sliding cover. The box is lined with dark green baize, and has a tin floor. The trap is placed in a shady corner of the room, and the mosquitoes upon entering the house in the morning seclude themselves therein to escape the sunlight. When the insects have duly settled, the lid is shut and about a teaspoonful of benzine injected into the box. Within a short time the flies succumb. Mr. Lefroy continued this process daily until the mosquitoes ceased to be troublesome, and within 31 days he caught and killed over 2,300 of these insects.

Drunk on Tea and Steak.

SOME people have maintained, in my hearing, that they have been drunk upon green tea, and a medical student in London, for whose knowledge in his profession I have reason to feel great respect, assured me the other day, that a patient in recovering from an illness, had got drunk on a beef steak.—*De Quincey*.

The Deadly House-Fly.

THE perils to public health caused by the house fly was an important subject of debate at the annual congress of the Royal Institute of Public Health at Buxton (England).

Dr. Gordon Hewlett declared that there was evidence that house-flies performed an important part in the dissemination of summer diarrhœa and other infectious enteric diseases, including typhoid.

Sir James Crichton-Browne agreed that the house-fly was a prolific source of disease. As many as 100,000 bacilli had been found on a fly's legs. He hoped that for the sake of the public health they would succeed in exterminating the fly, and that they would have to take their grandchildren to the British Museum to see the only specimens.

Starch for Diabetics.

DR. E. C. ECCLES is of the opinion that to withhold starch in diabetes is to work against the plan nature is trying to carry out, for no matter what diet we allow, sugar is still formed by the organism. Even when other foods are entirely cut off, sugar is manufactured out of the starch foods and, when these fail, out of the tissue cells. This should be to us an indication that this production of sugar is a means of defence against some unknown disease cause. We should not deprive the system of the starch foods, but should allow a natural and normal diet. To deprive the patient of starch is an illogical measure. We are fighting against Nature's method of cure. So much sugar is not made to be wasted. Deprivation of starch means starvation and hastening of the patient's death. One of the best forms of starch for diabetes is potato starch, mealy baked potatoes. Sugar is sometimes said to be the cause of diabetes, but the real cause is meat-eating. In countries where no meat is eaten and where much sugar is consumed diabetes is absent, and in meat-eating countries it is on the increase.

Race Suicide and Empty Cradles.

BY D. H. KRESS, M.D.

CONSIDERABLE alarm has for some years been manifested in some of our most highly civilized countries over the constantly decreasing birth rate. France shows a shortage of over 100,000 in seven years. Between the years 1900 and 1907 her births have been decreasing at the rate of 12,000 each year.

Various efforts have been put forth to remedy this evil which is threatening the existence of the nation; for empty cradles can mean nothing else than depopulation and extinction.

But in spite of the efforts to encourage race propagation, the year 1907, instead of showing an increase as we would expect, reveals the alarming decrease of 33,000.

Another feature of alarm is the fact that her death rate now exceeds her birth rate by 19,000. There is certainly sufficient cause for alarm in all of this. England's Registrar General's report for 1907 also reveals a greater decrease in birth rate than in any previous year. In Wales it was last year lower than it had ever been in modern times, less than three-fourths of the birth rate of thirty years ago. The fall in the city of London during the last thirty-seven years is about twenty-seven per cent. Much the same condition exists in other English cities.

In America the same condition exists, but the real situation is partially concealed by the influx of immigrants. During the first century after the landing of the Pilgrim Fathers on the New England shores, large families were the rule, small ones the exception. The average family numbered between ten and twelve. During the next four or five generations the average number of children in a family was reduced to five or six, while at present the average does not exceed three. Had the earlier birth rate been kept up, the United States would have a native-born population of over 100,000,000, whereas counting the immigrants and their families, which number fully 30,000,000, she can boast of a population of only 87,000,000. America therefore shows a shortage of about 40,000,000 in her native-born population.

The decreasing birth rate is not the only danger that is threatening civilized nations: but one-half of the children that are so fortunate as to be born, reach the fourth year of life. The modern mother seems to lack the vitality to nourish her weakly new born and is forced to resort to artificial feeding. The hereditary weaknesses plus the improper and unnatural food is responsible for the high mortality rate that exists among infants. Naturally we are led to inquire what are the causes of this decreasing birth rate and the weakened infant heredity.

Parents can impart to their offspring only that measure of vitality and health they themselves possess. Degeneracy in the infants is due to degeneracy in the parents. That this degeneracy exists among adults is too evident to be ignored. We need only to recall the results of the physical examination made in England a few years ago, of volunteers for the army. Those who appeared for this examination evidently considered themselves in the pink of health, but fully two-thirds of them were rejected as unfit. In America at the time of the Spanish-American War a call was made for men to enter the army service, but about three-fourths of the number who applied were rejected. In Germany, it is stated, fully one-half of the young men between the ages of eighteen and twenty-two are refused as incapable for army service. In France, although the requirements of the military service have been modified from time to time and have never been so low as at present, it is difficult to find men who meet the required standard. If two-thirds or three-fourths of the young men are physically unfit for army service, they are also unfit to propagate the race, and yet upon these we depend for race propagation. Our strong men are forced to enter army service. There they lead a life of idleness and immorality, or else they are forced to the front into the battle-field. In either case they return with ruined constitutions. After their return they are as unfit for race propagation as the weaklings that were culled out. As long as this continues what can we expect but race degeneracy, of which the declining birth rate and the high infant-mortality rate are but symptoms. By more careful feeding our weakly offspring may be kept alive and the average age of life thereby increased, but they remain weaklings ever after.

The slight increase in the average length of life which has led some to think that as a race we are becoming stronger, finds its explanation here. To keep alive our weakly infants or our degenerated adults a few extra years does not add to racial vigor; it hastens race decay. This is shown in the fact that deaths due to constitutional disease and degenerative changes have been rapidly increasing. For instance, the mortality from Bright's disease has increased over 300 per cent. during the last twenty years; the same increase is observed in apoplexy, heart disease, diabetes, and cancer. Arterio-selerosis, or premature old age, is more common than at any period of the past. Further, there are fewer centenarians to the million inhabitants to-day, than there have ever been.

There are sufficient causes to account for this degeneracy: one of these is the forsaking of rural life for the crowded city, and employment in the open air for sedentary office work in ill-ventilated rooms; another is the departure from the simple and natural habits of former days, and the adoption of habits which are complex and unnatural. These are the chief causes of the unwelcome conditions in which we find ourselves.

We do less manual work, but we eat more. The plain non-stimulating foods which were relished by the toiler of fifty years ago have been exchanged for highly seasoned foods and complicated dishes. All this exerts an unfavorable influence upon racial vigor and race propagation. It has been observed that similar causes among lower creatures bring about similar results. It is well known that hens do not lay well when they are overfed and are not granted the privilege of getting food by their own exertion. It has also been observed that wild animals that are accustomed to gather their own food, seldom breed when in captivity. The history of past nations also clearly indicates that hard work and plain food act as a stimulus in race propagation and that decline in every nation of the past has always been preceded with luxury and effeminacy.

Physical work is a blessing and plain food a necessity in maintaining racial vigor. We have wrong ideals: the aim of all seems to be to work as little as possible and to have the table laden with meats and delicacies. The mechanic and the common laborer who can not afford all the luxuries of the rich look forward to the time when they shall have accumulated sufficient to render toil no longer a necessity—when they can say, "Soul, thou hast much goods laid up for many years; take thine ease, eat, drink, and be merry"; and when this point is reached, degeneracy begins, which ends in premature death. This physical inactivity and high living account for the more rapid decline in cities. In the past nations have depended upon the rural districts, where the habits of the people are of necessity more simple, for the maintenance of racial vigor. We know that degeneracy in any country becomes more pronounced just to the extent that the simple and natural peasant life is exchanged for the unnatural and complicated city life.

That physical toil increases racial vigor was long ago demonstrated. Centuries ago a handful of people came to Egypt. For four hundred years they dwelt, not in the cities, but in the country, where they cultivated the soil. Here they multiplied and grew so rapidly that the Egyptians felt some alarm lest they should become even mightier than they. They reasoned, "Behold, the people of the children of Israel are more and mightier than we: come on, let us deal wisely with them; lest they multiply, and it come to pass, that, when there falleth out any war, they join also unto our enemies, and fight against us." "Therefore they did set over them taskmasters to afflict them with their burdens." Hard work and plain food the Egyptians thought would weaken them, but in this they were sadly disappointed, for the record tells us that "the more they afflicted them, the more they multiplied and grew. And they were grieved because of the children of Israel." The Egyptians were greatly perplexed, but here it was clearly shown beyond dispute that (to which the history of every nation since has borne witness) physical toil, rural life, and plain food afford the only means of maintaining racial vigor. This being so, they alone can remedy the present degeneracy and declining birth rate.

It is clear that the causes of the decadence in infant life lie with parenthood, and not with infancy; and that to remedy the evil the habits of civilized man must be changed. As long as men and women drink as they do, smoke as they do, and eat as they do, and then try to escape all physical exertion, degeneracy will continue, and this degeneracy will manifest itself especially in the offspring. To-day the empty cradles are appealing to men and women in all lands to cease to do evil and learn to do well; for the sins of the fathers have been visited upon the children.

Why Eat Meat?

NO. 4.—BY A. W. SEMMENS, MANAGER OF SYDNEY SANITARIUM.

AS STATED in our last article, the body is simply a machine which can transform matter and energy, but it can in no sense create either. It is true that in the animal body new compounds may be formed, some of which may not be present in the vegetable; but when it comes to food, we find that there is not only no element in the animal body that is not found in the vegetable, but there are no compound elements which in any way belong to food substances which are not found in quite as favorable a condition in the vegetable as in the animal. Take, for instance, the different food-stuffs, or, as they are called, alimentary principles, represented by different forms of starches, fats, sugars, proteids, certain salines, and possibly certain organic acids.

All the different foods can be placed in one of these classes. These different classes are present in the vegetable kingdom, and most of them in much greater abundance in vegetable than in animal foods. It is therefore true that not only are all the elements of food found in the vegetable kingdom, but all the food-stuffs. Consequently there is nothing in meat in the form of food that is not present in the foods produced by plants; and as a matter of fact, this food is in a much better condition in the vegetable than in the animal.

Foods derived from the vegetable kingdom differ essentially from the foods derived from the animal kingdom, in this particular—the foods derived from the vegetable kingdom do not contain any waste products that in any way irritate or derange the functions of the body. Although in our table given in a previous article, we did find in some productions of the vegetable kingdom traces of waste matter, these existed in such limited quantities that they could cause but slight trouble, if any; while the food derived from the animal kingdom must necessarily contain a large amount of waste products, which are always present in the tissues of the animal during life, and also after death.

Creatin and creatinin are the two waste products most abundant in the tissues. The muscles of the body contain of these two waste matters a total of about three ounces, or one-third of one per cent. As we have already learned, the tissues contain uric acid, and a variety of other substances, the poisonous character of which has been clearly pointed out by Bouchard, the eminent French physiologist.

Taking these substances into the body must to some degree deteriorate it, since they add to the waste substances already in the body resulting from its own work, and others which have been generated in the bodies of other animals.

These waste products are of no use to the animal in which they are formed, and are of no use to the human body when they are taken into it with flesh foods; they act only as irritants and poisons, and interfere with the physical functions to a greater or less degree.

When a plant or a tree has performed its function in growing a potato, an apple, an ear of corn, a nut; and the grain, potato, or apple is fully ripe and fit to be eaten, there is no chemical or other process going on in the potato, grain, or apple.

The work is finished when the fruit of the plant or the tree is ripe. Then, all the chemical processes that have taken place in the plant in the formation of vegetable proteid, starch, and sugars, are complete, and the chemico-vital changes are at an end.

In a previous study we mentioned that in several late investigations it was found that some of the vegetable foods contain traces of these waste products. The reason was then given, so we will not now take the space to repeat it. If these chemical changes were still going on at this stage, there might be some irritating substances formed to injure the tissues; but at the ripening of the fruit these are completed and there can be nothing of this sort. This is a very important point, and one that is likely to be overlooked by those who have not given the subject thought.

How very different it is, however, when we turn from the vegetable to the animal kingdom. In the animal, during his life and even after his death, there is constantly present a

chemical process in the tissue by which the more complex and highly elaborated substances are being broken down into those that are less complex, and more irritating, and which are deleterious in their action when taken into our bodies as food. There is never a time in the animal's life when the breaking-down process ceases, or when there is nothing present in the tissues except what we might call food elements. Consequently *we can never eat flesh without getting some of these poisons into our systems.* Why, then, eat meat? "There is death in the pot."

It is thus evident that the products of the vegetable kingdom lend themselves more readily and efficiently to support the energies of the body than does the flesh of animals. The popular notion that lean meat is particularly valuable as a force producer was long ago recognized as an error by physiologists.

We shall further continue this line of thought in our next number, and endeavor to illustrate very clearly the inferiority of flesh foods as flesh and force producers.

Fruits—Their Nutritive Uses.

BY HARVEY W. WILEY, M.D., PH.D.*

THE general characteristics of fruits include their color, flavor, odor, and nutritive properties. They are composed very largely of water, perhaps eighty per cent. or more. The solid matter consists of the usual cellulose structure of vegetable bodies, sugars, gums, organic acids, and mineral matters. Fruits are all succulent, that is, by reason of their high content of water, composed chiefly of matters in solution which constitute their juices. All fruits, therefore, when subjected to pressure, yield a juice which contains the principal portion of their dietetic constituents.

The study of the composition of the fruit juices would, therefore, naturally accompany a study of the fruits themselves. The chief characteristics of fruits from a dietetic point of view, and also a palatable standpoint, are their sugars and acids. The characteristic of taste depends on these two constituents principally. In addition to this, the fruits contain aromatic substances belonging to the class of essential oils and compound ethers, which give to them the agreeable odor which adds so much to their value.

The sugars in fruit include both the common sugar (sucrose) and invert sugar, which contains equal quantities of dextrose and levulose. As the sugar is more or less abundant in proportion to the other ingredients, the fruit is more or less sweet. The different fruits contain different quantities of sugar—the richest, perhaps, is the grape, which often, in a state of complete maturity, may have from twenty-five to thirty per cent. of sugar. Apples contain from five to fifteen per cent. of sugar, and peaches and pears somewhat less. In fact, this range in sugar will cover nearly all the fruits, large and small, as well as most of the berries.

One of the most important constituents of fruit from a palatable point of view is found in its organic acids. These vary in different classes of fruits. The most common organic acid in fruit is malic, which is the chief acid in the apple and allied forms. In citrus fruits, such as the lemon and orange, citric acid is the principal organic acid. In grapes, the principal organic acid is tartaric. More than one of these acids is, however, usually contained in a single fruit, and other organic acids than those named are found in small quantities in various fruits. The three mentioned may be regarded as the typical acids in fruits. These acids, if prepared chemically and administered in a pure state, have practically no food value at all, and can not be considered as wholesome material to place in the stomach. When, however, they are eaten in their natural state in combination with the potash and other bases which fruits contain, and mingled, as nature has done, with the other constituents, they add not only to the palatability but also to the wholesomeness of the product. This is only another illustration of the fact that natural products are often wholesome and desirable where artificial products of the same kind chemically are hurtful and undesirable.

Many fruits contain considerable quantities of a carbohydrate, allied to some extent in its composition to sugar and starch, but which has the property of settling to a semi-resilient mass known as jelly. This constituent in fruit is known as pectin or pectose, and is

*In Foods and Their Adulteration, P. Blakiston's Son & Co., Philadelphia, Pennsylvania.

present in greater or less quantities in almost all fruits. It is by the utilization of this component of fruit that the jellies which are so common an article of food are prepared. While in its physical properties the jelly of fruits has some semblance to the gelatine or jelly of animals, its chemical composition and nutritive values are entirely different. The gelatine or jelly of animals is essentially a nitrogenous product, while the pectin or jelly of fruit is essentially a carbohydrate product. The two, therefore, are not to be confounded.

Nutritive Uses.

The edible fruits are not only valuable on account of the nourishment they contain, but particularly so because of the general effect which they have upon the digestive operations. Their judicious use is conducive to health in many ways; the fruits are mildly laxative, as a rule, although there are some exceptions to this. For instance, in some berries, like the blackberry, the quantity of tannin present is sufficient to cause a styptic or binding action. While all the fruits contain tannin, it is usually not in such proportions as to produce a constipating effect. On the other hand, the combination of the acids, bases, pectins, and sugars favors a free and natural progress of the food through the alimentary canal. The entire withdrawal of fruit from the dietary, even if the nourishment it supplies be provided in some other way, would work a great damage to health.

There are some dangers to be avoided in the general use of fruit. Immature and imperfect fruits are unwholesome. Fruits are often subjected, moreover, to infection with eggs of various kinds of insects, and these organisms and the larvæ or eggs thereof may be introduced into the stomach with more or less injurious effects. In the eating of fruit care should be exercised in the inspection and proper preparation of the article. It should be free from infection, decay, and insect life. The natural condition in which fruit is eaten is in the raw state, and in general it may be said that this is the more wholesome and preferable way of eating it. On the other hand the cooking of fruit sterilizes it and makes the consumer secure against any infection from bacteria and insect life, and in some ways promotes to a certain degree the digestive processes. This is especially true of fruits of a hard or unyielding nature. Cooked fruits, as a rule, may be considered less desirable than the natural article, but they deserve mention on account of their freedom from infection wholesomeness, and general dietetic value.

Some fruits, such as apples and pears, contain notable quantities of starch, especially in the immature state, and this disappears to a greater or less extent during the process of ripening. At the period of complete maturity the starch is reduced to a minimum and the sugar in the fruit reaches a maximum. After this period the fruit begins to lose in dietetic value, due to the natural process of decay, which is not even entirely checked by placing the fruit in cold storage. The sugar gradually ferments and disappears. The fruit becomes more spongy and less palatable and its general properties are impaired. Other fruits, such as the orange and lemon, berry, etc., contain little or no starch at any period of their growth. By careful storage the period of maturity may be prolonged for weeks or even months, and thus the fruit made available over a very much longer period than would otherwise be the case. Under the existing conditions of communication with all parts of the world it is not impracticable for even those who are not blessed with wealth to have a daily supply of fresh fruit grown in different parts of the world. In temperate climes fresh fruits are available from June until May of the following year, either furnished directly from the orchard or properly preserved by storage.

The Importance of Choosing a Healthy Site for the Home.

BY WYNDHAM MARTYN, IN "MODERN SANITATION."

In past centuries, before sanitation had arrived at the dignity of a science, thousands of lives were thrown away annually through ignorance of those conditions necessary to insure proper and healthful sites for towns. Again and again one sees in the course of one's travels prettily situated towns, which seem to be admirably fitted for summer resorts or residential purposes. On inquiry they are found to possess a high death rate and a tendency to epidemic diseases. In nearly every case, careful investigation will reveal that some fundamental law of hygiene has been violated. Generally the low level of the town will be found to be difficult for drainage purposes, and rather than incur the expense necessary to replace old-fashioned

systems with new scientific ones, human lives pay the price of the economy.

In the selection of a town wherein to erect a home, it is imperative to see that the drainage is on a modern plan, with a good fall and no back flow of sewerage from high tides. It is necessary only to insist here that the health of the town or city, or particular locality of that town or city, shall be subjected to the most rigid examination.

When a locality takes one's fancy, and it seems in every manner a suitable one, remember these few rules, for their violation may have serious consequences:—

Do not build on a clay soil.

Do not build on what was a swamp.

Do not build on what was the dumping ground of a city's refuse.

Build on a gravel, porous, light soil, which allows water to filter through it and thus ensures the dryness without which no community can keep free from disease.

Medical and sanitary science have proven by incontrovertible statistics that dampness is the predisposing cause of civilization's greatest curse—consumption and its attendant evils.

A house built on heavy clay soil must always have a certain amount of moisture around it, which can not be entirely removed by even the best of drainage systems. Dampness in the air is caused by the evaporation of moisture, and a house which stands amid damp surroundings must inevitably have a bad effect on its inmates.

One reason of this unhealthfulness is the lowness of temperature which dampness always causes. An eminent English scientist and sanitary expert, Sir Douglas Galton, made a series of interesting experiments which prove without doubt that drained land has a more equable temperature than land which has not been so treated. He took two fields of equal area in the same locality and had one properly drained while the other he allowed to stand undrained. A difference of six degrees Fahrenheit was noted.

This can be the more readily understood when it is remembered that to convert water into vapor, 960 degrees of heat are absorbed from its vicinity. Thus each cubic foot evaporated lowers the temperature of three million cubic feet one degree.

When the soil of the proposed site is satisfactory, the relation of the dwelling to atmospheric conditions must be taken into consideration.

A house built on a hill, we are assured, can not be hidden, and it is safe to add it can not be unhealthy. Even if the winds do whistle around during the bleak months, the circulation of the air will have much to do with the health of the dwellers in such a house.

An historical instance of the unhealthfulness of the sheltered house may be met with in the medical reports on the health of the soldiers engaged in the Crimean War. Those regiments stationed on the Balaclava heights were comparatively immune from disease, while those stationed on the steep sheltered slopes of the hills suffered badly, the reason being that in the vicinity of steep hillsides there is certain to be a large amount of stagnate air, and active air and water are admitted to be the first requisites for healthy living. It will be noticed that mountaineers are invariably more physically fit than the dwellers in valleys for this same reason. Then, when the soil and site are shown to be hygienic, the fitting up with the latest sanitary fixtures can be undertaken with the assurance that success is certain to attend their installation. But if you pay no attention to soil and site, even modern sanitary fixtures and plumbing are handicapped, and will be insufficient to conserve the health of the household.

Stimulants.

STIMULANTS of all kinds stimulate. In other words, they give an external appearance of vitality and a temporary sensation of vitality, both of which may be very far from a true indication of the condition of the person. An individual may have a florid complexion and vivacious manners, and yet suffer from anæmia, both conduct and appearance being kept at concert pitch by a sustained supply of stimulating foods and drinks. It is just as though a shopkeeper should put all his goods in the window; or like a plant under glass—quick growth—early maturity—premature decay—great apparent vigor during a short life, but a rapid exhaustion of the supply from which this vigor is drawn.

Perhaps a better illustration is a reservoir of water with an equal and sufficient inflow and outflow—everlasting as long as those conditions obtain. Hurry the outflow; stimulate it by widening the orifice—when this does not suffice get the steam pumps to work—and your outflow will be magnificent, the observed of all observers. What a noble

reservoir! But your outflow is beating your inflow. Soon your supply must fail to respond to your greatest efforts, and you must inevitably reach total exhaustion—or if before this occurs we remove all artificial accelerators of the outflow there will be, there must be, an immediate apparent deterioration quite painful to witness, as when a meat-eating, tea-drinking, alcoholist suddenly takes to vegetarianism. But what has really happened? The outflow has been curtailed. What a miserable stream!

But if the inflow in its unheeded oblivion has not vanished utterly away, the reservoir will be replenished, equilibrium may be re-established; and if the proper conditions could obtain, there would be perpetual motion—everlasting life. However, merely to take up vegetarianism does not imply immediate salvation, or any other salvation.

How to eat is just as important as what to eat; and most important of all, when you know a thing, do it. There is no one thing more important to vegetarians than mastication; and food to be sufficiently masticated must be eaten dry. This is just as much a fact as that two and two make four, and all the arguments and subterfuges in the world will not do away with the necessity of thorough mastication.

Perhaps second, but very close up, I would place the need for a proportion of bulky food; but this bulk must not be made up of substances having a high food value.

Third, but almost needing bracketing with the above, I would emphasize the absolute need for a sufficiency of fatty matter. A lack of this inevitably leads to nervous disorders. Last, but not least, don't eat too many legumes. It is nearly as easy to get too much proteid as too little fat. Too much proteid from whatever source spells rheumatic disorders.

G. HUNGERFORD.

The Home Department.

CONDUCTED BY MRS. E. SISLEY RICHARDS, M.D.

A Mother's Talk with Mothers.

Shall the Children Have Sweets?

CERTAINLY—why not? A fondness for sweets appears to be a natural instinct which usually manifests itself very early in infancy and seldom disappears even in adult life. Sugar in one form or other is a necessary element in the nutrition of the body, its function being to furnish, in part, the required heat and energy.

But while we admit that sugar is a necessary food element, we would emphasize the fact that its use must be governed by knowledge and discretion.

Sweets should be of the purest quality, and should be taken in moderation, at mealtimes only. With reference to the quality of sweets, it may be said that the ordinary commercial sugar is perhaps the least wholesome form in which sweets may be taken. Experiments have been made which prove conclusively that the ordinary cane sugar if taken in excess is one of the most potent factors in producing catarrh of the stomach. This being the case cane sugar should be used sparingly in the making of puddings and desserts. Nor should the children be allowed to use sugar on their porridge, a practice which tends to induce flatulence or acidity of the stomach. Cane sugar is perhaps least objectionable when cooked with fruit. The sugar if boiled with an acid fruit juice undergoes a certain change which renders it more easily digested and less irritating to the mucous membrane lining the stomach. However, even in the stewing of fruit cane sugar should be used as sparingly as is compatible with palatability. The commercial glucose which is so largely used in the manufacture of cheap sweets and as syrup or treacle is a product which is obtained by the action of strong mineral acids upon the most unsuitable vegetable substances. As may be supposed, this form of glucose is wholly unfit for food.

The only forms of sugar which are really wholesome and which may be taken by the children as freely as desired (at mealtimes), are the natural sweets as they occur in fruits and in honey. Honey if good and pure is free from the objections offered to cane sugar, and may with safety form an important part of the children's diet. As a good quality of strained

honey can be obtained at so reasonable a price in most parts of Australia, there is no reason why it should not to a large extent displace cane sugar for table use and also in cooking. Honey is preferable to cane sugar also in the preparation of food for young infants.

The sweeter fruits, such as dates and figs, contain a large amount of sugar in its natural and most easily assimilated form. These fruits both require some preparation before they are given to the little folks. The figs if soft require only a careful washing in hot water. If they are hard and tough they should first be thoroughly cleansed, then steamed or stewed until tender. Fig syrup obtained from stewed figs may, after being strained, be given to young infants who are troubled with constipation. Dates always require thorough washing in hot water before being served. If intended for young children the stones should be removed, also the small, woody stem-ends.

Raisins may with propriety be given to children who are old enough to understand the necessity of thorough mastication, but under no circumstances should they be given to young children who would swallow them whole or only partially masticated. Serious illness has often followed the giving of raisins to babies and to young children.

Since natural sweets are the only wholesome sweets, mothers should see to it that their little folks are so freely supplied with these that they will have no craving for the objectionable sweets usually procured at the shops. Not only may honey and the sweet fruits be used freely upon the table, but they may also be employed in the making of many wholesome desserts which will delight the hearts of the little ones.

The following suggestions may be appreciated by more than one perplexed mother:—

Date Turnovers.

Prepare a wholesome pastry, using either olive oil, cream, or good butter for shortening; then prepare turnovers in the usual way, using a few washed and stoned dates for filling. These are delicious, and would be "just the thing" for the children's school lunch.

Date Cream Pie.

Line a shallow pie tin with pastry and bake in it a filling made as follows: Three cups of milk, three-fourths of a pound of dates, and two eggs. Stone the dates and stew them in a little water until tender and rather dry, then rub them through a colander. Heat the milk to boiling. Beat the eggs and add them to the dates; then add the hot milk and mix thoroughly.

Currant Pie.

Line a pie tin with pastry, prick it with a fork in several places to prevent blistering, and bake in a moderate oven. Have ready a currant filling made as follows: Take the desired quantity of dried currants (about half a pound will be required for one pie), wash thoroughly in several waters to remove all grit, and then stew in a moderate quantity of water until the fruit is quite tender. If the currants are sweet, they will require no sugar; but if rather an acid variety, they will need a little sugar or honey. When tender add sufficient cornflour rubbed smooth in cold water to thicken the juice. Continue to boil for about five minutes, stirring to prevent scorching. Shortly before serving pour the currant filling into the pastry shell. It may be served with cream if desired. If the pastry shell was baked several days previous to use, it should be placed in a brisk oven for a few minutes to become crisp before the currant filling is added.

Fig Marmalade.

Thoroughly wash a quantity of stewing figs, then chop them or pass them through a food mill. Stew in a moderate quantity of water until the fruit is tender and the juice is thick and syrupy. If desired, a little lemon juice and rind may be added for flavoring.

Fig Sandwiches.

Chop a few stewed or steamed figs and mix with about half the quantity of chopped walnut meats. Other nut meats may be used if preferred. Add a suggestion of lemon juice and use as a sandwich filling.

Stuffed Dates.

Select a few choice dates, wash and stone them, and then fill each date cavity with a walnut meat.

The little folks who are allowed freely to enjoy the natural sweets will seldom desire any other. But if on rare occasions the children desire "real sweets," let the mother try her hand at honey toffee. The honey requires only boiling until it hardens when dropped into cold water, and should then be poured out upon an oiled plate to cool.

It may be said that during the summer season the acid juicy fruits may quite largely

be used in place of the sweet fruits; but in this matter the natural instinct may usually be followed as a safe guide.

Small Economies that Count.

TRUE economy consists, not in purchasing goods of an inferior quality, but in buying and wisely using goods of the best quality. This principle applies especially to the purchase of food-stuffs. There is no economy in buying cheap foods. The better qualities go farther, are more wholesome, and in every way more satisfactory.

But true economy includes not only wise purchasing, but also the wise use of that which is purchased. The thoughtless housewife throws away many things which might with care be utilized in the making of wholesome and appetising dishes. While on the grounds of health we disapprove of complicated made dishes which contain a little bit of everything, we believe that almost all "left-overs" if fresh and good can be used wisely and well, if only the housewife will give to the matter a little careful thought and planning. A few suggestions may be helpful to the inexperienced person.

First of all, be careful in your cooking not to throw away valuable food elements in the shape of vegetable and other broths, for example, the water in which potatoes are boiled makes a good soup stock, as does also the broth from beans or lentils. The latter is especially rich in nitrogenous elements, and as far as food value is concerned is superior to the various meat broths. In cooking macaroni always save the liquid in which it is boiled, as this water is then rich in nutrition and makes an excellent gruel or soup stock. If the macaroni be boiled in salted water and an onion be cooked with it, the resulting broth is delicious. With the addition of a little cream or olive oil it is scarcely to be distinguished from chicken broth.

In preparing vegetables for the table, steaming or baking is preferable to boiling, as by the former method none of the valuable vegetable salts are lost.

And now a few words concerning the use of "left-overs." Pieces of dry bread should never be thrown away, as they may be used in a score or more of ways. If whole slices of bread have become dry, they may either be converted into zwieback and put away into a biscuit tin until required, or they may be cut into half-inch squares and toasted evenly to be served with soup. To make zwieback, place the slices of bread on a pan, or on the oven grate if preferred, and bake until evenly browned and crisp throughout. Each slice should be turned so that it may brown on both sides equally. Small and irregular pieces of bread as well as the end crusts, should be toasted in like manner, and then passed through a food chopper or reduced to crumbs by the use of a rolling-pin and kneading-board. These zwieback crumbs may be employed in any case in which bread crumbs would ordinarily be used. In fact, zwieback crumbs are preferable to bread crumbs in that they make lighter the dishes in which they are used. Another advantage is that they may be prepared during a leisure hour, and kept indefinitely in a closed receptacle.

Plain boiled rice, if left from a previous day, may, with the addition of a little seasoning and one or two beaten eggs, be converted into delicious rice balls for breakfast. They should be nicely browned in an oiled tin in the oven. If only a small quantity of rice is left over, it may be added to the soup or may be used in preparing a meat substitute for dinner. Either rice or macaroni combines well with nut meat or nut cheese, or with bean or lentil pulp, in the preparation of a savory dinner dish.

If the housewife finds a little stewed tomato on her pantry shelf, she may strain this to remove skins and seeds, and may then add it to a vegetable or leguminous soup or to a meat substitute. A little tomato adds to soup and sauces a piquancy that can not be obtained in any other way. If there is any left-over nut cheese or nut meat, it may be used in any of the ways in which flesh meats may be employed. Savory little nut-meat turnovers may be made from a trifle of cold potato and nut meat. These should be chopped together, nicely seasoned, and then enclosed in a wholesome pastry in the usual way.

A delicious and yet wholesome meat pie can be produced from a little nut food mixed with cooked rice, macaroni, or potatoes. It is improved by the addition of a little brown sauce, and even tomato or milk sauce could be used in this way.

If there is a little mashed potato left over from the previous day, it can be used instead of a pastry crust over the top of the meat pie. It requires simply to be spread in an even layer over the top of the pie mixture. A

potato crust, if baked to a golden brown, looks most attractive and appetising.

Left-over cereals, as barley, wheat, or oats, may be reheated in a double saucepan and served again another day.

A few stewed beans may be combined with tinned or stewed sweet corn, a palatable combination known as succotash.

Such vegetables as beet root or carrots, also hard-boiled eggs, if left over, may be cut in slices and used to decorate salads.

Suggestions for Nursing Mothers.

"VERY few mothers seem to be able to suckle their babes," writes a mother, "but I really think if they would diet themselves, and would not worry over trifles, in most cases they could do so. I find from experience that taking some hot milk and zwieback for breakfast, with other food, is a great help. In fact, I take it with the three meals, and baby is very contented, and sleeps well. I take also a little warm water first thing in the morning, and between meals." No doubt, GOOD HEALTH mothers will find these suggestions well worth carrying out. Every mother ought to be a member of the "No Worry" club, as nothing so seriously interferes with her own health, as well as the health of her child, as this modern disease. This, and the suggestion to take more fluid, many mothers have found very helpful. Plenty of pure water between meals, fresh fruit juices, and other wholesome beverages are a boon to the nursing mother.

Answers to Correspondents.

Questions from subscribers pertaining to the preservation of health, the treatment of disease, and kindred topics, will be answered by the Editor, in this department. Answers to questions received during the current month, will appear in the issue of the following month. Write plainly and concisely, give full name and address, and enclose stamp, as it is often expedient to reply by post.

150. CONSTIPATION, BLEEDING PILES.—V. L., Inglewood: I am troubled with constipation and bleeding, probably from piles. What treatment would you advise? *Ans.*—Your diet should contain foods which are sufficiently bulky. Highly concentrated foods, such as Plasmon and others which you mention, tend to produce constipation. Fruits and vegetables add considerably to the bulk of the food taken, as do also wheatmeal preparations, such as granose biscuits and flakes. Sufficient fat should be taken in the form of olive oil, nuts, or good dairy cream or butter. In the way of treatment, you will find exercise to strengthen the abdominal muscles helpful, also the taking of water freely the first thing in the morning and before meals. It may be necessary to take a dose of salts occasionally, until the trouble can be relieved by means of diet and exercise. Large enemas of warm water ought not to be taken frequently. Small quantities of cool water are more curative in their effects. Sitz baths will be found helpful in the treatment of bleeding piles, though if the bleeding persists, an operation offers the only prospect of permanent cure.

151. THE USE OF OLIVE OIL.—W. J. S., Sydney: 1. My singing teacher has advised me to take a tablespoonful of olive oil daily. Is this a wise thing to do as far as health is concerned? *Ans.*—This quantity of olive oil may be taken to advantage by any person possessing ordinary digestive powers.

2. Can you tell me of some of the good properties of olive oil? *Ans.*—Some of the good properties of olive oil are its purity and high food value. It is one of the most concentrated foods we possess, an ounce yielding 264 calories of energy. Olive oil is soothing to the stomach and bowels, and mildly laxative. It possesses marked anti-acid properties, so is useful in cases of hyperacidity, or "acid dyspepsia" as it is commonly called.

3. Kindly state what quantity of olive oil should be taken, also the best time to take it. *Ans.*—When taken as a food, olive oil should be eaten at mealtime. If taken to soothe an irritated stomach and prevent the excessive formation of hydrochloric acid, olive oil may be taken at the beginning of and during the meal. As to quantity, this necessarily varies with different individuals. From a teaspoonful to a tablespoonful, or even more, may be taken at a meal. Less would naturally be taken in warm than in cold weather.

152. NASAL CATARRH, INFANT FEEDING.—E. O. C., Canterbury: 1. Two of my children, aged seven and thirteen respectively, have nasal catarrh, and nearly every morning there is discharge on the pillow. Would you advise syringing the nostrils with warm water and salt? *Ans.*—Your children are old enough to be taught to cleanse the nostrils without the aid of the syringe. This is best accomplished by drawing salt water through the nostrils from a cup or a glass. It should be drawn freely through the nostrils just as air is inhaled. This method of nasal cleansing is therefore called "water-breathing." In chronic catarrh a tonic effect is necessary to strengthen and harden the mucous membranes. This effect is best obtained from cool water 80 degrees Fahrenheit, containing

a teaspoonful of common table salt to the pint.

2. Is it necessary to give a breast-fed baby granose biscuits made into gruel before the age of nine months? *Ans.*—If the mother's milk is sufficient in quantity and of good quality, it is necessary to give nothing else until the age of nine months, when the child should be weaned. If the mother's health is not good, and so her supply of milk deficient, or if the breast milk is impoverished, feeding with thin strained granose gruel made with milk should be begun two or three months earlier.

3. After a baby is weaned at nine months, do you approve of putting it on the bottle for a time, and for how long, or is spoon-feeding after that age just as good? *Ans.*—After the age of nine months the bottle is unnecessary. Spoon-feeding is in every way to be preferred.

4. Do you approve of the following method of treating milk? A quart of milk is allowed to set for eight hours. The cream is then removed and the skimmed milk brought to boiling point. After cooling, rennet is added and the curd removed. To this curd the cream or top milk and sugar of milk are finally added. *Ans.*—The above method is to be recommended in the case of infants who do not thrive on milk in its ordinary form. Lactosa to which cream has been added makes an excellent infants' food in cases of infantile dyspepsia and mal-nutrition.

153. READING AT MEALS, REMEDY FOR ACIDITY, PHOTOGRAPHY AND HEALTH, COLD FEET.—J. J., Waihi: 1. Do you consider it advisable to read at meals, as it helps me to spend more time masticating? *Ans.*—There is no objection to reading something cheerful and helpful that does not tax the mind or entirely absorb the attention. You should enjoy your food as well as your book at meals. Pleasant conversation is to be preferred.

2. In taking a tablespoonful of the following mixture after food I find no trouble with acidity or headache or flatulency. If I don't use it after a meal, I have headache; is there anything very harmful in it?—Sulpho. carbolali. of soda, mag. sulph., mag. carb., A. mentl. pep. *Ans.*—More exercise, the proper selection of food, and thorough mastication will make the use of the medicine unnecessary.

3. Do you consider photography (studio) work a healthy occupation? I consider my indigestion, acidity, and headache have become worse since I started it (nine or ten years ago), although I am most careful to avoid tea, coffee, coarse vegetables, and sloppy foods. *Ans.*—An outdoor life with abundant exercise would suit you better.

4. What is the best remedy for cold feet? Since I had pleurisy last year, my feet are so cold that I start to shiver when sitting at desk, even when other people are warm. *Ans.*—Walking, gardening, and other open-air exercises, and the alternate hot and cold leg-bath. You are thoroughly run down and should spend a few months at the sanitarium. If you go on much longer as at present, you are likely to have a serious illness.

154. IS COCOA HARMFUL?—E. P., Kangarilla: Is fresh cocoa harmful? If so, what are the harmful properties? *Ans.*—The chemical composition of cocoa shows it to contain from one to two per cent. of theobromine, a substance which is closely related to caffeine of coffee and the theine of tea. It is not generally known that theobromine is also very similar to uric acid in its chemical composition. Tannin is present in cocoa to the extent of five or six per cent. Robert Hutchison states that "Cocoa was found to interfere with artificial digestion, owing to the clogging action of its fine particles, preventing a free access of gastric juices to the food." He states further that "Cocoa also is apt to be irritating to some stomachs, and therefore tends to produce gastric catarrh." As to the food value of cocoa, Hutchison says, "Theoretically cocoa is a valuable food, but practically it is not," the reason being that so little of it can be taken at a time. It would require fully seventy-five cupfuls of cocoa to yield the total amount of energy demanded of the body daily. He further adds, "If the beverage is prepared entirely with milk and plenty of sugar, it becomes an important food, but that is due to the milk and sugar, and not to the cocoa." To sum up, the objections to the habitual use of cocoa as a beverage are these: first, disturbance of digestion which results in the production of atonic dyspepsia, accompanied by flatulence, depression, constipation, and disturb-

ance of the heart's action; second, the production of nervous disorders through the action of the theobromine on the nerve centres; third, the introduction into the system of considerable quantities of substance closely related chemically to uric acid.

155. WEAK KIDNEYS.—L. H. D., Strahan: Would you kindly give remedy for weak kidneys? When I get a cold it generally flies to the kidneys. *Ans.*—In the first place it is necessary to decide whether the kidneys are actually weak or diseased. A correct opinion can not be arrived at by the patient. A careful examination of the urine should be made by a competent person. If you will have such an examination made by a local physician, or if you will send a specimen to the sanitarium for analysis, I shall be able to advise treatment. There are many diseases of the kidneys, and treatment differs in different conditions.

156. ANEURISM OR WEAK HEART.—H. P. N., Nhill: I believe I am suffering from aneurism of the heart, which causes severe pain in the chest and weakness. I smoke one-quarter pound of tobacco a fortnight, take very little intoxicating liquor, and drink tea, coffee, and cocoa at meals. I am very nervous. *Ans.*—You may be suffering from aneurism, or your trouble may simply be functional weakness of the heart. In the latter case, total abstinence from tobacco, liquor, tea, coffee, cocoa, and all other stimulants, may suffice to bring about an improvement. Your diet should consist of simple, wholesome, easily digested foods, such as fresh and stewed fruits, milk, cream, etc. What is really needed is treatment in an institution with opportunity for proper rest and care.

157. ENLARGED TONSILS.—E. A. A., Agauaro: Would you kindly let me know through your journal if enlarged tonsils can be cured without operation? What remedy would you advise in the case of a child four years old? *Ans.*—If but slightly enlarged the tonsils may decrease in size under treatment. Benefit may be derived from the use of fomentations to the throat once or twice daily, followed by the heating throat compress overnight. In the morning, when the compress is removed, the throat should be bathed with cold water and gently but briskly rubbed, until well reddened, with a rough towl. A gargle of cold water containing a little borax or salt should be used two or three times daily. If the tonsils are very much enlarged, the most satisfactory method of treatment is by operation.

158. GASTRODYNIA, OR PAIN IN THE STOMACH.—J. M. C. M., Halpin's Creek: How would you treat gastrodynia? This has troubled me for years. *Ans.*—Gastrodynia or, in plain English, pain in the stomach, is not the disease; it is merely a symptom. It may be due to overeating or indigestion, or serious nervous disease as hysteria or neurasthenia. Severe pain in the abdomen is common in nervous dyspepsia and hyper-acidity. As gastrodynia may even be due to gall stones or appendicitis, it is impossible to prescribe treatment without full information and examination.

159. SCANTY, DARK-COLORED URINE.—C. E. H., Bega: When the urine is scanty and dark-colored and sometimes goes thick and whitish in standing, does that indicate disease of the kidneys? *Ans.*—Not necessarily; it may simply indicate that too little water is being drunk. The urine should be examined by a competent person. Quite likely the whitish deposit consists of urates. If so, the urine will become clear on warming.

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