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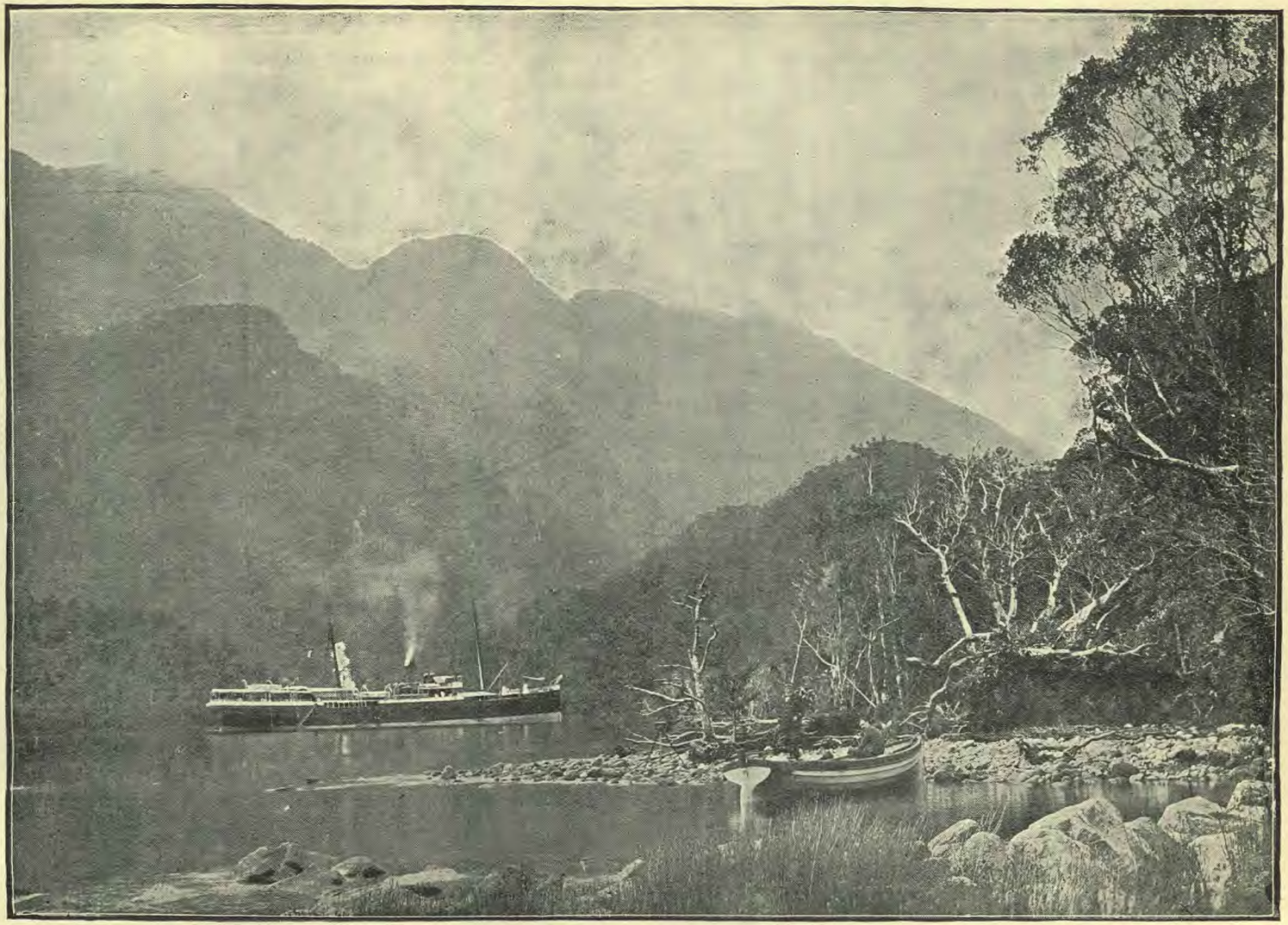


GEORGE SOUND, NEW ZEALAND

By permission of N. J. Caire, Photo., Melb.


Vol. 6 February-March, 1916 No. 1

# Dyspepsia

W. HOWARD JAMES, M.B., B.S.

MOST writers in medicine take up the subject of dyspepsia with a half apology that it is not a disease in itself, but a symptom of some other trouble. Indigestion, however, is so universal that a separate chapter is dedicated to it in all medical treatises. Digestion of our food should be accomplished without any sensations on our part except that of satisfaction, a realisation that the wants of the system have been attended to. Dyspepsia, delayed or difficult digestion, is so common that one perhaps would come to the conclusion that man is an imperfectly constructed being.

### The Preparation of Food

The imperfection is not in man's construction but in his habits. The lower animals are not subject to difficult digestion simply because they have but little choice in the selection of their food, and the food is taken as prepared by nature. Man not only can choose his food and prepare it by the arts of the kitchen, but he also, in order to tickle the appetite, makes up all sorts of complicated mixtures. The simplest food we take is extremely complicated in its nature; the physical and chemical composition is such that it can only but dimly be comprehended by the expert analyst. Every food in its natural state has its own flavour, and if man were more satisfied with that flavour and abstained from the constant interfering with nature's provisions for him he would gain infinitely. The commandment, says the Scripture, was ordained to life. Nature gives us exactly what is best for us, but man has perverted his appetite. He has acquired unnatural tastes, and the satisfying of these tastes does not give him the pleasure and satisfaction that he would have maintained had he lived in harmony with his Creator's plans.

"Nature had to submit to imperfection" through the perversion of law, and man has to accommodate himself to that imperfection. Cooking of the sour, unnatural fruit is essential if it is to form a suitable food. That fruit, however, which has been matured by the sun's rays is much more suitable for the man with ordinary health than that which has been subjected to so much manipulation and changes. It is now recognised that the digestive juices vary in accord with the kind of food taken, that the composition of that which is necessary for a meat diet is very different to that required for the simple bread and milk. It has been unmistakably demonstrated that every kind of food has its own special digestive

secretions prepared for it, but we would ask how is nature to prepare for the combination of flesh foods, soups, puddings, milk, cakes, and tea, coffee, or cocoa presented at the ordinary meal? Not only do we get a variety of dishes at the same meal, but each dish is made as complex as the ingenuity (?) of the cook can devise. Milk, butter, salt, sugar, farinaceous material, soda, and cream of tartar, and fruits, are all combined in the one dish. Is it not marvellous that man comes off as well as he does? Undoubtedly the less complicated the dish the more easily it is digested, and this fact should be remembered in the preparation of food. We should adhere to nature's simple products as much as possible. The perverted appetite craves for that which is not healthful, for that which does not produce strength. Beef tea is considered by many a nourishing dish because it excites (we would avoid the use of the term "stimulates") the nerves of taste. It is, however, not a food. Dr. A. L. Bendict writes: "A meat broth prepared at a temperature above 160° F., the coagulation point of albumen, contains salts, extractives, which are mainly excrementitious, and a little gelatine, as well as some melted fat, although the fat is often skimmed off. In so far as protein is concerned, a meat tea made by boiling cannot be more nourishing than egg tea, that is to say, the water in which eggs are poached; or, in plain words, it contains no protein nourishment at all, and is, barring certain qualitative and quantitative differences, of the same dietetic value as urine."

The more meat is manipulated by man the more indigestible it becomes, and the greater its food value is lessened. In the making of beef tea man's art is brought to perfection, the nourishing parts of the food are rejected and the excrementitious products are retained. But flesh foods often contain other poisons than excrementitious products, and cooking is necessary to destroy these. But flesh foods are not the natural food of man, not the food upon which our Creator designed that man should live. The preparation of beef tea will illustrate the fact that the preparation or cooking of our food should be carried out, not for the mere production of flavour, but with proper regard for the nourishment of the system. It should be remembered that the fewer and the more simple the dishes the more expeditious will be the digestion.

### The Cooking of Fats

In the cooking of food it should be especially remembered that fats are much more digestible as formed by nature, and that the more they are changed by the "many inventions" of man, the more liable are they to interfere with digestion. Nature provides our fat in cereal foods, in fruits, and milk in very fine globules; in fact, they are so minute that in one drop of milk the size of a head of a pin it is estimated there are 1,500,000 fat globules. In the making of butter, the scalding of cream, and in ordinary cooking this fine arrangement of nature is destroyed, and before the fat can be absorbed into our system it, by the duodenal digestive fluids, must be again brought into this fine state of division. The cooking of fat not only destroys the microscopic fat globules, but disintegrates the fat itself, producing fatty acids which are irritating to the delicate lining of the alimentary canal. It should be an absolute rule that fat should never be brought to a higher temperature than boiling point. The frying and baking of all foods containing fat is decidedly inimical to digestion. Pastry cakes and all fried foods should consequently find no place on our tables. Again, when fat is heated in conjunction with other elements of our food it forms a covering to those elements, and prevents the saliva and the gastric juice from acting on them, because the fat cannot be digested and removed until the food is acted on by the digestive fluids from the liver and the pancreas.

### Hereditary

Undoubtedly the sins of the fathers are visited on the children. We inherit the weakened constitutions of our parents.

Frequently the effects of injurious habits are made more manifest in the children than in those indulging in those habits. The drunkard, the smoker, and the heavy tea drinker hand down to their posterity weaknesses of constitution with which they will have to battle throughout life. This is also true in regard to many diseases, such as tuberculosis, syphilis, and probably cancer. The child of the dyspeptic, in order to keep in health will have to exert more than the usual care in the selection of his diet. The difference between the resisting power of the one born with an untainted constitution and the one with a weakened constitution is very marked. We frequently hear the complaint from the dyspeptic, with an inherited weakened constitution, that his neighbours remain free from all dyspeptic troubles without paying any particular regard to what they eat and drink, while he with all his carefulness has to endure almost constant discomfort and uneasiness. The one with an inherited weakness will always have to exercise care. He must not overindulge if he wishes health and happiness. The man with a healthy constitution should also remember that when that constitution has been undermined, even though he make an apparently full recovery, will have to exercise the same care as the one who has inherited a weakened one.

**Women Suffer More Than Men**

from dyspeptic troubles, and many reasons can be given for this fact. They spend much less time in the open air than men. They have greater opportunity for eating and drinking between meals; they are more cumbered with heavy clothes; they wear tightly fitting garments about the waist, where special freedom of movement is absolutely necessary for health. They work right up to the time for partaking of the meal, and, in fact, are frequently disturbed during the meal. All these factors play an important part in bringing about quite a train of dyspeptic symptoms.

The causes of dyspepsia may be conveniently classified under two headings: (1) Constitutional; (2) Functional.

**Constitutional Conditions**

Tuberculosis is frequently the cause of dyspepsia in young people, and indigestion may be an early symptom of tuberculosis, and precede by many months the development of that disease in the lungs or elsewhere. Chronic kidney disease is often responsible for symptoms of indigestion in adult and elderly people. Very frequently the kidney trouble is only accidentally discovered through the development of dyspeptic trouble. Dyspepsia again may be due to organic heart disease, severe anæmic or other constitutional trouble, such as rheumatism or gout. Organic lesions of any of the contents of the abdomen may be the cause of dyspepsia, such as ulcer of stomach or duodenum, dilatation of the stomach, chronic gastric catarrh, appendicitis, catarrh of gall bladder or bile ducts, floating kidney, and various ovarian and uterine disorders. In the treatment of dyspepsia all these constitutional ailments must be remembered.

In our next article we will deal with the causes of functional indigestion and the different forms of indigestion commonly met with.

---

THE battle of Vigo Bay, fought in 1702, led to the adoption of the snuff-taking habit in England. After defeating the combined French and Spanish fleets, Sir George Rooke, the English commander, sacked the town of Vigo, the booty including several thousand barrels of the finest snuff. Although smoking was then firmly established in England, snuff was almost unknown; but when this enormous quantity was thrown on the market at a low price it was bought, out of curiosity, by all sorts and conditions of men. The novelty caught on so well that for the next 100 years the English snuffed far more tobacco than they smoked."

# A Light Luncheon for a Hot Day

EULALIA S. RICHARDS

WHAT shall I cook for dinner? is a question which puzzles many a housewife during the hot days of summer. With the mercury standing in the neighbourhood of 100°, one instinctively feels a repugnance for meats and the heavier dishes which are so much appreciated on a winter's day. Were we to follow the teachings of nature and even of appetite itself we should, at least during the hot weather and better all the year round, dine chiefly upon the delicious fruits and green vegetables which abound at this season of the year. Such a diet produces clean, cool blood, and minimises the tendency to summer disorders. The following is suggested as a light luncheon or dinner for a hot day :—

Macaroni with hard-boiled egg
Green beans with milk sauce
Baked potatoes. Lettuce and tomato salad
Fresh fruit.

Macaroni is a food which does not enjoy the popularity which it deserves. It is light, yet nourishing, and may be served in so many attractive ways. The very best macaroni should be obtained, and while we believe in supporting home industry, there is no doubt that the Italian macaroni is the best produced. There is certainly a knack in cooking macaroni. A brisk fire, an abundance of salted, boiling water, and an allowance of sufficient time (about an hour and a half) are the requisites.

**Macaroni with Hard-Boiled Egg.**—Break the macaroni into inch lengths. Add a cup and a half of broken macaroni to about two quarts of boiling water. Keep boiling briskly for an hour and a half, adding more boiling water if required, and stirring from time to time to prevent sticking at the bottom. Add two or three sticks of celery, an onion if desired, to the macaroni while boiling. When the macaroni is swollen and so soft that it fairly melts in the mouth, drain off the water, which, by the way, makes a good soup stock. (While the macaroni is cooking boil two eggs for twenty minutes.) Now turn the hot macaroni into a pie dish and add a small amount of butter and about a cupful of milk. Press the hard-boiled egg through a sieve, and season with salt and a little butter. Place this in a layer over the macaroni. Now take about a cupful of zwieback crumbs and rub them up with a teaspoonful of butter and two tablespoonfuls of tomato sauce. Sprinkle the prepared zwieback crumbs over the top of the macaroni and egg, and bake in the oven until lightly browned. This is a tasty dish, which will be appreciated by many who are not usually fond of vegetarian dishes.

**Green Beans with Milk Sauce.**—Cut along the edges of the beans to remove the strings: Then cut six or more of them at once, laying them in a bundle on a cutting board, and with a sharp knife cutting into half-inch lengths. Beans so cut are more easily eaten than when cut into long shreds, and they are prepared in a fraction of the time required for the orthodox method. Having cut the beans, drop them into boiling water, adding a teaspoonful of sugar to help preserve the colour. Use only enough water to cover the beans, adding more if necessary later on. Allow an hour and a half for boiling. The average housewife boils beans for about a half hour, but beans so cooked are not nearly so tasty nor so digestible as when cooked for a longer period. Just try and see. By the time the beans are quite tender, the water should nearly have boiled away, so that there is no need of pouring off the water and so wasting a large portion of the valuable salts and other nourishing properties. Now pour over the beans a cupful or more of milk, according to the quantity of beans, season with salt and butter, and thicken slightly with a little cornflour rubbed smooth in cold water. Stir constantly while thickening, and boil for five minutes.

**Baked Potatoes.**—Select potatoes of medium and uniform size. Wash them well, and bake in a moderate oven for forty-five minutes, or until soft throughout. Turn them once or twice while baking, and pierce the skin with a fork when done to allow the steam to escape. Serve them at once, as they soon become heavy and sodden if allowed to wait.

**Lettuce and Tomato Salad.**—Carefully wash the tender leaves from one or two heads of lettuce, and cut up fairly fine. Peel and slice three or four sound tomatoes, and add to the lettuce. Pour over all a salad dressing made as follows :—

**A Delicious and Wholesome Salad Dressing.**—Beat one egg until light, add the juice of one lemon and a little of the grated rind. Add also a dessertspoonful or more of sugar, a tablespoonful of water, a little salt, and a teaspoonful of butter. Mix all together in a small saucepan. Now stand this small saucepan in a larger saucepan containing boiling water. Stir the dressing constantly until it thickens, then remove from the fire and cool by standing it in cold water. Double the recipe if a larger quantily of dressing is desired.

This dressing may be used with any salad. Often one may have some cold vegetable left from the previous day,

which when mixed with a little dressing makes an acceptable salad. Cold green beans, peas, beetroot, carrots, spinach, and even potatoes may be used singly or in various combinations.

For dessert on a hot day nothing is more acceptable than fresh fruit in season. If fresh fruit is not obtainable, stewed or bottled fruit serves nearly as well. Sometimes boiled custard or a milk pudding may be served with the fruit.

Complex dinners are a tax not only to the digestion of the diners, but also to the strength of the housewife, whose cares are quite heavy enough without the preparation of elaborate meals.

A Maori Warri, New Zealand By permission of N. J. Caire, Photo., Melb.


# The Active and Pestilential Fly

## No Race Suicide With Him—What He Does to Spread Disease—How to Get Rid of Him

A. W. SEMMENS, M.D.

THERE is probably no other agency that has such capacity to spread disease as has the ordinary house fly. Because it is more or less a domestic insect, and lives about the habitations of men, it has great opportunities to get into infected matter; and because it can move from one place to another more rapidly than any other insect, and because it thrives in greater numbers, and because its hairy feet, with sucker-like terminals, can gather more certainly whatever infected matter it lights upon, the dangers from its presence are far greater than those from any other infecting agent.

Fly poison and fly papers destroy thousands of the pests. Still they exist by the million.

### A Trillion a Year

It has been estimated that one female fly will multiply itself into thirteen figures (1,000,000,000,000)—so many times that the human mind is unable to calculate the number. To get rid of this pest, then, we must have some very decided means of preventing this propagation.

Investigations carried out on new lines have proved that many of the most deadly diseases, which cause the untimely death of thousands of people, are due to the presence of the house fly and the mosquito. In the near future, when people are educated as to these facts, no civilised town will allow any filth to accumulate or remain uncovered to breed flies; and all tanks, drains, ponds, and swamps will be covered, or else treated so that no mosquitoes can breed in them.

### The Typhoid Fly

"Dr. Howard, of America, has proposed that we should drop the name 'house fly,' with its harmless sound, and call it the 'typhoid fly.' While we talk about it as the domestic or house fly, we will never realise that it is the active agent in spreading typhoid fever. We all know how flies swarm over all kinds of food that are left uncovered, how they feed upon it by sucking up the moisture, or if it is hard, how they discharge a little fluid down their proboscides to soften it.

"Not only do they feed upon all exposed food, but they discharge their excrement upon it; and then a thoughtless person eats this contaminated food that has been left in the pantry or on the dining-room table. Out in the yard and the street, swarms of flies may be observed resting and feasting upon every bit of decaying matter. From such things they come flying into the house, their feet and mouths reeking with filth."

### Not Particular with Their Feet

They are not at all particular in cleaning their feet or mouths before their entrance into the house.

Another great danger from these insects

is this: Flies that have been feasting upon a dead beast, where decay has set in, or upon a beast that has died from some such deadly disease as anthrax, can, if they settle upon an open cut or wound, infect it, and cause blood poisoning, by inoculating the cut or wound with putrid material, or with the deadly germs of anthrax.

While visiting some of the islands in Polynesia, the writer observed the great prevalence of purulent conjunctivitis among the natives, and on investigation found that flies would swarm around these diseased eyes, which were not covered and were seldom washed. Hence the propagation of this virulent malady.

Dysentery is only too well known in many countries; and among young children, in particular, many deaths occur from this cause, particularly in the summer months. In this country and elsewhere, it has been shown that this intestinal disease is always most prevalent in the summer months, when flies are at their worst.

### They Spread Tuberculosis

That flies play a part in the spread of tuberculosis, too, seems probable, for the specific bacilli have repeatedly been found in virulent condition in their intestines and in their excrement.

Dr. Frederick T. Lord, of Boston, published a paper on this in the Boston *Medical and Surgical Journal*, 1904. His important conclusions are as follows:—

1. Flies may ingest tubercular sputum and excrete tubercle bacilli, the virulence of which may last for fifteen days.

2. The danger of human infection from tubercular flyspecks is by the ingestion of the specks on food.

3. Tubercular material should be carefully protected from flies, lest they act as disseminators of the tubercle bacilli.

4. During the fly season, greater attention should be paid to the screening of rooms and hospital wards containing patients with tuberculosis, and laboratories where tubercular material is examined.

5. As the precautions would not eliminate fly infection by patients at large, foodstuffs should be protected from flies, which may already have ingested tubercular material.

The number of bacteria on a single fly may range all the way from 550 to 6,600,000. Early in the fly season, the numbers of bacteria on flies are comparatively small; while later, the numbers are comparatively large. The domestic fly is passing from a disgusting nuisance and troublesome pest to a dangerous enemy to human health, a distributor of typhoid fever, dysentery, cholera, tuberculosis, blood poisoning, and other similar diseases.

### Where the House Fly Breeds

House flies deposit their eggs chiefly in horse manure. Any heap of horse manure piled up about a stable or a yard will within twenty-four hours be found to contain swarms of small, white, naked maggots, the house fly larvæ. On the second day, they are full-grown. On the third day, they have changed to pupæ; and instead of white maggots, the more or less drying manure will be found full of the oval, reddish brown pupa cases of the flies, from which, in three or four days, the perfect flies will swarm out, ready to lay their eggs and produce the next generation. This goes on all through the summer.

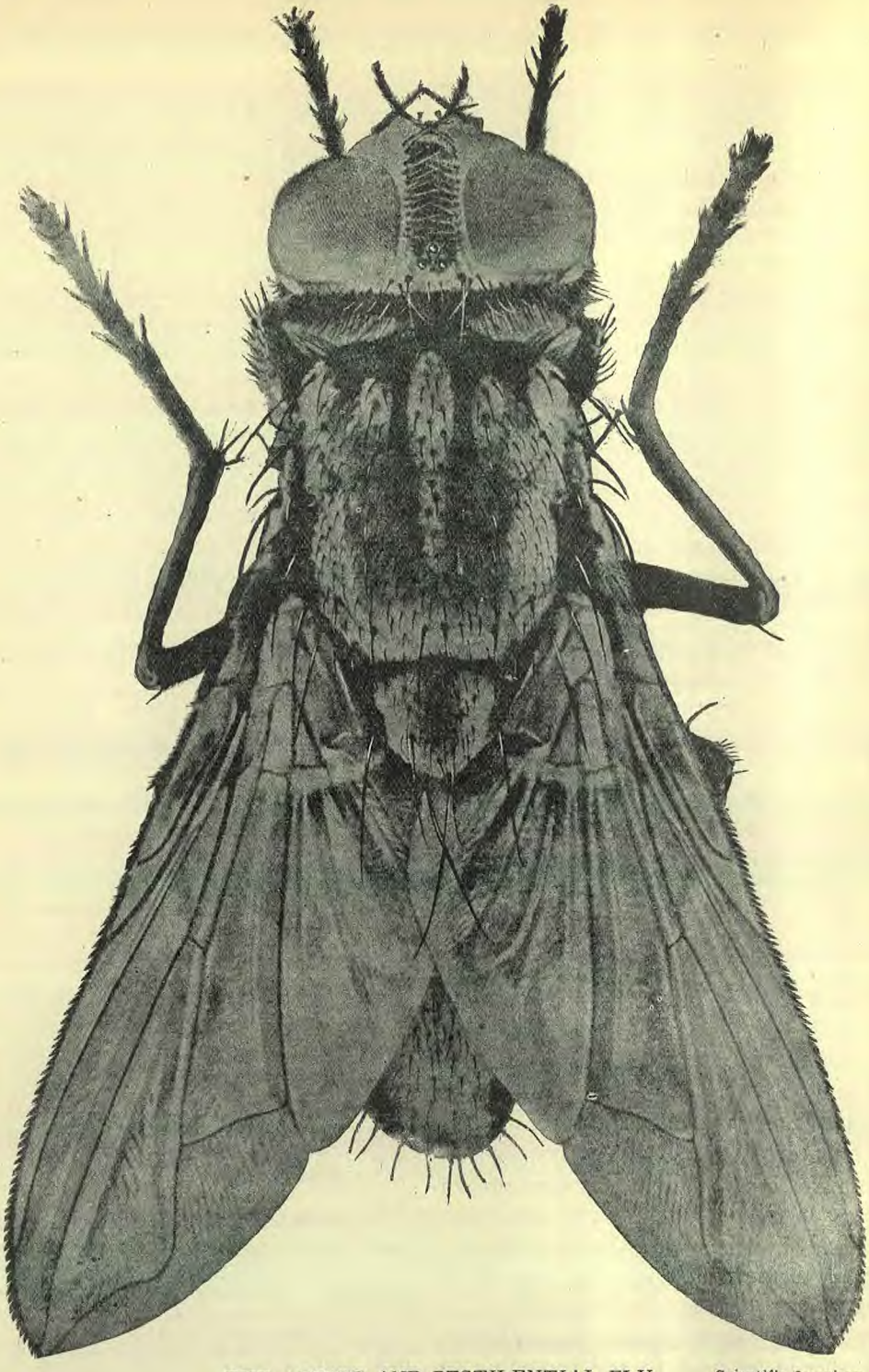
A house fly was placed in a bottle at six o'clock in the evening, and at eight o'clock next morning it was found that it had laid one hundred and twenty eggs.

### How to Make Away with Them

1. Keep clean homes. Few flies enter such homes; and their cargo of bacteria is usually less than that of flies found elsewhere.

2. In dirty homes, the diarrhœal sickness among cases exposed to flies is twice that among cases protected from flies.

3. There is more than twice as much



THE ACTIVE AND PESTILENTIAL FLY *Scientific American*

"While we talk about it as the domestic or house fly, we will never realise that it is the active agent in spreading typhoid fever."

diarrhœa among all cases exposed to flies as among cases protected from flies.

4. There is nearly twice as much diarrhœal sickness in dirty homes as in clean homes.

5. Two and a half times as much sickness among infants, and three and a half times as much diarrhœa occurred among infants exposed to flies in dirty homes as among infants protected from flies in clean homes.

6. Destroy the eggs before they hatch.

7. Sprinkle powdered borax over manure piles, and in cracks and crevices, and wherever flies can breed.

The following directions are given for applying borax as a fly egg destroyer: "Apply through a fine sieve or flour sifter two ounces of borax to a can of rubbish daily; apply ten ounces in the same way to eight bushels of fresh manure, and sprinkle with water." Borax should be applied also to floors and crevices in barns, stables, and markets, to street sweepings, and to such places in the hospital or the home as are likely to be chosen by flies in which to lay their eggs. After the borax is sprinkled, water should be sprinkled over the powder.

We must not wait till flies are here. We must prevent their breeding; and those which survive our preventive measures, must be starved to death. Fly starving, and especially preventive measures against their hatching, will end the nuisance for all time.

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INTERESTING circles that are familiar to all medical men are those in which alcoholism and the drug-habit are important links. The individual who, to tide over a neurasthenic period, takes a little alcohol, is in danger of forming a habit; and, a habit once formed, all the terrible results of chronic alcoholism soon appear, among which, of course, there is the firm desire for more stimulant which maintains the action of the circle.—*The Hospital.*

## Effects of Eating Too Much

Claud E. Steen

MANY persons think that when they have laid aside meat, coffee, tea, and some of the other deleterious things, then they are at liberty to use without limit the abundance of perfectly good food with which the Lord has blessed us. But as surely as they do, they will have to suffer.

What is temperance? It has been defined as the absolute nonuse of all things injurious, and the moderate use of things good.

The affection of any one of the numerous organs and tissues of the body spells the name of a disease. The primary cause—overeating—explains the beginning of most of them.

Science has as yet failed to disprove the results of the many experiments carried on by Professor Chittenden; that is, that man eats far in excess of what he should for the best of health and happiness, not mentioning the greater amount of work accomplished when one eats less, and the saving on the purse.

Many people say, "We will store up food and energy for future work." But this is not so, for the body can use only enough for immediate requirements. All above this amount must be handled as waste. Man does not live on what he eats, but on what he digests.

Overeating may be (1) temporary or (2) chronic.

Temporary overeating may apply to the excessive consumption (*a*) of a mixed diet, or (*b*) of particular articles of food. Many troubles may follow either one or both of these causes. Chronic overeating brings in its train Bright's disease, gout, rheumatism, appendicitis, congestion of the liver, biliousness, constipation, and many other diseases.

It is proper to depend upon a normal appetite to give information as to when to stop eating. The appetite is the conscious call of the body for food. The body will call for food until it is satisfied. But how shall we know when the needs

of the body are supplied? One cannot eat until the stomach digests food enough to supply these needs, although this is what most people try to do.

The appetite sends out its signals through the taste. In other words, when the taste has been obtained from enough food, the desire for food is gone. Nine persons out of every ten—yes, possibly ninety-nine out of every hundred—swallow food, taste, and all, and of course only lack of capacity cuts short their pleasant repast.

In the acute form mentioned above, the body generally has some reserve power to help digest and throw off the excess; but in the chronic form, a constant stress is placed upon the eliminative organs, which sooner or later give way under the strain.

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# Mouth Infection as a Source of Disease

GEORGE THOMASON, M.D.

THE attention of medical men is becoming more and more directed to unhygienic conditions of the mouth as the principal causative factor in a number of diseases. Physical examinations by physicians now necessarily include a thorough inspection of the mouth, or the referring of the patient to a competent dentist for this purpose. Repeated investigations show that less than twenty per cent of the people have healthy mouths.

A great variety of germs may be found in the mouth, eighty per cent of cases showing pus-producing organisms. Various infections which produce by far the greatest number of diseases find entrance to the body through either the digestive or the respiratory tracts, with entrance by the mouth. Germs are constantly taken into the mouth through the process of eating. Particles of food remaining between the teeth, with the warmth and moisture in the mouth, form ideal conditions for the growth of the bacteria The presence of decayed teeth and cavities of course greatly facilitate these processes.

### Diseases Produced Through Infections from the Mouth

The most common of these is rheumatism, both acute and chronic. The swollen, painful joints in rheumatism, as well as pains in the muscles, have been demonstrated many times to have had their origin in pyorrhea of the gums, root abscesses, and pus pockets around the teeth. By means of the blood current, infection from the mouth is carried to the joint, producing inflammation in the blood vessels, and permitting of enlargement and permanent tissue changes in the joints.

Neuritis, or inflammation of the nerve trunks, sciatica, neuralgia, headaches, as well as various digestive disturbances, including ulcer of the stomach, inflammation of the gall bladder and the appendix, are frequently traceable to mouth infection. The sensation of " pins and needles," of which people so frequently complain, often originates from a similar source.

Cases of pronounced mental depression and even melancholia have entirely cleared up following thorough dental care.

A number of cases of palpitation of the heart and even malignant inflammation of the lining of the heart, also Bright's disease of the kidneys, have been found to have originated through an infection from the mouth.

Decaying food particles in the mouth tend to produce an acid reaction which favours the development of cancer of the mouth and tongue, especially in the presence of sharp edges of roots and other sources of irritation.

### The Remedy

The conditions above mentioned can be obviated largely by:—

First, the occasional attention of a competent, conscientious dentist.

Second, the thorough use of a toothbrush, with suitable dental cream or powder, at least three or four times a day, to include light scrubbing of the tongue or use of a tongue scraper.

Third, a toothpick or linen thread or dental floss used so as to remove thoroughly remaining food particles from between the teeth.

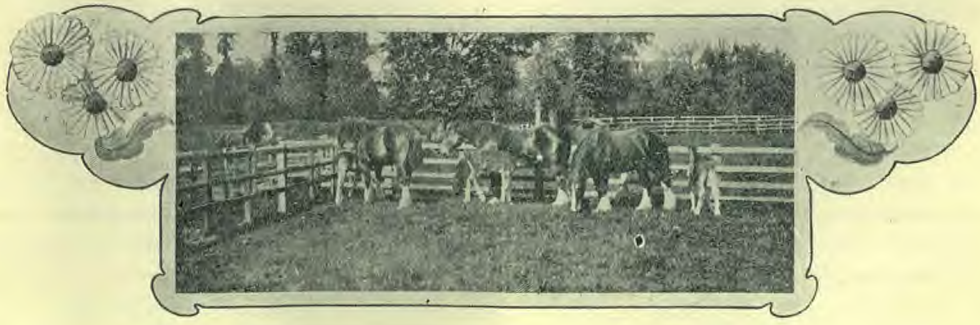
Fourth, rinsing the mouth and gargling the throat once or twice daily with a mild antiseptic, such as two or three drops of oil of cinnamon in a glass of water, or one part of listerine or glycothymoline to three parts of water.

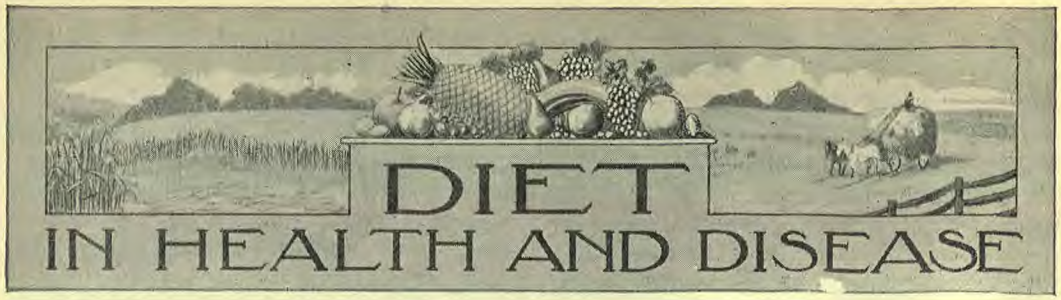
Fifth, the eating daily of acid fruit, especially oranges, apples, grapes, pineapples, and similar fruits.

In view of the serious and often disastrous physical mischief that may be wrought by septic mouth conditions, it is of tremendous importance that the possibilities involved should be more generally recognised and appreciated, and oral asepsis practised.

## Effects of Town Smoke on Plants

INVESTIGATIONS on this subject have been made in and about the city of Leeds by Messrs. Crowther, Ruston, and Stuart, says the *Scientific American*. At six stations ranging in location from the heart of the industrial area to a point six miles out of town crops of radishes, lettuce, and cabbages were grown in wooden buckets sunk in the ground and all filled with soil taken from a common locality. The degree of atmospheric pollution was measured at each of these places by an examination of the annual rainfall as to its sulphur content. There was found to be a fairly close relation between the relative degree of atmospheric purity and the amount of plant growth obtainable, as well as the sulphur content of the crop. Moreover, the effects of atmospheric pollution appear to be cumulative, becoming worse with each succeeding crop. A chemical and bacteriological examination of the soil at the end of the experiments, which lasted three years, showed that the detrimental effect of the smoky atmosphere on plant growth is partly due to such unfavourable changes in the soil as the steady depletion of the stock of calcium carbonate and the inhibition of the activities of the nitrogen-adapting bacteria.






# Fruit as a Food in Health and Disease

D. H. KRESS, M.D.

"OF every tree thou mayest freely eat," is voiced both by inspiration, instinct, and science. The Creator placed within man a desire for fruit, and then placed him where this craving could be satisfied—in a garden in which were planted trees "pleasant to the sight and good for food" —and said, "Of every tree thou mayest *freely* eat." There are certain foods which are wholesome of which we should eat sparingly, but not so with fruits. Fruits may be used freely. Nothing is so attractive as a luscious peach, a pear, an apple, or an orange. Children will often defy the cane in order to satisfy their craving for fruit. By choice, children would make this the chief part of their diet.

When fruit is not well masticated, or is eaten when unripe, or combined with vegetables, it causes trouble. This has led some to regard fruit as dangerous. Parents, to supply the desire of their children for the sweets found in fruits, purchase lollies, cake, etc.; but the cane sugar which they contain is a poor and, in fact, a dangerous substitute for the sugar found in fruit. Fruit sugar is a natural food, cane sugar is not. Cane sugar is irritating to the alimentary tract. It is found only in minute quantities in man's original bill of fare, the grains, fruits, and nuts.

Cane sugar is derived from the coarser foods, as grasses, roots, and the stems of plants. It was first commercially introduced into Europe in the fourteenth century. The consumption per capita has doubled during the past twenty years. America consumes over seventy-five pounds per capita, and Great Britain eighty-five pounds annually. £60,000,000 is paid out annually in the United States alone for this commodity which a few centuries ago was unknown. The free use of sugar is responsible for the prevalence of intestinal catarrh and many other ills. The rapid increase of diabetes and other derangements of the liver is due often to the free use of sugar. Many of the diseases of modern man might be prevented if fruit should be given the place the Creator designed it should have in man's dietary.

The craving for sugar exists in all who do not make use of fruits. Fruit is best taken at or near the close of the meal. Science gives us the reason for it. The acids in fruits interfere with starch digestion if eaten before or with the meal, but both the acids and pectose in fruit aid the digestion of the albumens and fats when taken at the close of the meal; it no longer interferes with the one, and it aids the other. Apples, pears, peaches, strawberries, cherries, grapes, etc., aside from sugar, contain a considerable amount of pectose and valuable acids. All these acids aid stomach digestion. A small quantity of lemon juice, pineapple juice, orange or apple juice, at the close of the meal is therefore one of the best remedies physicians can prescribe in hypochlorhydria, or slow digestion due to diminution of stomach acid. Paul's advice to

"Fruit is not Merely a Food, but it is One of Nature's Best Medicines."

Timothy should be given more frequently to those who have slow digestion: "Use a little wine [juice of the grape] for thy stomach's sake and thine often infirmities."

Ship crews, when deprived of fruits, and forced to subsist for any length of time upon meats, new breads, tea and coffee, grow haggard and rheumatic, their gums grow spongy, and they develop a condition known as scurvy. It has been found that the addition of a liberal supply of fruit will cause a disappearance of these unfavourable symptoms.

Fruit is not merely a food, but it is one of nature's best medicines. It increases the alkalinity of the blood, enabling it to dissolve and hold in solution for elimination the acid tissue wastes; thus it clears and cleanses the tissues, and acts as a preventive of rheumatism, gout, and other maladies in the adult, and prevents scrofula in children.

No remedy exists that is better than the free use of oranges, lemons, strawberries, grapes, apples, etc., for gouty subjects. The salts of potash and the acids found so plentifully in fruits are the chief agents in purifying the blood from uric acid poisons. The acids of fruits are oxidised in the body and converted into alkalies. Fruit acids are much better than the much advertised lithia and other alkaline waters. In scurvy on board ship, when iron, quinine, arsenic, strychnia, and other drugs have proved miserable failures, fruits have accomplished that which artificially made fruit salts, mercury, podophyllin, etc., failed to accomplish.

By the palate, when unperverted, fruit is relished. Solomon, the greatest and wisest of kings the world has ever known, gave expression to the satisfaction fruit afforded him, in the following words: "Stay me with raisins, comfort me with apples."

When Moses sent out the spies to the land of Canaan, they were told, "Be of good courage, and *bring of the fruit of the land.*" They returned, carrying between them a cluster of grapes cut down at the brook Eshcol, and said: "It is a good land." "This is the fruit of it!" Among the people whom God led and taught, more attention and more thought were given to the cultivation of vineyards, than to the raising of cattle. It was God's purpose that fruit, not meat, should constitute the most essential part of their food.

After the wanderings of the children of Israel in the wilderness had ceased, and the manna upon which they had depended for sustenance no longer fell, "they did eat of the old corn of the land, . . . unleavened cakes, and parched corn," and "they did eat of the fruit of the land of Canaan that year." No better food could have been chosen both to acquire health and to develop purity of life, than cereals and fruits. These foods combine perfectly, and make a well-balanced meal.

The poor Egyptian, who was forsaken by his master because he was hopelessly ill, when found by David the king, received bread to eat and water to drink, the record tells us; "and they gave him a piece of a cake of figs, and two clusters of raisins: and when he had eaten, his spirit came again to him." Many a poor sufferer can date his recovery to the adoption of a similar diet of fruits and bread, and there are still many invalids that are considered hopeless who might be helped by the adoption of such a diet.

Fruit should be fully ripened, and should also be thoroughly divided by chewing. It should not be swallowed in lumps. Fresh fruits are always preferable to dried or canned fruits; but when fresh fruits cannot be obtained in liberal quantities, the latter may be used.

*The juice of fruit* is valuable in disease both as a nutrient and as a germicide. Usually beef extract is resorted to in disease, under the supposition that it is especially nourishing and sustaining. This is a mistake. Dr. W. H. Wiley says: "There is no nourishment in broth or the so-called meat extracts. Every one of the so-called invalid foods made from meat is a fake of the worst kind. Extract of meat is absolutely without

value as a food. A dog fed on beef extract for eleven days died of starvation." W. Gilman Thompson, M.D., in his "Practical Dietetics," says, "Liebig's extract of meat consists of the flavouring extractive matters, such as creatin, isolin, decomposable hematin, and salts." These are excrementitious substances, and are eliminated chiefly through the kidneys; hence Masterman compares meat juices to urine, the elements found in meat extractives being almost identical to those found in urine. A pound of mutton represents two-fifths of an ounce of the extract. Thompson says meat extract "contains no albumen or fibrin, hence its nutritive power is practically nil."

Anyone acquainted with chemistry will recognise creatin, isolin, and hematin as poisons formed in the body of the animal as the result of breaking down of tissue. All meat extracts have in them these soluble body or tissue wastes. These give to the meat extractives the aroma and flavour so much desired. All that can be said in favour of meat extractives as food can be said in favour of alcohol. Both contain elements which overwork and tax the liver in converting them into less harmful products. They produce a feverish or diseased condition of this organ. The only part of the meat that has any real food value is the insoluble part, or the meat fibre. This part is rendered more wholesome by the removal of these soluble wastes. In fact, the orthodox Jew carefully washes all meats, just as we do garments, to get rid of this organic filth. The Jew rids the meat of the products which the Gentile seeks after. For this reason the Jew is also exempt from many diseases which afflict the Gentile.

"No Better Food Could be Chosen Both to Acquire Health and to Develop Purity of Life, than Cereals and Fruits"

Since these facts have been demonstrated, some of the manufacturers of meat juices, to save their reputation, have added

to their products a little of the meat fibre or some cereal product; but even then the nutritive value of the most nutritious beef extract cannot be compared with fruit juices.

One cup of orange juice is equal in food value to five cups of the most nutritious beef tea, and one cup of grape juice is equal to eight cups of beef juice.

In most of the diseases, and especially in fevers, the saliva and the gastric juice for germs, and is not a suitable food when the temperature is high. While meat juices encourage the growth of bacteria, fruit juices destroy germs of disease. Grape juice, even one part to one hundred of water, is destructive to typhoid fever germs in less than three minutes; while lemon, pineapple, or orange juice are known to be destructive to germs of cholera.

The fruit juices also contain properties

"In the Fruits the Nutritive Elements are Ready for Assimilation"

are diminished, and digestion is slow. In the absence or diminution of the digestive juices the food eaten naturally tends to decay. This accounts for the coated tongue and foul breath found in fevers. Beef tea is therefore one of the worst things to give to a fever patient; for instead of discouraging the growth of dangerous bacteria, it favours their increase, and consequently there will be an increased formation of the poisons which feed the fever. Many a fever patient has been killed by meat extractives.

Even milk affords a favourable culture which aid the digestion of protein. It is known by all that pineapple juice will digest meat fibre or the white of eggs. Other fruits contain this same property, but to a less degree. Where fever patients are fed on fruit juices, the coating on the tongue is absent, the breath is not foul, and the temperature is easy to control. When fruit juices disagree or cause flatulency it may be traced to the way they are taken. They should not be gulped down, but taken in small sips. They should be retained in the mouth sufficiently long to mingle the saliva with them. Usually if

this simple precaution is observed the symptoms of flatulency will disappear. Fruit juices are the best foods to give fever cases, especially while the fever is high. Milk may sometimes be given if taken in small sips and well insalivated, but beef tea should *never* be given to fever patients.

Fruits are especially indicated during the summer months, when the system is in a more or less relaxed or debilitated state because of the warm weather. The glands of the stomach are then less active, less gastric juice is formed, and less food can be digested. Nature indicates plainly a change of food when the weather is warm. Solid foods and especially highly albuminous foods which readily undergo decay, should be used sparingly. Nature during the warm weather serves man with the food best adapted for him. The acid in the fruits exerts the same antiseptic influence on the stomach contents that is exerted by the normal stomach acid when present.

In the fruits the nutritive elements are ready for immediate absorption and assimilation, requiring little or no effort on the part of the digestive organs. Should fruit be more freely used, there would be much less sickness than there is; and should it be employed more freely by the sick, more recoveries would result.

Therefore in health and in disease the intelligent use of fruit is indicated. See that the fruit is well ripened. Eat it chiefly at the close of the meal. Do not eat fruits at the same meal with vegetables. Grains, breads, nuts, and fruits combine well.

Fruits must be well masticated or thoroughly divided into minute particles. This also encourages the free mingling of alkaline saliva with the acid, and lessens the irritation that would otherwise result from the acid and sugar. It also prevents fermentation.

Fruit juices should be taken sparingly when taken with meals, as a glass of fruit juice represents a good deal of fruit, and much liquid is not indicated when solid foods have been eaten. Each small mouthful of fruit or fruit juice should be retained for a time in the mouth, and the saliva should be well mingled with it.

If these precautions are observed, those who have supposed they could not eat fruits will find they can, and no disturbance will result from the use of fruits by the feeblest stomachs.

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## Hints on the Prevention of Dyspepsia

A. B. Olsen, M.D., D.P.H.

THERE is no reason why the stomach and liver and bowels should not give as good and perfect service as any other set of organs in the body, and they would were it not for the fact that they are subjected to more abuse. Most people seem to have great difficulty in exercising anything like a reasonable control of appetite, and often yield to temptation and indulge in articles of drink and diet even when they know positively that the stomach will suffer. While nature intended that eating and drinking should be a comfortable and pleasant sensation, it does not mean that people should live for the purpose of indulging in the pleasures of the table, or make eating and drinking the main motive of life.

The real object of attendance at table is to nourish the body and restore its strength and energies. This can be done wisely, and at the same time one may enjoy both food and drink and rise from the table with a sensation of comfort and pleasure.

Most people eat too frequently, taking four or five or even six meals in the day. Three are ample, and there is little doubt but that the vast majority of people would find two meals a day still more satisfactory from the standpoint of health and efficiency. There should be an interval of about five hours between meals so as to give the digestive organs ample opportunity to do their work and have a brief rest between meals. This is particularly true of the stomach, which should not be kept in a state of constant activity and

dilatation during all the waking hours and part of the time allotted to sleep.

It is well to make breakfast a fairly substantial meal, and if possible, it should be taken sufficiently early so that it is not necessary to rise from the table and rush off to work or to the tram or train. As far as possible the main meal of the day should be taken between one and two, and the third and last meal should be taken comparatively early, about six or seven. Supper should be the lightest meal of the day, and may consist chiefly of fresh or stewed fruit with wholemeal bread and butter, with an added hot, nourishing drink in winter time if necessary. Drinking freely with meals is decidedly undesirable, and should be avoided.

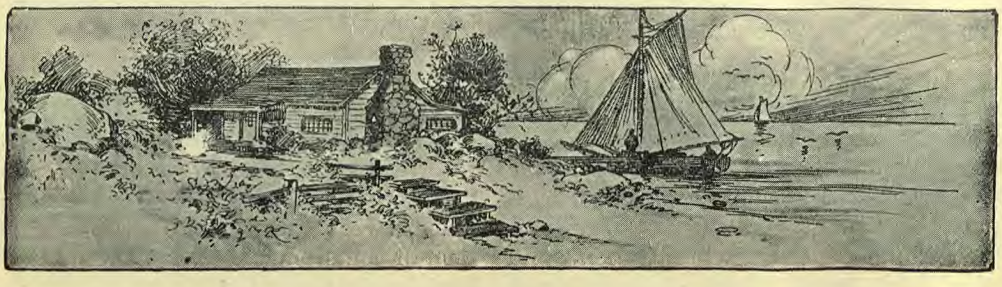
No provision has been made for tea, which is both an unnecessary and an unwholesome function as far as health is concerned. If it becomes desirable to offer refreshments to friends calling in the afternoon we would recommend fruit drinks, such as freshly prepared lemonade or orangeade, unfermented grape wine or fresh grapes, oranges, or other juicy fruit.

It is a mistake to think that it is necessary to eat simply because meal-time has arrived. The wise man waits on hunger, and does not mind skipping a meal now and again, and giving his digestive organs a pleasant surprise. Hunger is always the best sauce, and it is also the best means of ensuring good digestion and assimilation. When the stomach really calls for food, it is usually prepared to deal with it in a satisfactory way, but when appetite has to be stimulated or tickled by irritating spices and other condiments mischief is almost certain to follow. It is not wise to sit down to a full meal when overtired or exhausted. Sipping a cup of some hot, nourishing drink will bring the needed refreshing, and then a moderate meal may be proceeded with later on.

Rapid eating is another common means of encouraging dyspepsia, and would be impossible if people took pains to masticate their food as nature intended. Efficient mastication also brings out the delicate flavours of the food, and makes the use of condiments superfluous. Careful chewing of the food is one of the best means of preventing indigestion and dyspepsia, and such a practice also helps to preserve the teeth by putting them to their natural use.

To eat to repletion is a mistake. It is always better to leave the table before the appetite is satiated. Over-eating brings uncomfortable feelings in the region of the stomach, if not actual pain, and makes one drowsy and lethargic and ready to have a goodsleep. Such feelings after a meal are positive evidence of over-eating.

No food of any kind should be taken between meals. The common habit of taking sweets, cakes, pastries, and fruit at any and all times is not conducive to good digestion, and sooner or later brings trouble. Adults as well as children very often give way to this habit, but always suffer in consequence sooner or later. Nothing but water or lemonade or some similar drink should be taken between meals.




# The Health of the House-Mother

EULALIA S. RICHARDS

WE hear a great deal about the care of infants, the hygiene of childhood, and health conditions in workrooms and business offices. In fact we hear a great deal concerning the health of almost every member of the family and of the community except the house-mother.

The business man or woman works eight or nine hours a day under conditions rendered reasonably favourable by the compulsion of law. But the mother's work is never done, and she finds but little time for personal health culture. From the early hour when she leaves her bed to prepare breakfast until the last child is tucked away for the night it is one long record of strenuous effort. Nor is she quite sure, when the last baby is in bed, that she will enjoy a night's repose. Babies have a habit of cutting teeth and developing colic, colds, and all sorts of troublesome little ailments. And who could be expected to care for sick babies but mother? Let us just glance at mother's work-schedule for one year.

1,095 meals to plan, prepare, and serve.

Clear table and "wash up" at least 1,095 times.

Make up beds and tidy house 365 times.

Floor scrubbing, window washing, etc., as required.

"Spring house cleaning" once or twice.

Fifty-two family washings and as many ironings.

Daily washing for baby if there is one in the family.

Fifty-two piles of clothes and socks to be mended.

A large number of garments to be made, chiefly after the family are in bed.

Care for baby constantly, preparing his bottle, if artificially fed, about 1,350 times, or five times a day for nine months.

Nurse any member of the family who is ill, bandage all wounds, kiss all of baby's bruises, arbitrate in all quarrels, cheer all despondent, and heal all broken hearts.

This is but a brief and incomplete record of all that the loving and faithful mother must face at the beginning of each new year. Well it is for her that she needs live but one day at a time, and that she may claim the comforting promise, "As thy day so shall thy strength be."

However, we believe that it is the mother's duty to guard her health and strength as a sacred treasure. No one could ever quite fill her place in her children's hearts and lives were she to be taken from them. That same love which prompts her to render her family faithful service should also lead her to carefully conserve her life and health.

How may the busy mother so increase her strength and energy that she may greet each new day courageously and joyously.

*First.*—She must devote a little time each day to personal health culture. This includes taking sufficient time for her meals, for a daily bath, a little exercise in

the open air, and a short rest each afternoon.

*Secondly.*—She must simplify her daily routine of household labour so that there shall be actually less work to do.

*Thirdly.*—She must learn to share her burdens with others.

*Lastly.*—She must be allowed regular and adequate holidays.

It will require careful thought and planning to bring all this about, but it must somehow be accomplished, else the mother will one day find herself an old woman, worn, weak, and nervous, at a time in life when she should still be young and fresh and joyous.

The simplification of the daily routine of household labour is in itself no simple matter. The mother must apply her mind diligently to the task of thinking out ways and means of lessening her labour. Her husband, too, must come to the rescue, and provide her with such conveniences and appliances as shall render her work more easy. For example, the O'cedar mop may be used in cleaning the linoleums. It costs but little, yet saves many a backache. Carpets which necessitate so much sweeping and dusting may be almost wholly replaced by small, light rugs. Heavy window hangings, bed curtains, and all unnecessary draperies may be discarded. Short window curtains of muslin or net, supported by brass rods, are all that is required (in addition to the usual blinds), and these are very easily laundered. The multitude of useless knick-knacks which render complex the work of dusting the house might well be shipped to the heathen, who would no doubt derive untold pleasure from them, and would not be worried with their cleaning.

The children's every-day clothes should be made of dark material and in the simplest styles possible. In warm weather the little daughter requires but a cotton singlet, and bloomers to match her simple one-piece frock. Her brother's clothing may be almost if not quite so simple. A little thought will suggest many ways of simplifying the family wardrobe, and thus lessen the work of both making and laundering garments.

Then, too, the family will be much healthier and happier if their meals are simplified considerably. Let the mother study to make each meal simple in itself, providing variety from day to day. Choose such foods as are wholesome. Prepare them carefully and serve them tastefully. Just try your family, and see if they will not soon come to revel in your simple, satisfying and enjoyable meals.

Now with whom is the mother to share her labours? With her children; yes, and with her husband. Even though he works his eight hours a day, it would not hurt him occasionally to lend his wife a hand in the heaviest of her work which so taxes her lesser strength. The children should be assigned their own little duties, which should be regularly performed. As they become accustomed to bearing responsibility, they will be able to relieve their mother more and more. Let them feel that it is each one's duty to share the labour of the home as well as its pleasures. The tactful mother will find tactful methods of keeping the children up to their regular work. A special treat or pleasure now and again as a reward of faithful service, or perhaps a small allowance of money, which will serve the purpose of teaching the child appreciation of money values and discretion in its expenditure.

Many a weary mother has borne her burdens alone, rejoicing unselfishly in the thought that her children were enjoying easier lives than hers had been. But this is a great mistake. One of her chief duties is to teach her children to sense their duty to those about them, and to bravely shoulder their share of the world's work. The child who is allowed to spend his days in idleness becomes selfish and exacting, an encumbrance to his friends and to society at large.

Lastly, the mother must be allowed regular and adequate holidays. Why not? Everyone else who works (and many who do not) has his holiday, and surely no one needs it more than the

An Ideal Spot for Mother's Holiday

N. J. Caire, Photo., Melb.

mother whose work is never done. She should have at stated intervals, say once a year, a really proper holiday. We do not refer to the sort of holiday many poor mothers get, when they are bundled off to the mountains or the seashore with six or more babies. That is no holiday at all, and the mother is likely to return home more tired than when she left. Certainly she could care for her children more easily, comfortably, and happily in her own home than in a boarding-house where their presence is an annoyance and they must be watched every moment to keep them out of mischief. No; by all means let the mother have a proper holiday. Her husband finds one day a week with the children just all he can bear. In fact his endurance is often so taxed before the day is done, that he quietly steals away and hides himself, leaving the children to worry their longsuffering mother. She is accustomed to them. Yes, certainly; for she is with them from morning till night, from one year's end to another.

For this very reason she needs a holiday—a short time spent right away from home and children. Let some relation or trustworthy person be found to care for the family in the mother's absence. If adequate provision for the comfort and well-being of her family is made, the mother will go away with a light heart feeling that she has nothing to do, for perhaps a fortnight, but to eat and sleep and rest and enjoy herself as fancy dictates. She can "sleep in" if she likes, and enjoy the luxury of breakfast in bed. She may enjoy long walks and talks with nature, renewing her acquaintance with those things which were so dear to her in her girlhood days. She may have seasons of quiet thought and communion which are so refreshing to those whose lives are spent in service for others.

When mother comes home there will be roses in her cheeks, a sparkle in her eyes, and fresh courage in her heart for another year's service.

How beautiful the old home looks, how lovely are her children, and how sweet the privilege of mothering them again. All of the little things which caused such fret and chafing before her holiday are met with a smiling face now that she has had an opportunity of adjusting her perspective of life and calming her weary nerves into serenity.

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### SMILE ON

**R. Hare**

WHAT does the sun do when tempests come
To hide its smiling face,
To shut the light from our anxious sight,
And shade each sunny place?

It just shines on, and it smiles the same,
However tempests blow,
In Orient shroud, behind the cloud,
It shines—storms pass—you know!

What do the stars do when tempests rise,
And hide their twinkling gleam—
When gloom profound reigns all around
Without one cheering beam?

They just shine on and smile as sweet
As when the heavens were clear,
The clouds that rise to shade the skies
Pass, then the stars appear.

Then, weary heart, all thy lessons learn—
The clouds that bring thee pain
Will pass in love, and from above
The sun will smile again.

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## The Curtains at Night

**Mrs. I. H. E.**

NO doubt many women feel as one has expressed it, that "the pinning up of the curtains before opening the windows at night is the last straw that breaks the tired housekeeper's back." The nightly protest of tired arms and back led this woman to think out an easier way than pinning them up, draping them over a picture, or even leaving them to swing back and forth against the screens in the damp night air. A white bone ring was sewed in the middle of each curtain hem, on the wrong side. Brass hooks were placed on each side of the window frame, rather high up; and when bedtime came, it took but a moment to hook the curtains over these, and protect them from the breezes that would otherwise soon make them limp and unsightly.

## The Sand Box

THERE is nothing that gives the children a safer and better time than the sand box. It will hold their attention for hours, and affords unending pleasure in the open air. They can dip and play contentedly, and not be lured away by other attractions.

The children's sand box is a great mother's helper too, for she always knows what to do with the little ones when she cannot be continually with them. It can be made a very instructive device as well as a pastime. With a little help from an older brother or sister, the children in school who are beginning geography can be taught to make models of the different forms of land, the outline of different countries and various other things that will be instructive.

A pile of sand in the yard isn't a very desirable thing, as the sand soon spreads, becomes mixed with dirt and rubbish, and before long the children are sitting on the bare ground. These objectionable features can be avoided if the sand is put in a large box. The box should be raised off the ground a few inches, then when it rains the sand will dry quickly.

If a slightly sloping shelf is built all the way around the top of the box, it will make a place for toys, and the children will waste less sand. Such a shelf would be a convenient seat for older people who assemble to help or watch the children in their play.—*Selected.*


**NOTICE TO SUBSCRIBERS: All questions for this department must be addressed to the EDITOR, "LIFE & HEALTH," WARBURTON, VICTORIA, and not to Dr. W. H. James, who will treat correspondence only on usual conditions of private practice. Subscribers sending questions should invariably give their full name and address, not for publication, but in order that the Editor may reply by personal letter if he so desires. Because of this omission several questions have not been answered. To avoid disappointment subscribers will please refrain from requesting replies to questions by mail.**

### 379. Acid Dyspepsia

"Worried" complains: "For some months I have suffered with severe burning sensations almost immediately after taking food, with sour eructations, flatulence, and considerable pain. Food gives some relief to the acidity and the burning pain, but all starchy foods increase the trouble. The pain is of a gnawing, burning character, and is relieved by belching. Often the pain appears when I am beginning to feel hungry."

*Ans.*—This is a case of hyperchlorhydria —excess of hydrochloric acid, the normal acid of the stomach. Very often this condition is associated with some organic lesion, as ulcer of the stomach or duodenum, gall stones, or appendicitis. Dieting is of the utmost importance. All articles of food that over-stimulate the glands of the stomach must be avoided, such as acids (acid fruits), mustard, pepper, spices, pickles, condiments, sauces, tea, and coffee. The food should be rich in albumen, and should consist largely of milk and eggs. Milk should be taken with lime water—three parts of milk to one of lime water. Eggs should never be cooked at a high temperature. In cooking eggs in the shells bring the water to boiling point, put in the eggs, and remove at once from the fire. The same may be said in reference to poaching eggs. They can be allowed to remain in the water from five minutes upwards according to taste. Zwieback made from white, new "pulled" (not cut) bread is better than ordinary bread. Butter, cream, and olive oil are often of great advantage. Tablespoonful of olive oil may be taken before meals. A small quantity of green vegetables may be taken with the albuminous food, such as spinach, asparagus, tender peas, or french beans. Bread when taken should be stale and well baked. Unlike in ordinary indigestion, a considerable quantity of warm water should be taken with the meals. A large tumblerful should also be taken an hour before meals, and if acidity is troublesome after meals it should be diluted with more warm water. Hydrotherapy is beneficial in these cases. Alternate hot and cold compresses over the stomach an hour before meals and hot douches or fomentations over the spine tend to lessen the formation of acid. This is exactly opposite to treatment for ordinary indigestion where cold applications are more beneficial. A heating compress often gives relief. Several layers of cheese cloth rung out in water, covered with oil silk and flannel bandages, worn continuously through the night.

Often some alkali is necessary to keep down acidity. The following would be good form :—

℞ Magnesia ustae
Sodae Bicarb
Bismuth Subnit aa (of each) ℥j (one ounce)

Take one teaspoonful one or two hours after meals.

The white of one or two eggs immediately before meals is also very helpful.

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**380. Bad Breath**

"Anxious" complains that he constantly suffers from bad breath, and would like to know the cause.

*Ans.*—Certain odours from the body are often unavoidable. They are inherent in the individual and characteristic of physical organisation, being due to changes which take place in the tissues of the body (metabolic). The odour of the body is generally noticed also in the breath. Often bad breath is due to some local trouble in the nose, mouth, or throat. It may be due to diseased bone in nose, catarrh of nose, or tonsillar trouble. Very frequently it is digestive, and due to the decomposition of albuminous foods in the small and large intestines, especially when combined with constipation. It is not so much stomach as intestinal trouble that produces bad breath. Avoid excess of albuminous foods, such as flesh foods, eggs, and milk. Take plenty of water between meals, and mature fruit after meals. Avoid the coarser vegetables. Spinach, cauliflower, young green peas, and french beans are the most suitable. Keep the bowels regular, and thoroughly cleanse the skin of the whole body daily with cold water. Take hot bath twice weekly, followed always by cold shower or cold sponge.

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**381. Constipation in Baby**

"Taranaka," N.Z., writes: "My baby, seventeen weeks old, has suffered with constipation from birth. I fed her myself for seven weeks, and now have her on humanised milk. . . . For two weeks I kept her regular by giving her about three ounces of cold water when she first wakened at five o'clock. Orange juice will act once in a while. A little treacle in her milk acted once. I gave her olive oil regularly for weeks, and also massaged her bowels, but as a general rule have to resort to enemata. Baby is outside all day long, weather permitting. She sleeps with windows wide open at night."

*Ans.*—The remedies employed in this case are all good, and are often successful. The addition to the food of a dilute cereal gruel, such as barley water, will often help. Increase of amount of cream in the food and the addition of a teaspoonful of Benger's or Mellin's Food will be found serviceable. Sometimes constipation is due to the child not getting enough food, and when the food is not strong enough. When dietetic treatment is not effective, olive oil, teaspoonful, thrice daily may prove successful. If this does not act, give half a grain of calomel powder occasionally. We would only recommend the latter when other remedies fail, but it is generally followed by good, permanent results.

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**382. Tonsillitis**

J. A. O. asks for remedy for her tonsils, which fill up with offensive matter daily, and asks what will reduce enlarged tonsils?

*Ans.*—Mouth breathing due to some trouble in the nose is frequently the cause of tonsillar trouble. If breathing through the nose is not free, the nose should be thoroughly examined by a reliable medical man and suitable treatment adopted. Repeated colds, influenza, and depressed general health are often causes. Post nasal growths are frequently associated with enlarged tonsils. Both should be removed by an operation. Attend to digestion, avoid constipation, sleep in well-ventilated bedroom, keep the windows open to fullest extent. Sponge body daily with cold water, and the neck two or three times daily. Correct the habit of breathing through the mouth. The tonsils should be painted daily with the following:—

℞ Glyc. Acidi Tannici
Tincture Iodi aa (of each) ℥p (half ounce)

**383. Numbness**

J. A. O. also writes: "A friend suffers with numbness in fingers. They feel very big. When rubbed they tingle and burn. The pain goes up the arm till it feels and looks like a live coal. Pain in the right arm starts usually about 4 a.m., and continues till rising time. It is intense."

*Ans.*—This case needs personal examination. There is some constitutional trouble affecting the nervous system. It is a case suitable for Sanitarium treatment which should extend over some weeks.

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**384. Anaemia in Girls**

J. A. O. asks for explanation why "so many girls in their teens, reared in good homes, well fed, wear no corsets, etc., become anæmic."

*Ans.*—Anæmia is due to deficiency of absorption of the iron in the food. All foods contain iron, but most of it is frequently passed out of the system without being absorbed. The drinking of tea and coffee with meals will so alter the composition of the organic iron of the system that it will not be absorbed. Very often there is not sufficient outdoor exercise. Fresh air is absolutely necessary night and day. Constipation and the absorption of poisonous bi-products of digestion are another cause. Excessive monthly losses are frequently the cause of anæmia. Milk, eggs and fresh fruit are helpful. Often a course of iron is necessary, such as citrate of iron and ammonia. Five to ten grains should be taken with each meal.

Heredity is often a predisposing cause. The treatment is the same.

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**385. Hereditary Obesity**

J. A. O. also asks if there is any way of preventing obesity if the tendency is hereditary?

*Ans.*—The same rules should be followed as in ordinary obesity. Nitrogenous foods are not so liable to be converted into fat as sugars, starches and fats. The reduction in amount of food should be in bread, milk, butter, sugar and potatoes. It is well to avoid too great a variety of food as this increases the appetite. All condiments, spices and stimulants to appetite should be avoided. Sugar should be cut out of the diet altogether. All visible fat should be removed from meat. Milk and its products should be sparingly used, and all puddings must be altogether forbidden. Potatoes are not so dangerous as bread. Avoid dried fruits on account of the sugar they contain. All made dishes, thick soups, sauces and pastry must be dropped from the menu.

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**386. Diarrhoea in Child, Patent Medicines, etc.**

A constant reader writes, "My baby, aged fourteen months, has diarrhœa when teething. I have a powder from the chemist. Would you think there is any harm in giving it to him?"

*Ans.*—It is impossible to give an opinion about the powder without knowing its composition. The best powder in these cases is Hydrag. cum creta grs i. Give one three times daily. Great care should be taken in sterilising all the food.

Constant reader also asks our opinion *re* "Seigel's Syrup and Bismurated Magnesia." We would not recommend either.

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**387. Duck as Food**

Constant Reader also asks: "Is duck good for food; if not, why not?

*Ans.*—Duck is very rich in fat, containing nearly three times as much as the fowl. It is richer in fat than turkey, but not so rich as the flesh of goose. Apart from its richness in fat and its liability to cause biliousness, we do not know of any special objection to duck flesh any more than other flesh foods.

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**388. Diet for Boy of Three Years**

Constant Reader asks for a diet for "my little boy of three years. He is not robust. Are eggs good for him? Also a little meat?

*Ans.*—One lightly cooked egg daily would be ample. Flesh foods of all kinds should be avoided. A dietary can be selected from the following: Milk, well-cooked bread, farinaceous puddings, rice with milk is especially valuable, oatmeal porridge, granola, dates, fruits, dried or fresh; potatoes, cauliflower, cabbage, peas, french beans, granose or other plain biscuits. Milk is especially valuable, and all foods cooked with milk. Water or water and fruit juice should be the only beverage.

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**389. Diet in Rheumatism**

R. W., W. Australia, asks: "Is Vee Dee Treatment good for rheumatism? Would Epsom salts and cream of tartar do any good? What would be a good diet for rheumatism?

*Ans.*—To the first question we give a negative answer. Salts, when small quantities taken before breakfast are effective, are a good purgative, but are not in any way a specific for rheumatism. The rheumatic patient should avoid all red meats, all foods cooked with fats, such as pastry and cakes, sugar and sweets. Milk and cereal foods are good. Fruits and vegetables are excellent. A previous issue of LIFE AND HEALTH contains an editorial on "Rheumatism."

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**390. Ulcer of the Leg**

M. A. N., Bathurst, asks for treatment of ulcer of leg, and for a tonic to improve appetite.

*Ans.*—The leg should be rested in the horizontal position as much as possible. Dress the ulcer three times daily with simple boiled water on lint. Boil the lint used and the water; cover with oiled silk and bandage. For tonic treatment sponge the body daily with cold water, sleep in well ventilated and roomy bedroom, do not use more clothes than really necessary. Let the food be simple and plain, attend well to the digestion, and see that the bowels are relieved once daily. Tonic treatment, however, depends largely on the constitution and ailments of the individual.

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**391. Weak Kidneys and Cramp**

"New Zealander" writes, "I suffer from weak kidneys. My water is a constant trouble to me. I want to pass it often. What is the cause and cure of cramp? I do a great deal of bicycling and take a lot of exercise. Some nights I am in agony, which is only relieved by taking a dose of whisky."

*Ans.*—There is probably no kidney disease, the fault probably resides in the urine being too acid. The information in reference to "cramp" is too indefinite. If it is spasmodic pain in the abdomen it may have some connection with the acid urine and is due to some digestive trouble. Cramp in the limbs is frequently relieved by the application of very cold water and thorough rubbing. Acidity of urine should be remedied through the diet. Avoid excess of highly nitrogenous foods, such as flesh foods and eggs, also fats and sweets that upset digestion. Acid fruits improve the reaction of the blood and lessen acidity of the urine. A little lemon juice may be taken in water after meals. The evening meal could, with advantage, be composed of fruit only. Drink freely of water on retiring and rising. The diet should be plain and simple, the less complicated the better. Do not take more than two courses at the one meal. Keep the bowels regular by suitable diet and the drinking of water.

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**392. Catarrh and Rheumatism**

"Clydesdale" writes, "I have catarrh, rheumatism, noise in the head, cold feelings, cold shivers, feet get very cold sometimes. I get cold easy in the nose in cold weather. I have pains in my chest, water passes very slowly, very downhearted, very tired feelings, headache, appetite not very good, heart beats very irregularly."

*Ans.*—This is probably a case of auto-intoxication. Absorption of undi-

gested or bi-products from the intestines. Follow directions given to "New Zealander." Take a good deal of dry food (well masticated) with each meal, such as granose biscuits, doubly baked bread (zwieback), rusks. Avoid fats and sweets, cakes, scones, pastry and all rich foods.

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**393. Chorea (St. Vitus's Dance), Styes and Circumcision**

"Modbury" writes about her children:

1. My eldest boy is about five years of age. Had a nervous cough about a year ago. This disappeared, and he started fidgeting, worse at meals, keeps touching his ears, nose and forehead in turn, and pulls his pants as though they were tight.

2. My second boy is nearly three years old. He is continually getting styes on his eyes and tiny pimples at the corner of his mouth.

3. My baby is nearly ten months old, has always suffered with wind. I weaned him at nine months. Have been giving him goat's and cow's milk, unsterilised, with oatmeal and barley water. I gave him Mellin's Food, nine tablespoonfuls of milk to four of bran gruel, four meals. He has a stye on his eye. Do you believe in circumcision when not really necessary?

*Ans.*—The eldest boy should not be allowed to mix with other children more than can be helped, should be kept quiet and free from all excitement. If the movements become very bad he should be kept in bed. Avoid flesh foods and heavy meals. Sponge body with cold water twice daily. A bath at 95°F. for quarter hour once daily could, with advantage be substituted for the evening sponge. Good fomentations to the spine are beneficial. Keep the bowels open, and allow him to sleep as long as possible. He will probably recover within four or five weeks.

Styes may sometimes be aborted by continuous cold applications. When the cold has no beneficial effect give small and frequent hot applications. When the matter has formed it should be let out with a sharp knife. The diet should be simple and composed largely of fruit (at meals). Keep the skin active by frequent applications of hot and cold water applied alternately.

Wind in children must be treated through the dietary. See that the food is not taken too quickly. Mellin's Food and milk is an excellent food, although expensive for most families. Zwieback and hot milk, also strained granose biscuits and hot milk form an excellent meal. The granose biscuits form an excellent food for children after eighth or ninth month. We do not believe in circumcision as a routine practice. Where the water is freely passed and the opening in the foreskin is sufficient, the operation is unnecessary. It can, however, never do any harm.

**UNANSWERED QUESTIONS**

**We frequently receive questions that are of such a nature that they cannot be answered in these columns. Subscribers are asked to carefully read the notice at the head of "Chats" in reference to answers by post.**

MILSON'S POINT, SYDNEY HARBOUR

N. J. Caire, Photo., Melb.

# *What a Difference!*

### *WHEN PA IS SICK*

When pa is sick,
He's scared to death,
An' ma an' us
Just hold our breath.
He crawls in bed,
An' puffs an' grunts,
And does all kinds
Of crazy stunts.
He wants "Doc" James,
An' mighty quick;
For when Pa's ill,
He's awful sick.
He gasps and groans,
An' sort o' sighs,
He talks so queer,
An' rolls his eyes.
Ma jumps an' runs,
An' all of us,
An' all the house
Is in a fuss.
An' peace and joy
Is mighty skeerce—
When pa is sick,
It's something fierce.

### *WHEN MA IS SICK*

When Ma is sick,
She pegs away;
She's quiet though,
Not much t' say.
She goes right on
A-doin' things
An' sometimes laughs,
'Er even sings.
She says she don't
Feel extra well,
But then it's just
A kind o' spell.
She'll be all right
To-morrow, sure,
A good old sleep
Will be the cure.
An' Pa he sniffs
And makes no kick,
For wimmen folks
Is always sick.
An' Ma she smiles,
Lets on she's glad—
When ma is sick,
It ain't so bad.


# Summer Diarrhoea: Its Prevention and Treatment

C. H. HAYTON, B.A., M.D.

DIARRHŒA is a term used to designate the frequent and loose movements of the bowels. It is most common in the hot weather, and reaches its greatest frequency and severity during the months of January and February. Adults as well as children are attacked, but it is more frequent and fatal among the latter. Poor children are among the most easily affected, especially those whose surroundings are most unhygienic, who live in filthy, overcrowded and stuffy rooms. It attacks the weakling and the artificially fed, and the children who are teething.

It is estimated that from 2,000 to 4,000 children under the age of one year die annually in London from this complaint, and published statistics show that the rate is increasing, notwithstanding the improvements made in the hygienic surrounding of these children. Sixty per cent of the deaths occur during the first three months of life, and the vast majority of these are among the bottle fed. Breast fed children seem to be immune from summer diarrhœa. Here is a fact worthy of consideration, and it should appeal to all mothers who wish to save their children from this serious complaint. Better by far suckle your child during these hot months than to hand feed it.

### Prevention

One of the greatest factors in the causation of diarrhœa is the use of improper and impure food. In the adult some unripe or over-ripe fruit starts the mischief. In the children, and infants, the milk plays the important part. It is not the fault of the milk *per se*, but more the surroundings, and the contamination through which the milk passes before the infant receives it as food, that does the harm. Milk is notorious as a good medium, especially in hot weather, for all kinds of bacteria. The greatest care must be exercised in handling it when it is used as infant's food. All vessels in which the milk is placed should be scalded and cooled beforehand. The baby's bottles and teats should be kept submerged in boric acid solution during the interval they are not in use. Boric acid is a cheap crystal; a few pence will buy at the chemist's sufficient to last some time. The milk itself upon being received should be sterilised immediately. Sterilising milk is quite a different process from boiling it. Sterilised milk is milk which has reached a temperature of from 150°-170° Fahr., and has been allowed to remain at this temperature for from fifteen to twenty minutes. It has been found by experiments that raising milk to this temperature destroys all germs without changing the quality of milk, which is done when milk is boiled. Milk is quite easily sterilised by heating it in a double boiler. A thermometer with a boiling point to test it is a useful instrument to have in the kitchen. Do not boil the milk, but be sure to boil all the vessels, bottles, and

rubbers that come in contact with it, or that are used in feeding.

While the above precautions are essential at all times in the preparation of milk used as infant's food, they are doubly so during the hot weather months. Breast nursing, however, should always have the preference and choice in feeding. Do not attempt to wean a child during the hot summer months. Fatal cases of diarrhœa among nursing infants are rare.

### Symptoms

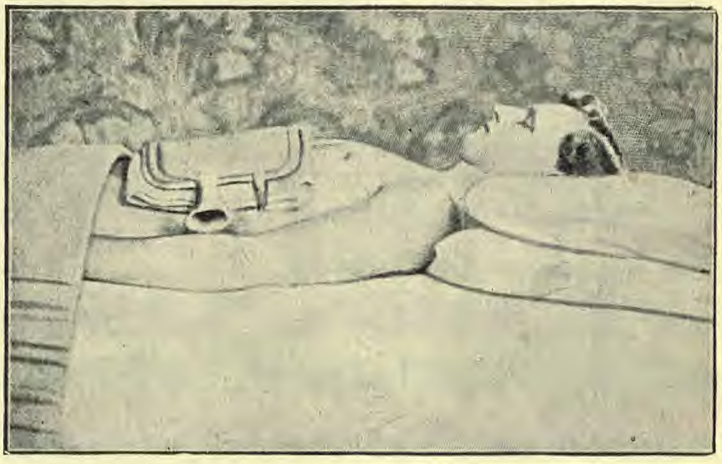
Summer diarrhœa often begins with pain in the abdomen. The child cries fretfully and draws up its little legs to relieve the pain. Vomiting generally comes on in a few hours. Then follows the diarrhœa. The motions are at first yellow, then become greenish, or brown, in colour. There may be mucus and undigested particles of food mixed in. The stools are of a foul odour, and increase in number from four to twelve per day. Blood is not generally present unless the case is serious.

The infant sleeps badly and awakes with a start. The temperature of the child may be raised at first. If the attack lasts more than a day, then it looks pale and pinched, and loses weight rapidly.

The serious form follows after several days of a mild attack. Especially is this so during the hot months. At the first sign of diarrhœa it is always best to consult your physician.

### Treatment

In many cases of summer diarrhœa, the child passes so rapidly from bad to worse that whatever is done must be done quickly. At the first sign of diarrhœa stop all milk feeding. Administer a dose of castor oil to the child. Castor oil is a good old household remedy, and is of immense value in these cases. Children stand it well. The frequent stools are simply an effort of nature to expel an irritating substance that has found lodgment in the alimentary canal, generally bacteria. One helps nature by giving a purge. One-half to one teaspoonful of castor oil for a child under one year is sufficient. The child should then be fed with boiled water. After a day, add the white of an egg to half a glass of boiled water and feed with this when cooled. The second day rice water may be given, then barley water. Raisin tea may also be given. On another page recipes may be found for making these drinks. After a few days, if the diarrhœa is checked, milk feeding may begin again. Small feedings at one time are better than large feedings—say three or four teaspoonfuls every hour. Remember an infant suffering from diarrhœa needs plenty of fluids.



A SIMPLE FOMENTATION

In this case a piece of flannel is wrung out of warm water and laid over the stomach, after which a hot water bottle, partly filled with very hot water, is laid on top.

Water treatments act well in these cases. Warm fomentations to the abdomen, with a cold application following, three times a day, are good. A full cool bath, temperature at 70° for an infant with fever, acts like magic. Irrigation of the colon is of great value. Warm water enemas, or a weak solution of boric acid,

or a salt solution (one teaspoonful to one pint of water) are best. The enemas should be administered three times a day. Half to one pint should be allowed to run in slowly through a funnel and a small rubber tube. These remedies are effective for checking an early case, but if they fail a physician should be called in immediately.

## Artificial Respiration

THIS procedure is resorted to in cases of threatened death from absence of a breathing consequent upon drowning, a profound anæsthetisation, electric shock, or the inhalation of poisonous gases, or when for any cause there is interference with the function of breathing. Before resorting to artificial respiration care should be taken to see that nothing is present in the mouth or air passages which will obstruct the entrance of air into the lungs, such as mucus, foreign bodies, or liquids, and also that all tight clothing interfering with free expansion of the chest walls is removed from the chest.

When artificial respiration is resorted to the operator should persevere with it for some time, even when no apparent spontaneous respiratory movements are excited; for resuscitation has been accomplished in seemingly hopeless cases by patient perseverance with the manipulations. When the first natural respiratory movement is detected the operator should not cease making artificial respiration, but should continue these movements in such a way as to coincide with the spontaneous breathing movements until the breathing has assumed its regular character. The temperature of the body should also be restored by friction to the surface of the body by the hands or by rough towels and hot water bottles, and warm coverings should be applied for the same object.

The patient should be placed on his back upon a firm flat surface, a cushion of clothing is placed under the shoulders, and the head should be dropped lower than the body by tilting the surface on which he is laid. The mouth being cleared of mucus or foreign substance the tongue is drawn forward and secured to the chin by a piece of rope tied around it and the lower jaw, or may be pulled out of the mouth and held by an assistant. The operator, standing at the patient's head, grasps the arms at the elbows and carries them first outward and then upward until the hands are brought together above the head; this represents inspiration; they should be kept in this position for two seconds, after which time they are brought slowly back to the sides of the thorax and pressed against it for two seconds; this represents expiration. These movements are repeated fifteen times in a minute until the breathing is restored, or it is evident that the case is a hopeless one.

Mouth to mouth inflation is a good method of artificial respiration in case of emergency, especially in very young children. The operator draws the tongue forward, closes the nostrils, and applies his mouth directly to the mouth of the patient and by a deep expiratory effort endeavours to force air into the chest; when this is accomplished, the air can be expelled from the lungs by pressure upon the walls of the chest, and the procedure should be repeated about sixteen times in a minute. It is a good thing to have a piece of gauze between the operator's mouth and the patient's mouth.—*Herald of Health.*

## Wax and Deafness

WAX in the ear is a normal secretion. The glands of the face, and the glands of the scalp which keep the hair oily, are the same sort of glands as those of the ear which produce the wax. The wax is a little different, but it is the same kind of gland, making with little modification the same secretion. The cells lining the canal of the external ear, instead of growing into the lumen, or opening of the canal, grow outward in the other direction,

so that they push everything out. The growth is toward the external ear, and the wax is carried along out toward the outer surface. Then the wax accumulates in little particles, and usually breaks off from the skin of the ear, and falls out when a person is turning the head or lying down at night.

In certain persons this wax accumulates until it fills the entire canal. The result is great impairment of hearing, and an irritation which the person feels in the side of the head or ear. One common cause is washing the ear and leaving some soapsuds in the ear which become dried, and it is thought that this coating of dry soap causes the formation of a ball of wax. Any eczematous condition causes the flaking off of scales such as we find on the back of the hands, and these scales act as centres round which the wax accumulates. Then, again, the little hairs which line the canal are thrown off and cause a detention of wax.

There is a condition in which there is an excessive amount of wax produced, as sometimes there is an excessive amount of oil produced in the hair. Dandruff in the hair is merely an evidence of excessive amount of oil production on the scalp.

The question of removing the wax comes up. It should be removed, and the question is how it should be done. One eminent ear specialist says that if you ever want to use anything in the ear, never use anything smaller than your own elbow, so you will not do any damage. But it is true that the ear doctor in general does not get the wax out by means of an instrument. That is, he does not rely upon instrumental removal as the best method. It is better to have someone remove it who can see what he is doing, because the ear is delicate and some damage may be done. Good methods are these: Fill the ear with glycerine and turn the head over, and pump it back and forth by putting the finger on the soft mass in front, that softens the wax. The next day fill the ear with a little warm peroxide of hydrogen, and that will also burn its way into the dried masses of wax, and you can push that around in the same way. Leave it for five minutes or so, and then let it run out.

The best thing with which to irrigate the ear in order to get the wax out is a warm solution of baking soda, about a tablespoonful to a glass of warm water. The soda dissolves the wax. The best way to irrigate is either with a small hand bulb syringe with which to force the water in and let it run out again, or a fountain syringe. Fill the fountain with warm soda and water, and have it no more than two feet above the ear, so that it does not enter the ear with too great force and injure the drum. If it is not all washed out the first day, try again the next day, and after it is all out and the water has been all drained out by putting the ear over to one side and wiping it out with a little sponge of cotton wool, drop in a drop or two of alboline.

There is one precaution I want to make prominent, and that is, the irrigation of the ear for any purpose should never be done if the person being treated has ever had an abscess in the ear, or any condition in which there has been a discharge of water or blood or pus from the ear, because if there should be a perforation in the ear drum, some of the solution with which you irrigate may get through to the middle ear, and if it does it will inevitably set up infection, and there is apt to be a very bad complication.—*B. N. Colver, M.D., in the Battle Creek Idea.*


# Some Seasonable Recipes

### Cherry Pudding

One-half cupful of tapioca, one pint of hot water, one pint of stoned cherries, one-quarter cupful of sugar.

Soak half a cup of tapioca for two hours. Pour on it one pint of boiling water and cook until transparent. Have ready in a pudding dish a pint of stoned cherries, sprinkle the sugar over them, and pour the cooked tapioca over them. Bake for half an hour in a moderate oven. Serve with or without cream.

### Strawberry Muffins

Four eggs, two cupfuls of milk, two cupfuls of flour, one-half teaspoonful of salt, strawberries, sugar, cream.

Beat up the yolks of the eggs very light, add the milk, salt and flour, gradually beating all the time, then fold in the stiffly beaten whites of the eggs. Divide the mixture into well-buttered muffin-irons, and bake in a hot oven for half an hour. If properly baked they will puff up so that when done the insides will be nearly hollow. With a sharp knife cut off the top of each muffin. Fill the centres with ripe strawberries or raspberries, sprinkle with sugar and a teaspoonful of whipped cream, and put on the tops.

### Strawberry Whip

One cupful of strawberries, white of one egg, one-half cupful of sugar, one teaspoonful of lemon juice.

Choose well-ripened strawberries, wash them, and remove the stems, put all the ingredients into a basin, then beat with a wire egg whip until light and fluffy, which will take twenty minutes or more. Pile lightly on a dish, and pour a border of crushed fruit or red fruit juice unsweetened around the whip on each dish.

### Strawberry and Granose Dessert

One granose biscuit, one tablespoonful of warm milk or cream, strawberry whip.

Toast a granose biscuit and pour over it one tablespoonful of warm milk or cream to slightly soften it. Then drop a tablespoonful of strawberry whip on top. Fill the dish with as many biscuits as desired. Garnish on top with a large ripe berry or a spoonful of crushed berries, and serve. Raspberries or blackberries may be used instead of strawberries.

### Albumen Water

Stir the white of an egg, after passing it through muslin, into a glass of cold water, or water as warm as it can be without coagulating the egg, and serve.

### Barley Water

Two tablespoonfuls of barley, one quart of water.

Wash the barley in cold water until the water is clear. Put it to cook in a double boiler with one quart of water, and boil until the water is reduced to a pint. Strain off the water and serve.

### Berry Mould

One and a half cupfuls of strawberry or blackberry juice, one quarter cupful of lemon juice, one-half cupful of sugar, one cupful of vegetable jelly.

Mix all ingredients together, and mould immediately. Garnish with fresh berries and whipped cream.

### Raspberry Sponge

One pint of raspberry jelly, one-half pint of cream.

Take a pint of raspberry jelly, flavouring it with fresh crushed fruit, and set aside to cool. When thick, but not firm, beat to a froth with an egg-beater, then fold in lightly half a pint of cream, whipped and sweetened, and pour into a mould to harden. When firm, turn out and decorate with points cut from sponge cake and raspberries.

### Lemonade for a Week

Two quarts of water, four cupfuls of granulated sugar, one and a half cupfuls of lemon juice.

Boil together the water and sugar for ten minutes, then add the lemon juice. Let cool, and pour in jars or bottles, and set where it is cool. The addition of a teaspoonful of raspberry syrup will give the lemonade a good colour and pleasant flavour.

### Rice Water

One-half cupful of rice, three cupfuls of cold water.

Wash the rice well and put into a saucepan; add three cupfuls of cold water, and boil for thirty minutes. Strain and serve.

### Raisin Tea

One breakfast cupful of raisins, two cupfuls of water.

Chop the raisins fine, simmer for two hours. Strain and serve.

### A Substitute for Dairy Butter

Yolk of one egg, raw; one to two cups cooking or olive oil; one-half teaspoonful of salt; juice of half a lemon. (If old lemons are used the juice must be slightly diluted with water; also, if the lemon flavour is too strong the juice may be slightly diluted.)

Have utensils and ingredients cold. Use a soup plate and a fork. Beat well the yolk of egg and salt; add half a teaspoonful of lemon juice; then add oil drop by drop, at first stirring constantly. As the mixture thickens, add a little lemon juice to thin the batter to the proper consistency; then add more oil, then a little lemon juice, and so on. After a while, the oil may be added faster. This butter may be made thick enough to cut with a knife, and it will keep several days in a cool place.

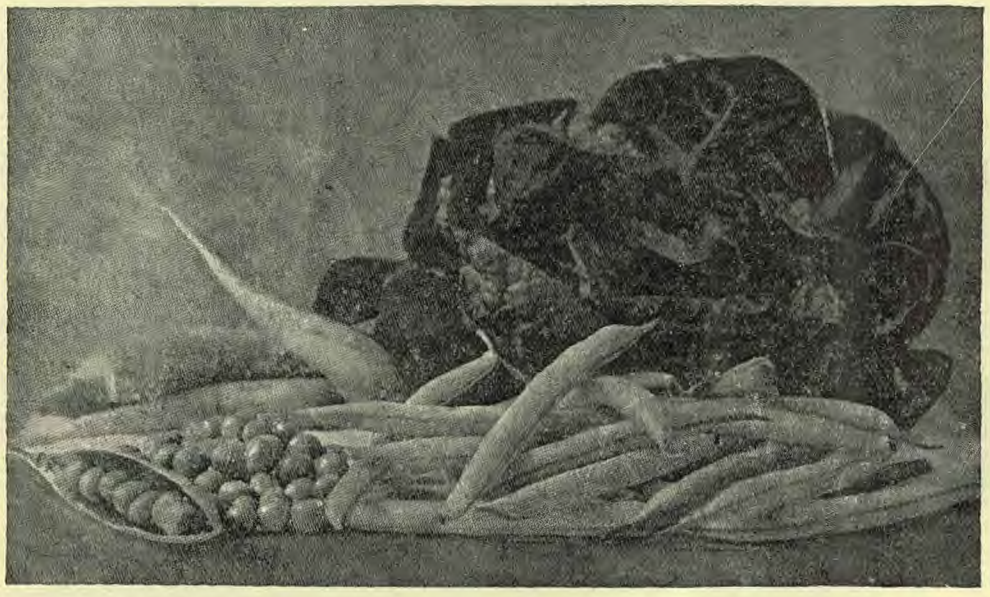
## A New Way to Can Vegetables

ANY woman can preserve vegetables as successfully as fruits. But the process is not the same; a little more time and labour are necessary. The difficulty in former days arose because the cause of fermentation was not well known, so the remedy could not be applied with certainty.

Vegetables in general contain very little of the acids that discourage bacteria; on the other hand, they contain large amounts of protein, the food most hospitable to bacteria. Moreover, the bacteria always present in corn, beans, and other vegetables have a peculiar life history that makes them extremely resistant to heat. Under favourable conditions they live and multiply as other similar growths, but under unfavourable conditions they form thick-walled bodies called *spores*, which are able to retain their vitality even if boiled for hours.

### The Little Spores Work Havoc

It was these spores that worked havoc in the jars of our mothers and grandmothers. Long-continued boiling of the vegetable to be canned failed to kill all present; the few or many that escaped, sooner or later developed into bacteria in the jars, and then multiplication was so rapid as to spoil all the contents.



Although the spores are able to resist the temperature of boiling water for a long time, the bacteria that develop from them cannot. Therefore the problem of recent investigators has been to devise a means of making the spores develop into bacteria at canning time, and then to kill these bacteria by boiling. Fortunately a certain means of doing this has been discovered. It was found that boiling does not kill the spores; in fact, it stimulates them so that they develop into bacteria within twenty-four or forty-eight hours.

Hence the method now used with complete success in canning vegetables of all

kinds in the home without special apparatus is to boil the vegetable for an hour to kill all bacteria present and to stimulate the spores; then to seal the jars and let them stand for twenty-four hours so the spores may develop into easily killed bacteria; and finally to boil the vegetable again for an hour to kill the new crop. Generally the boiling is repeated on the third day to make sure that no spores escape. This method of canning can be used with certainty by any housewife who will observe ordinary cleanliness and follow directions.

The method is known by various names. Because the vegetable is put into the jars cold before cooking, it is coming to be called the "cold-pack" method. It is perhaps best illustrated with corn, so directions for canning corn are here given in detail:—

**The Cold-Pack Method in Canning Sweet Corn**

Use the best grade of sweet corn. Select ears that are not too hard, and do the canning as soon as possible after the ears are pulled from the stalk; the percentage of sugar is low in hard ears and in ears that have been pulled for some time. Remove the husks and silks; if this work is done carefully, it will not be necessary to wash the corn unless worms are present. Cut and scrape the corn from the cobs with a sharp knife, in order to get all the nutriment possible. Salt the corn slightly; ordinarily a teaspoonful of salt to a quart of corn is sufficient.

Have glass jars ready; these are the best, because they can be cleaned more easily than any other kind, and also more thoroughly. Pack the jars full of corn, fill them to the top with cold water, put the covers in place loosely without the rubbers, stand the jars in the wash boiler on a false bottom of cloth or shingles, surround them with a few inches of warm water, put the cover on the boiler loosely, and steam the jars and their contents for an hour by boiling the water. Then put the rubbers on the jars and seal them.

After twenty-four hours loosen the covers so they fit loosely, and again boil the water for an hour. Seal the jars, and allow them to stand for another twenty-four hours. Then unseal them, put new rubbers of good quality in place, screw on the covers loosely, and steam the jars the third time for an hour. Screw the covers on tight while the jars are still hot, and the corn will certainly keep; moreover, its flavour is excellent.

**To Can Lima Beans**

Shell the beans, blanch them four or five minutes, cool them, and pack them into jars. Fill the jars with cold water, and steam them for an hour on three different days, as in canning corn. It is important to hurry the process after shelling the beans, as Lima beans lose their delicate flavour if allowed to stand after shelling.—*M. M. Telford, in the Delineator.*

# Economy in Diet

A. B. OLSEN, M.D., D.P.H.

To select the various articles of diet with due regard to economy of both health and purse requires at least an elementary knowledge of the composition and nutritive values of foods. Although we hear a good deal about proteids, sugars, starches, and fats, there are, nevertheless, many people who fail to comprehend the real meaning of these terms and the relative value of even the most common foods.

### Tissue Building Food

Proteid or albumen or egg-stuff is the building and repair food of the body, and no diet is complete or satisfactory without a sufficient amount of this vital material. The white of the egg is almost pure albumen and water. The curds or casein of milk are another good example of proteids. Then there is the fibre of meat, the gluten of wheat and other cereals, and the legumen of beans and lentils. Almost all nuts are rich in body-building proteids, the pine kernels containing more than 30 per cent, a larger proportion than is found in any other natural food.

### Heat and Energy Foods

In the process of digestion all starch is changed into sugar, and then it is prepared to enter the blood and undergo combustion or burning for the purpose of furnishing the body with warmth and strength. Fats and oils too are rich fuel foods, and are capable of furnishing a larger proportion of energy than any other food, more than double that of proteids or sugars. Since the body only requires a comparatively small amount of repair material, the great bulk of the food, fully 90 per cent, should consist of fuel in the form of starches, sugars, and fats. When these substances are burned in the body for the heat and energy they contain, the end or waste products consist only of carbonic acid gas, which is eliminated through the lungs, and water.

But proteids are not capable of undergoing such complete combustion, and therefore when burned for the purpose of supplying energy leave behind urea, uric acid, and other somewhat similar products, all of which are poisonous to the system, and are eliminated through the kidneys, throwing extra work on these important organs. It must be obvious that the use of proteid food as a fuel in the body is not only a disadvantage but actually harmful, and may be and often is productive of serious mischief.

### Food Units

To assist our readers in understanding the food values of the ordinary articles of diet, we have reproduced on the opposite page a chart prepared by the United States Department of Agriculture. The statistics of this chart are based on analyses by Drs. Atwater and Bryant, both acknowledged authorities.

A food unit or calorie is the amount of heat required to raise one gram of water one degree centigrade. One ounce contains 28.3 grammes. Proteids, starches, and fats each have a distinct and definite food value, as follows:—

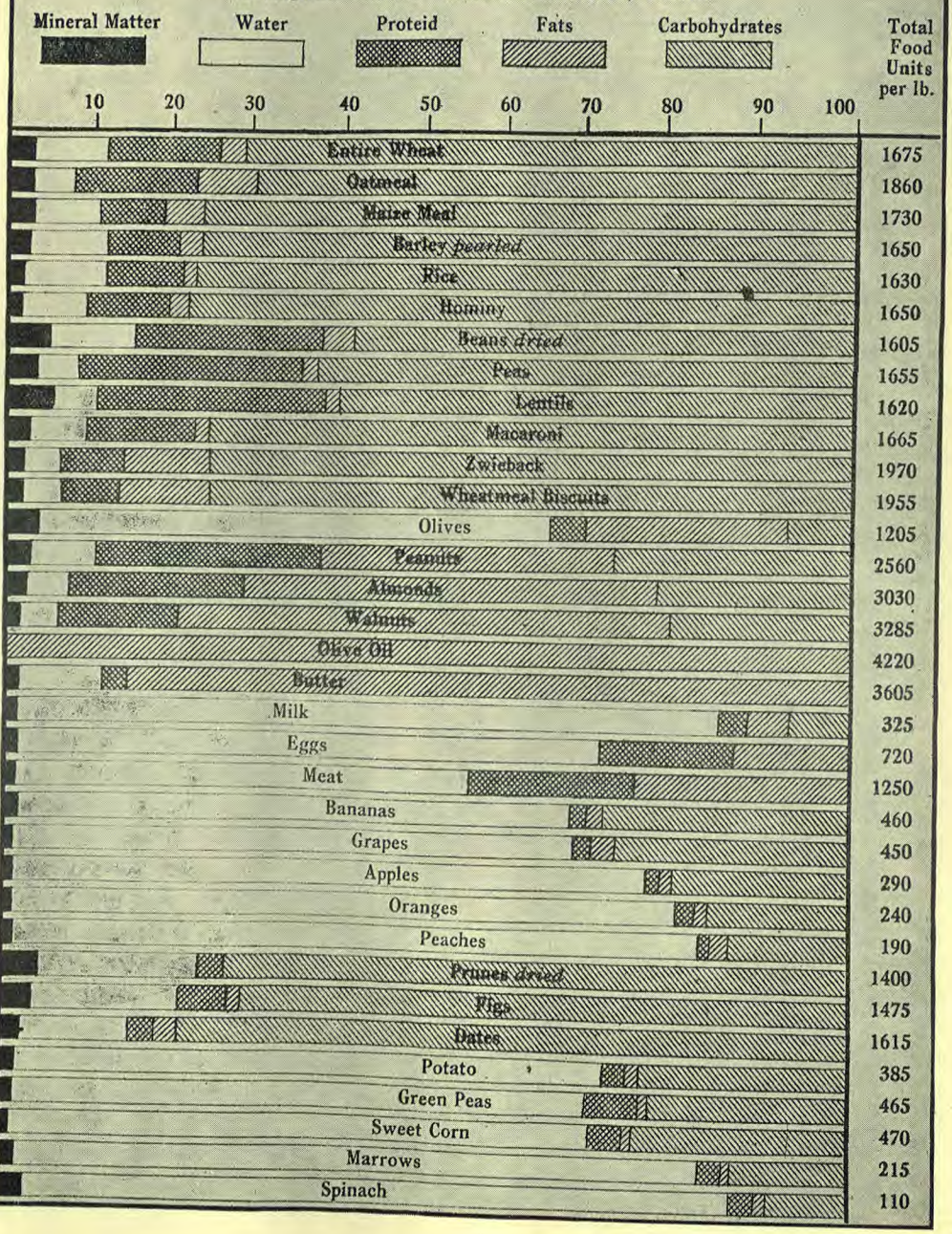
One gramme of proteid yields 4 calories.
One gramme of starch yields 4 calories.
One gramme of fat yields 8.9 calories.

From this table one can see at a glance the tissue-building or energy-producing value of each of the foods listed. The percentage of water and mineral matter is also indicated. Olive oil being a pure fat and containing nothing but fat yields the highest percentage of food units, namely 4,220 per pound, while spinach, consisting almost entirely of water, and with but a small percentage of starch, fat, and proteid, yields only 110 units per pound.

# Food Values

Organic { Nitrogenous **PROTEID** Tissue-forming Substances
Non-nitrogenous { **CARBOHYDRATES** / **FATS** } Heat and Energy

Inorganic Salts - - Mineral Matters, Water



# Playing Hospital

Elizabeth E. Scantlebury

I have so many children sick
I don't know what to do;
They're nearly all of them in bed,
But Jane and Mary Sue.

One has a dretful 'tomach ache,
And one has lost her hair;
And all the rest have whoopin' cough
'Cept dear old Teddy Bear.

He's the sickest one there is,
I think his throat is sore;
Or p'raps he has the chicken-pox—
A feather's on the floor.

The others 'sturb him with their noise;
I'll put him all alone
Right 'side the fire, where he'll be warm,
And call up Doctor Stone.

"One-three-four-six. Yes, please. Hullo!
I want the doctor, quick"—
"Oh, doctor, hurry up and come,
My children are so sick!"

"Ahem! Good morning, Mrs. Brown,
I've brought my med'sun bag,
I'd like some spoons 'n' glasses, please,
'N' a piece of flannel rag.

"Just hold up Teddy, Mrs. Brown—
I'll tie his throat up tight,
'N' give him castor oil to take—
He'll be all well by night.

"Just give the other children cake,
'N' three gum-drops a day.
By next week they'll be well enuff
To run outdoors 'n' play."


### WEAR YOUR SMILE

**R. Hare**

KEEP the dimples in your chin,
Jessie dear;
Keep the dimples in your chin,
And a merry heart within;
Then you need not care a pin
When the clouds appear.

Skies all brighten when your eyes
Lose their tears.
And with many a glad surprise
Mornings dawn and scenes arise
While life's vision onward flies
Through the passing years.

Let no scowl-marks ever trace,
Day or night,
Their dark crow feet on your face—
Deem sharp features a disgrace,
While you smile in simple grace
With life's glad delight.

Keep the dimples in your chin,
Jessie dear;
God above and love within,
Every day your soul may win
Triumphs over grief and sin
That will bless and cheer.

---

## Elsie's Errand

"ELSIE, I wish you to do an errand for me this afternoon," said her mamma.

A scowl came on Elsie's face.

"I want you," went on mamma, without seeing the scowl, "to go over to Miss Finlay's."

"Oh! mamma, I don't want to," began Elsie.

"To carry those flowers to her," said mamma. "She has never seen any of them, poor soul. Her long illness has lasted all through the winter. She would not let me gather any of them for her, because she wanted them all to go to the flower-show."

"But I wanted to play tennis this afternoon," said Elsie, with a pout.

"It is a very pleasant errand on which I am sending you, my little daughter," said mamma.

"Can't I go to-morrow morning?" asked Elsie.

"Listen, dear. You remember they are from some choice roots that were given her. I raised them because she has no garden. And now you are to have the pleasure of telling her that her flowers took a prize of three pounds. Tell her I would have stopped to show them to her the morning we took them, but it was too early to disturb a sick person. And that these were all I could get, because cut flowers are always carried away at such places. Go at once, dear."

But Elsie did not move.

"You can tell her, too, all you can about the flower show. She will enjoy it. You can make your visit very delightful to her, if you try. And I am sure my little girl is willing to give up her own pleasure to do a kindness."

"Mamma," said Elsie, rather sulkily, "I think there's time enough for that yet for me. It's very well for grown-up people to think of giving up, and all that. I'll do it when I am older."

"I am sorry you feel that way," said mamma, gravely. "How old do you think you ought to be before you are willing to deny yourself for the sake of others?"

Elsie did not seem ready to answer this.

"Oh! I can go, of course," said Elsie.

"No," said her mother; "I don't wish it to be grudging, but a loving service. I should do it myself, but that I have to drive into town. I will let Jane leave

ELSIE'S BUNCH OF FLOWERS

her work later to carry the flowers."

An hour after this Elsie was ready for the game of tennis, at the home of one of her friends.

As she passed along the sunny side of the house, she saw Carlo lying by a freshly-planted flower bed.

"I'll take Carlo," she said. "Come, Carlo."

But Carlo did not move.

"You can't get him to go," said Jane, calling through the kitchen window. "Your brother has just planted his spring pansy seeds there. The chickens are loose, and he told Carlo to watch till they are put up again, so they wouldn't scratch the seeds."

Elsie hurried away to her play. But there was a weight at her heart. She had been too well taught not to know that she was showing a selfish spirit. Here was Carlo, the dumb creature, faithful in service to his master, while she grudged an act of self-denial to make others happy.

The day was bright and the play merry. But before an hour was gone Elsie found someone to take her place, and was on her way home.

Carlo had been set free, and now frolicked and gambolled about her as she called him.

Oh, how sweetly the birds sang, and how brightly the sun shone, as she tripped through the bit of woods, the shortest way to Miss Finlay's. She carried in her hands all the glowing roses which had been saved from the flower show.

Miss Finlay's weary face lit up at sight of the little girl. An hour flew away while Elsie gave her a full account of all she had seen at the flower show. And another while she read and sang to her.

"You have brought me such cheer and comfort, with your bright face and your flower talk," said Miss Finlay, as at last Elsie was going.

"There is a carriage," said Elsie, looking out of the window. "It is mamma."

Mamma had driven round by Miss Finlay's to see if the flowers had reached her. How her face lighted up at the sight of the little girl.

"You here, my dear? Why, I thought you decided not to come?"

"But I changed my mind," said Elsie.

Do you think Elsie was sorry she did it? If you have any doubt about it, try something of the same sort for yourselves. —*Home-chat.*

---

## Bob's "Wait a Minute"

"IN a minute, mother dear. Just one more spin."

Bob was kneeling on the ground near the open window, all unmindful of the peep-holes the plump knees were forcing in his stockings.

The red, white, and blue stripes on the surface of the flat top kept winding themselves in and out of the centre in such a fascinating way that he never tired of looking at them.

In a far-away corner of his curly head he was wondering why it was that big folks always called when a boy was having the most fun.

Another vigorous spin and his eyes danced with delight, but he kept one ear open for a second call. He was sure it would come; it always did.

His mother's first call was to Bob as the ringing of the first bell at school—only a warning that a second was to follow shortly.

He became so absorbed that he dropped himself to the ground, resting his head in his hand, was soon lost in wonder at the way the stripes in the "Tireless Spinner" kept chasing each other over the edge as the top slackened its speed and began to wobble.

He was so still that a linnet hopped down from a tree-top to see what was going on, but Bob paid no attention to the cheep, cheep at his side.

Presently, kerflop came the evening paper against the house. It bounded back and knocked off his hat. Not until he heard the chuckle of the newspaper boy as he passed up the street did he understand what had happened. He

looked around startled. Mother was still seated at the window, but the sewing had dropped into her lap. Perhaps she had forgotten about calling him, just as he had forgotten about going in when she had asked him to.

Something about mother's face told him that she was not happy. He hesitated for just a moment, as he looked at his top, then tiptoed to his room to make himself clean for supper—clean even to ear-corners and finger nails. This gave him a more comfortable feeling. Then he decided to hurry downstairs and help set the table.

He found his mother still by the window. She had not stirred since he last looked at her. At the sound of his footsteps she glanced up and cheerily suggested that there might be time for a story before supper.

Bob's big blue eyes looked his surprise. Yes, she had forgotten about wanting him. His face glowed with pleasure. Mother told such lovely stories, and they were usually his reward for being good.

There was a vacant chair near by, but Bob didn't see it. He cuddled on his mother's lap, as a boy of eight knows how to do when no one is looking. Mother's arms about him gave a cosy feeling. He purred his satisfaction and patted her cheek lovingly, resolving in his tender little heart that any mother who would act in this way when a boy hadn't been very quick to obey deserved better treatment, and she was going to have it, too.

"Once upon a time," she began in a low, musical voice, as she returned his pat, "before our little boy had come to us ——"

"Oh, yes, I know!" Bob interrupted excitedly, "that's what I like. When you went with father to Africa on the hunting trip. Whew! but I wish I'd come in time for that! May I go with you next time?"

"Very likely—if ever we go again." She squeezed him close to her and started over.

"One morning your father and I and the men we had with us had been tramping for hours; sometimes over footpaths, but more often through tangles and jungles which made our travel slow.

"We had not seen a ferocious animal for over an hour ——"

"No lions?" Bob's voice had in it a note of disappointment.

"Not this time, though father had shot one earlier in the day. Toward noon we halted in a quiet spot. I remember how tired I was when I dropped on a log and took off my hat to rest. I was very hungry, and looked back to see if our men were following with the lunch baskets. I discovered that they had stopped a few feet back and were standing motionless, with scared looks in their faces. Everything was so quiet that I could hear my heart beat. Suddenly your father snapped his fingers and looked steadily at me. I understood the signal. It meant danger, and to mind quickly. I dropped to the ground without a question, and without a moment's delay. I was trembling like an aspen leaf, for I had caught a glimpse of a monstrous serpent a few feet away, with half his length poised in air ready to strike at me with his deadly fangs.

"I shall never forget how frightened I was; but before I had caught my breath I heard the bang of your father's gun, and after that a second shot, right over my head."

"But he didn't shoot you, did he?" Bob clutched his mother's arm in his eagerness to make sure that she was there and unharmed.

"No, dear; but he saved my life, for I dropped so quickly when I heard his fingers snap, that I was out of the way of the shot that had to come instantly to do any good."

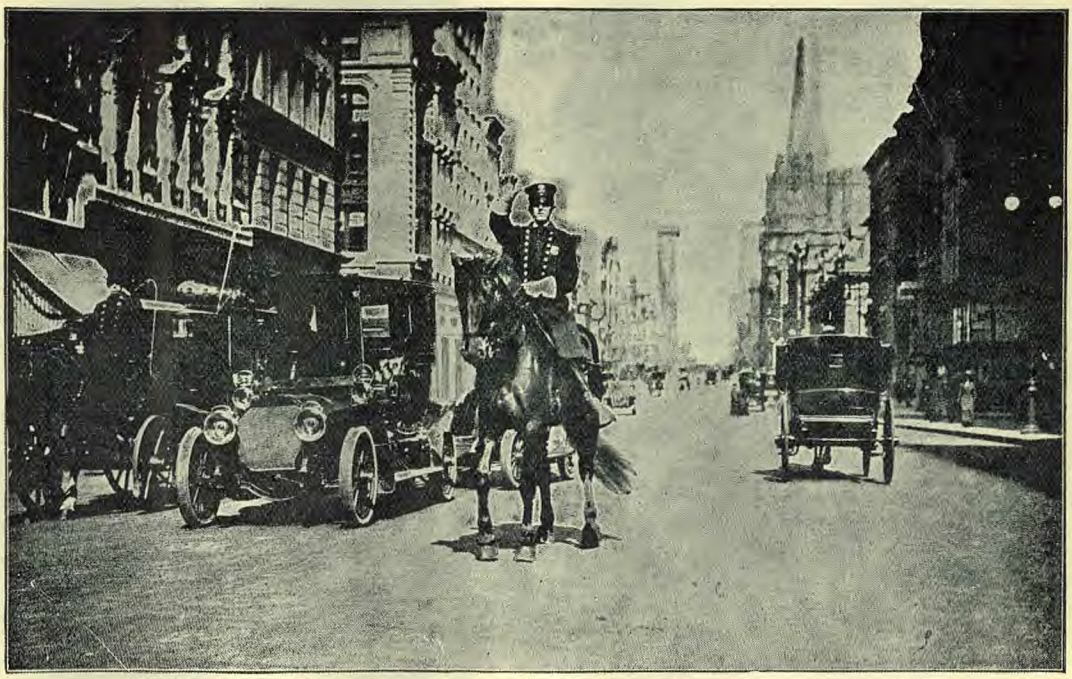
Bob drew a deep breath. His face flushed. For a moment he hung his head. Then, with sudden resolution, he looked straight into his mother's eyes and gave her an extra hug. "My, but I'm glad father trained you to act quickly when you were snapped at, or where would my mother be to-day? Guess I'll ask father to train me."—*S. S. Times.*

## The Cat Had Right of Way

WHEN traffic was at its height on one of New York's busiest thoroughfares recently, and a long line of trucks on either side, moving continuously, made crossing dangerous for all foot travellers, a cat emerged from a produce store with a kitten dangling from her mouth, and essayed to cross the street. Each time she started she had to turn back because of a cart, and her efforts quickly attracted a crowd.

Down from the corner came a policeman. He soon saw what was the matter, and while there was nothing in the traffic regulations to cover the point, it took him only a minute to decide what to do.

Going into the street he raised his hands in the way that drivers have learned means "Stop!" They stopped. The cat, seeing her opportunity, took a firmer hold on the nape of her progeny, and then, holding it high to keep even its curved tail out of the mud, she slowly and deliberately picked her way across, and disappeared in a cellar.—*Our Dumb Animals.*



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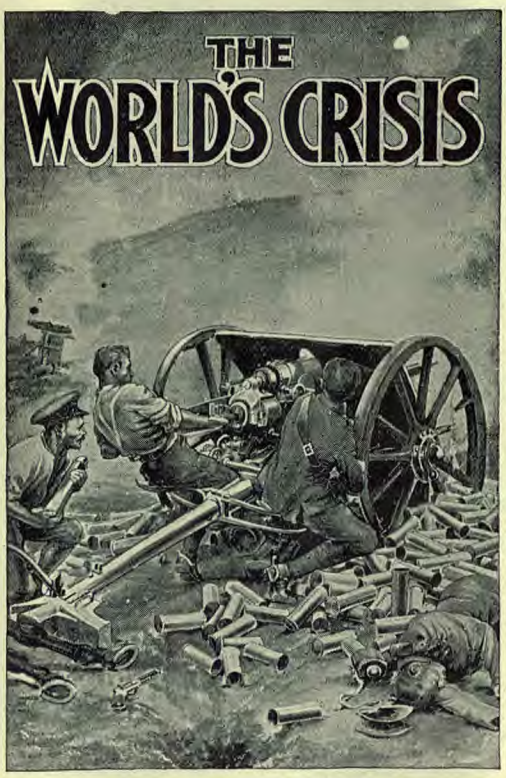


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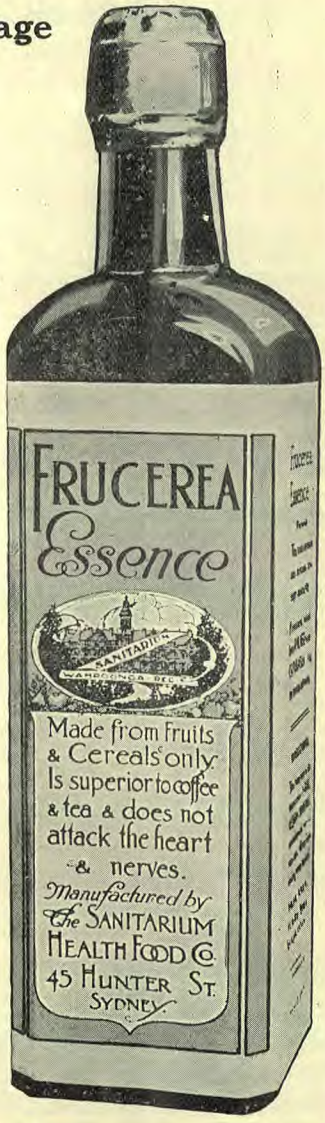


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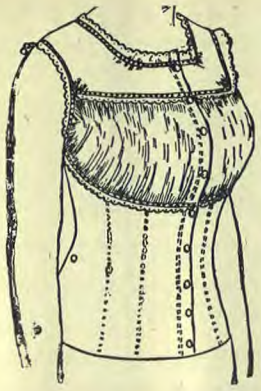

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