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Life & Health

PUBLISHED MONTHLY BY THE

REVIEW AND HERALD PUBLISHING ASSN., TAKOMA PARK, WASHINGTON, D. C.

Entered as second-class matter June 24, 1904, at the Post Office at Washington, D. C., under the Act of Congress of March 3, 1879

Acceptance for mailing at special rate of postage provided for in Sec. 1103, Act of Oct. 3, 1917, authorized on June 22, 1918.

VOL. 35 APRIL, 1920 NO. 4

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SUBSCRIPTION RATES.— One year, $1; six months, 60 cents. Remit by Post Office Money Order (payable at Washington, D. C., post office), Express Order, or Draft on New York. Cash should be sent in Registered Letter. When a change of address is desired, both old and new addresses must be given. No extra charge to foreign countries.

Geisha Girls in a Japanese Garden

Life & Health

HOW TO LIVE

EDITORS

L. A. HANSEN G. H. HEALD, M. D.

VOL. 35 APRIL, 1920 No. 4

EDITORIAL

The Missionary Aspect of Medical Work

A PROPER conception of medical work places it above the plane of ordinary secular pursuit. It may to many, even to persons engaging in it, be only a profession, a means of livelihood. It may in some instances fall into disrepute because of unscrupulous methods and quackery. True medical work occupies a sphere that is distinctly missionary in character.

The word " doctor " means a learned person, a teacher, one who is prepared to instruct, and does it. The medical doctor is an authority on things pertaining to the body and its needs. He understands the action of the laws of nature, and makes it known to the people. He imparts knowledge in the things of life.

The true physician aids in the restoration of health, and gives instruction in hygiene, sanitation, and all healthful living, doing everything possible to safeguard the health of the people.

The question of health is so closely associated with most of life's conditions that the activities of the faithful physician take him into nearly all its relations. His position is that of a benefactor.

In his recognition that the laws of health are of divine establishment and that disease is the result of violation of God's laws, the medical man faces the question of sin. He sees its destroying effect, and cannot but know the ultimate end. He takes account of the eternal future.

Proper regard for the physical life and upright living go together. Correct habits and morality are not far apart. As a teacher in right living, the doctor is a representative of that which is good. His interests are on the side of right.

The faithful doctor will tell his patient wherein he is violating natural laws, and will give warning of the consequences of following a wrong course. He will

do all he can to bring about a reform. He will, in principle, say: "Sin no more, lest a worse thing come upon thee."

A reform in life is a step toward a better life. No genuine reform can be accomplished by human power alone. Natural tendencies and cultivated weakness cannot meet temptations which have long mastered. Only as the vitalizing power of Christ's life is allowed to prevail in one's course, can true reform be effected.

The fuller interpretation, then, of medical work makes it a factor in imparting a knowledge of God's ways, chiefly with regard to the enjoyment of life. Life from God's viewpoint means eternal life, and life eternal is to know God and Jesus Christ whom he sent.

The relation of sin and disease is intimate. The Bible makes little difference between healing of the soul and healing of the body. They are accomplished by the same power. In fact, either seems only a part of one complete work. To bring health and life without giving a knowledge of the real Healer leaves an important part undone. To secure health for the body and leave the soul still sick unto death is stopping short of the really important thing.

The blessings of physical healing and of bodily health are intended to be associated with soul salvation and spiritual strength. It is a most natural union, ordained of God.

No apology should seem necessary from the practitioner for talking religion to a sick man, under appropriate conditions and in a suitable manner. The peace of God is the best medicine for many. And many a sick man is in position to find the comfort of soul most welcome.

Health work and evangelical work go so well together that it is a great loss of highest welfare efficiency to separate them. This does not mean that the doctor must be a preacher. But the doctor or nurse is in a position to do most acceptable spiritual service in connection with attendance on the sick. A personal experience in practical religion makes the medical worker doubly efficient.

A godly physician senses his need of the more than human skill and power, and seeks help accordingly. The one living close to God may well be trusted with the care of the sick. Godliness does not detract from scientific skill, but greatly strengthens it. Human ability is perfected in its connection with divine power. The one working for God has the highest reason for developing his skill to the utmost.

For the good of the medical profession itself, for the higher welfare of the objects of its service, and in the name of the Great Physician, we plead for a stronger missionary side of this important calling. L. A. H.

"OUR bodies, with their unnumbered calls for sensuous gratification, running the gamut from highest esthetic expression to the repelling comforts of the gutter, tend to bind man ever more securely with the chains of habit — silken threads only they seem at first, but how fatally they twist and twine and harden into links of steel! Through slavery to physical desires many of the bluest blood have sunk out of the category of manhood."— "*The Soul in Suffering*," *Robert S. Carroll, M. D., pp. 200, 201.*

AS WE SEE IT

Conducted by
G. H. Heald, M. D.

INFLUENCE OF DIET ON INTESTINAL BACTERIA

BEGINNING with Metchnikoff (who conceived that if the mischief originating in the lower intestinal tract could be eliminated, even at the expense of amputating the colon, human life might be indefinitely prolonged), many men have worked earnestly to perfect a method of ridding the lower bowel of poison-producing germs, by the introduction of acid-forming germs of the sour-milk type. But thus far no decisive results have followed these various efforts, and the general belief among medical men is that the "friendly germ" treatment is ineffectual.

There would, however, seem to be more promise of success in the radical change of the menu from a high-protein type, to one predominatingly non-protein, avoiding in particular the proteins of animal origin. These statements are borne out by an editorial which appeared in the Dec. 13, 1919, issue of the *Journal A. M. A.*, the most influential and representative medical journal in the world:

> "There are many indications in the recent literature of alimentary bacteriology leading to the conclusion that diet can play a significant rôle in determining the bacterial flora [i. e., the types of bacteria] of the intestine. The attempts to establish specific types of micro-organisms in the enteric [intestinal] tract by feeding bacterial cultures have not proved successful in the way that the enthusiasts of the Metchnikoff school were led to expect. Despite the positive claims of the manufacturers of such products, the preponderant view at present is against the probability of success in the efforts to implant strains of bacteria in the intestine by feeding cultures of them. On the other hand, there is growing evidence that the flora [i. e., the bacteria] in the bowel can be profoundly altered by changes in diet."

Certain investigators in the University of California Medical School have determined that in normal children with a well-balanced diet, the fermentative and putrefactive bacteria are about equally proportioned in the bowel. But on the addition of large quantities of animal food (cow's milk in this case) there was a preponderance of the putrefactive germs. In children with certain forms of intoxication of digestive origin, there is a preponderance of putrefactive germs. If these children return to a condition of health, the fermentative germs are again strongly in evidence.

These observers state that this change in health and in the type of intestinal bacteria can be brought about by restricting the amount of animal protein eaten, and giving large quantities of milk sugar and other carbohydrates (starches and sugars). They do not get the same result by the feeding of acid-forming germs.

This may explain the benefit derived by diluting milk for babies, with cereal, or of adding certain malt products.

The fact that men and women are but children grown would suggest in this connection that much toxic disturbance of intestinal origin in adults might be avoided by a greater restriction of the animal proteins, and a more liberal use of the grains, fruits, nuts, vegetables, etc. Man tries hard to make himself believe that he is by nature carnivorous, but very much of the recent laboratory work and other research has shown that man can live in perfect health without the animal foods, and that the liberal use of flesh foods is not devoid of danger.

THE MENACE OF UNSUSPECTED TUBERCULOSIS

In view of the fact that 150,000 people die in the United States every year of tuberculosis; in view of the fact that there are constantly in this country a million cases of recognized tuberculosis, and two million more cases of unsuspected tuberculosis; and in view of the fact that the disease is readily curable in the early stages, when the ordinary doctor hesitates to give a diagnosis of tuberculosis, the suggestions given in an editorial article in the *New York Medical Journal* of October 11 are eminently worthy of careful consideration. According to this article —

> "The pulse is usually the first normal function to be disturbed in the disease and should be carefully watched if there is any suspicion of the existence of the affection. A persistently rapid pulse, even if only above ninety, should be regarded with suspicion. If the patient exhibiting it has been in contact with tuberculous patients and is losing any weight or has recently lost weight, it is enough of itself almost to justify the diagnosis of tuberculosis. As nine out of ten people have some focus of the disease within them, a diagnosis on such slight grounds is quite justified. If with this there is even a slight hacking cough, though perhaps without any expectoration, the suspicion is amply confirmed. Any localized lung symptom in connection with these, as for instance a lengthening of respiration at one of the apices, gives proof positive of a tuberculous infection of the lungs.
>
> "If when these symptoms are present the patient can be made to gain in weight and above all can be made to reform habits of life so that he shall get more air than before, there is an excellent chance of making the case one of those in which the presence of tuberculosis will be absolutely demonstrated, as it is so often, only after death.
>
> "Waiting until there is a definite febrile reaction, especially above one hundred, or until tuberculosis can be discovered in the sputum, very often means a long road to recovery and a serious impairment of resistive vitality if ever there should be a relapse of the symptoms.
>
> "Physicians sometimes seem loath to hint at the diagnosis of tuberculosis until serious symptoms are present, but this is always an unfortunate mistake for the patient. When our present knowledge of tuberculosis is explained to the patient, a diagnosis made on very early symptoms, instead of doing harm by arousing discouragement, will usually have the opposite effect and make the patient understand the necessity for such care as to habits of eating and getting fresh air as will insure him against more serious developments."

It may be added that any one who finds his tasks growing harder, who gets tired easily, who is becoming discouraged, who is manifesting neurasthenic symptoms, would do well to be on the lookout for these early symptoms of tuberculosis, and to get on a more liberal diet of plain nourishing food, including a

fair amount of the vitamine foods, milk (especially on account of the lime it contains) and eggs, and provide for a more open-air life. And it is usually worth everything to have the kindly attention of a physician to hold the patient to his program of feeding and fresh air, and possibly of regulated exercise.

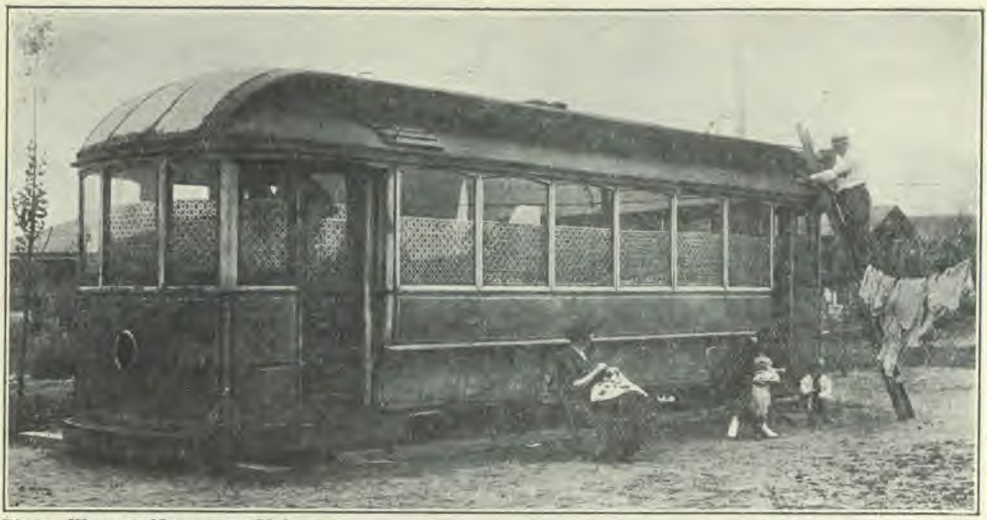
TREAT THE PATIENT, NOT THE DISEASE

NOT infrequently queries come to the Questions and Answers department requesting a course of treatment, say, for neuritis, or gout, or rheumatism, or gastric catarrh. Perhaps the doctor who furnishes the wisdom for this particular department, in the goodness of his heart, in order not to disappoint the inquirer, outlines a conventional plan of treatment for the disease mentioned. The chances are ten to one that if he had the patient under his care, he would first make a careful examination and as a result of that examination his course of treatment would be vastly different from that outlined in his answer. In fact, he would treat the patient, not the disease. In this connection, a quotation from a lecture by Prof. Robert Hutchinson, delivered before the students of the London Hospital Medical College, is to the point. Professor Hutchinson says (*London Practitioner,* September, 1919):

> "The next thing to be remembered about your plan of treatment is, that it must be *directed to an individual,* and not to a disease. You do not treat gout, you treat John Smith, who happens at the moment to be a sufferer from gout. Remember always that you are dealing not with a mechanism which has gone wrong, but with an individual who has a physiological personality, in which he differs from all other persons, and your treatment must be so directed as to recognize that fact. That is why the family doctor who knows what is called the 'constitution' of the patient, is often in a better position to treat him than the expert who is consulted only once. The family doctor has seen the patient through many illnesses, has watched over him for years, knows the way in which he reacts to certain medicines, and knows the weak points in his constitution. Such knowledge is very valuable, when one comes to treat him for a new disease.
>
> "This necessity for 'individualizing' is a reason why you should avoid systems of treatment. I never like to hear a man say that his 'system' of treating typhoid is so and so, or his 'system' of treating pneumonia is so and so. There is no *system* of treating pneumonia; the treatment which is best for one patient does not necessarily apply agreeably well to another."

So, if the doctor who answers queries by mail, in order not to appear indifferent, outlines a treatment for some serious disease, remember that the treatment is only suggestive, and that it should be adapted to the individual patient. Successful treatment deals with a patient who at the time happens to have a certain disease, and not with a disease which at the time has the patient.

A BODILY disease which we look upon as whole and entire within itself, may, after all, be but a symptom of some ailment in the spiritual part.—*Nathaniel Hawthorne.*



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CUTTING HIGH COST OF RENT

Common Sense Economy for Cutting the Cost of Living

L. A. Hansen

THE big problem of today is well put when we speak of it as the high cost of living. It is not so much that this, that, or the other particular thing is high in cost, but that living in itself is costly. No one needs to be told that practically everything has gone skyrocketing in price, the possible exceptions being chewing gum and one or two other items. Economists and financial authorities are telling us that our high living is the principal thing at fault, that we are living on a scale that under the general circumstances must be costly.

We Must Cut Down

How to cut down living is now as much a question as the cutting of prices. Extravagance, waste, and nonproduction are now rated as serious evils, which, if not curbed, will lead to a serious panic. Common-sense economy is spoken of as the greatest need of our country, and the only thing that will avert possible disaster. To spend less and save more is the course pointed out as being not only advisable but necessary.

Thrift and economy have always demanded the giving up of luxuries and nonessentials. In a time of high prices we need more than ever to observe this, but, strange to say, high prices have the strongest lure to draw us into buying what we cannot afford. We often buy because prices are high and with a preference for these high-priced things. We have an idea that price is quality, and the higher the price the greater is our demand. So the climb of cost and demand goes up and up. A reversal of the order is urged for bringing things to a level — a normal demand bringing normal prices.

High prices are not objectionable if we have an income high enough to pay the prices. While income and cost may not in all cases have kept abreast, wages as well as goods have gone up — one of the contributing factors to high cost, and

BUYING AT MARKET AND SAVING HUCKSTER'S PROFIT

perhaps a principal one. Figured out in actual dollars and cents, most persons could fare better now than when both wages and prices were lower, for the proportion of saving made possible is greater. If by careful living, practising sensible economy, and effecting savings here and there, one could keep ahead when the income and outgo were on a low level, one ought to make a larger saving when the sum of money handled is larger, providing the cost of things is not too far out of proportion to the income.

Economy Is Capital

We may, as it were, capitalize our economy. With a greater turnover of personal or household cash, we are doing a larger business, and should be able to save more out of it. Say, for example, a family was able to live and save something when the income was twenty dollars a week. That same family should be able to save at least three times as much when the income is sixty dollars, provided that the actual cost of living necessities has not outproportioned the increase in the income. Saving families are doing that very thing and even more, for economy works all the harder and the better the more chance it has.

Common sense and sanity do not need to wait on "fair price" boards to determine what should be paid for things and for justice to do what it ought to do with the profiteers. We do not know how long we may have to wait or what the waiting will bring. In the meantime we have to live, and we have to pay, generally speaking, the prices that are asked for the things we must have in order to live. Little hope is held out that legisla-

tion is going to accomplish much, at least very soon. Prices may go even higher; no telling where they will go. In the present topsy-turvy state of affairs no one dares make predictions, though nearly all agree we are heading for trouble if we don't look out.

It resolves itself into individual attention to economy in outlay. Spending less and saving more, in time, strength, and money, is the surest means in sight for meeting present conditions. Making the best use of what we have, and doing without things we do not actually have to have, will go farther toward meeting high costs than will berating the Government, the packers, middlemen, retailers, labor unions, or what not.

Let us recognize that economy is not stinginess, and extravagance is not liberality. Waste is not a sign of wealth or culture. Waste is wicked, particularly so when others are in want. Paying high prices just to pay high prices does not mean a high rating.

Budget Your Expenditures

The budget plan is advocated as a practical means of guarding the proper balance between income and outlay. This means to plan out for a week, month, or year, just what can be allowed for the various items of household and living expense, covering rent or payments on a home or the cost of owning it, food, clothing, fuel, light, education, emergencies, savings, etc. Then estimate the probable income, figure out what is necessary to do in the way of retrenchment in order to make the income cover the needs and have a safe margin. An account is to be kept of the expenditures and savings, which account should be studied from time to time in order to

BUYING IN QUANTITY AND DIVIDING

DRYING SOUP GREENS FOR WINTER

determine how the program of thrift is progressing.

Better Buying

Better buying permits larger saving. Buying is a necessity, but we can regulate it considerably. To buy wisely we must give thought to it. Then we will not buy what we do not need, and we will see that we get our money's worth. While we will watch for bargain prices, we will not let every bargain sale induce us to buy. We will go shopping for what we really want and not to see what there is to be had.

There may be a question as to whether we should buy a certain article just now. There is no question about having more money to buy with later if we do not spend it now. Wise spending means intelligent saving, and the saving of small sums ordinarily spent needlessly insures larger sums later for buying larger and better things. If prices do come down, a dollar saved now will be worth more at such a time.

Food Economy

In buying food the purse as well as the appetite must be considered. Nutritional needs must be taken into consideration, for underfeeding is the grossest waste. But eating merely because we like to eat is not necessarily wise eating. Eating wisely and buying accordingly calls for a knowledge of food values, which every housekeeper should possess. Proper cooking is also necessary to food economy. Correct eating is likewise essential.

Getting full value for money spent for food does not mean buying costly foods.

Meats, for example, are high priced, but offer in actual nutrition what may be had at much lower cost in beans, peas, milk, cottage cheese, nuts, and cereals. Foodstuffs brought from a distance cost more and are not always the best, losing in taste and keeping qualities by their long travel. Out-of-season articles are of course also expensive.

Personal marketing is far cheaper than buying by telephone. Parcel-post buying is found practical to many. Those with automobiles have an advantage in being able to go into the country districts and buy at first hand fresh products. Co-operative buying is being developed in many places and is possible in others. Our own local buying club has purchased apples, potatoes, coal, and other commodities in carload quantities at a saving.

Food Care

The proper care of food after it is bought is as important as right buying. Keeping food away from dust, dirt, and flies, will lessen the possibility of spoiling by bacteria. Keeping foods cool will also prevent such spoilage, as the bacteria, or germs, require heat. Some foods should be kept from drying out, and others from absorbing moisture. Some foods are especially subject to worms and weevils. Suitable precautions should be taken with all.

Left-over foods are worth looking after. They represent not only the value of the original raw materials, but the cost of preparation, which includes the seasoning, shortening, and sweetening used, the fuel for cooking, and labor. Finicky appetites may not relish cooked-over foods, but sensible economy demands that whims be waived in times like this.

Not many cooked foods improve by standing very long, and a dish of food may soon dry out, become unsightly and undesirable, and then be more fit for the garbage pail than for anything else. Better make use of leftovers as early as possible and avoid this waste. Dishes made with cream dressing must, of course, be promptly used. The same is true of cereals cooked with milk.

Clothing

When it comes to clothing, we alternate between the promise that its cost will soon come down and the threat that it is going higher. At present, clothing is very expensive, and more than ever is it good sense to exercise economy. Good materials are the best in the long run. Good workmanship should also be sought; for a garment of good material, but poorly made, will not last much longer than one of poor material. Conservatism in style should be observed in making selection, avoiding novelties or faddish designs or colors and extreme styles that will soon become out of date or monotonous.

Bargain-counter buying is somewhat a matter of chance. Usually a cut in price is offset by a cut in quality or otherwise. One must be a fair judge to buy safely and steel oneself pretty much against the lure of the bargain sale, simply as such. The buying of odds and ends that look cheap but cannot be used at full value does not pay. Overbuying of things that one "might find use for sometime" is a poor policy. Investment is to be considered, and having things lying around a long time is liable to make one tired of them before they are used.

Better have in mind what you want when you go shopping. Don't pay the first price asked without ascertaining whether you can buy cheaper elsewhere. Shop around enough to know the standard of prices in various places. One store may make a specialty of certain lines, while another store does better on something else.

Biggest Saving

The best economy that can possibly be effected is in the care of the health. The saving may not be apparent until sickness makes it so; then one finds that lost time, doctor's bills, and many incidental expenses, besides suffering and possibly irreparable physical injury, or even

death, foot up a heavy total on the debit side. Thrift habits pay, but health habits pay more. Dividends are realized at once and increase with time.

Health economy has the advantage that it can be practised without stinting ourselves on anything, without sacrifice of any pleasure, and with no loss anywhere. It does not call upon us to give up anything that is desirable, but includes the things that are the very best. Health economy is appropriate at any time, and always pays. Particularly does it pay in helping people to stand trying times such as the present. Real health will meet the severest test. We ought never to forego the practice of good common-sense economy in health.

First Aid in Accidents and Emergencies

L. A. Sutter, M. D.
Wichita, Kans.

Wounds

ANY break in the skin is a wound. It may be incised or lacerated. Incised wounds are those made by a knife, glass, tin-can lid, or any other object with a sharp edge. Lacerated wounds are irregular, rough, and ragged. If they are made by a nail or a pitchfork tine, they are called punctured wounds. A blow from a club, a fall from an automobile, or a kick by a horse, may cause a contused wound. While one is tightening a nut, if the wrench should slip and his arm hit against a brace or a bolt and the outer skin be rubbed off, so that the blood would ooze through, the wound is called an abrasion. If a rope slips through the hands and removes the skin from the palmar surface of the fingers, the wound is called a brush burn.

Symptoms of a Wound

All wounds bleed more or less. Wounds of the scalp, palm of the hand, or sole of the foot bleed very freely. Wounds of the face bleed much more freely than wounds of the back. Those made with a sharp object bleed more freely than lacerated wounds, for the reason that the walls of an artery or a vein, when torn across, tend to curl themselves and stop bleeding.

Shock is a symptom that accompanies all wounds. It varies in severity with the extent of the wound and with the individual's ability to endure pain. The degree of shock is in proportion to the amount of bleeding, the chilling of the body, and the degree of pain. Shock is recognized by a very frequent, weak pulse, shallow breathing, dilated pupils, a pallid hue to the skin, and cold perspiration. The extremities are very cold.

Gaping may be very slight or quite wide, depending on the location of the wound, and whether it is just into the skin or deep enough to cut across muscle fibers. Pain may be slight or quite severe according to the location of the wound, the kind of wound, and the patient's reaction to the wound. An incised wound causes less pain than a lacerated wound.

Swelling is a very marked symptom of contused wounds. It is much more extensive in wounds around the eyes.

Discoloration is always present in a lacerated wound. It may be slight if the wound is small. Torn vessels let the blood seep out underneath the skin, and the breaking up of the red blood cells of the escaped blood causes the black or blue discoloration.

The Treatment of Wounds

The cause of shock being the loss of blood, pain, and the chilling of the body, in treating the wound the bleeding must be checked as quickly as possible. Get the patient warm by covering him with coats or blankets. Remove him, if possible, to a protected room. Apply hot water bottles or hot irons,— one on either side of the thighs, one to the feet, one between the thighs, and one in either armpit. Never place hot water bottles or hot irons next to the skin of the patient, for there is great danger of causing severe burns in a more or less unconscious patient. Therefore all water bottles or hot irons should be outside the blankets. Avoid causing pain, by very gentle handling, and by moving the patient as little as possible.

Hemorrhage

The treatment of bleeding depends on the extent and location of the wound. If the blood comes in a bright-red jet, an artery has been cut. To stop arterial hemorrhage, pressure can be made between the wound and the heart, either by means of the thumb or by tying a tourniquet around the limb between the heart and the wound. In making pressure the artery should be pressed against a bone. Great care should be exercised not to leave a tourniquet on for a great length of time, else it may cause the death of all the tissues beyond where it is tied. A garter, necktie, suspender, or belt may be used as a tourniquet. This should be tied loosely around the limb between the heart and the wound. A stick can be put through the loosely tied tourniquet and pressure made by twisting the stick.

Bleeding from a vein may be checked by putting a tight compress directly over the wound. If the bleeding is severe, it may be necessary to place the thumb on the bleeding point, and make firm pressure in order to save the patient's life. But unless there is great danger of the patient's bleeding to death, nothing that has not been made free from germs by being thoroughly boiled or baked should come in contact with the wound.

Infection

All wounds that result from accident are infected. Fortunately free bleeding washes out many of the germs, thus lessening infection.

All wounds should have every part of them thoroughly washed with tincture of iodine, applied by means of a medicine dropper. Never wash a wound with water, as this will increase the infection. Hydrogen peroxide is of very little benefit in keeping down infection, and may even be a detriment to the wound.

Wounds from machinery that are smeared with oil may be cleansed with kerosene. This will remove the grease, after which tincture of iodine may be carefully dropped into the wound. Care should be taken to see that no hairs are left matted in a wound.

Wounds made by bullets, a nail, or a pitchfork tine may be infected with tetanus. If so, the patient may develop lockjaw. Punctured wounds should be made to bleed freely if possible, after which iodine can be forced into them. All wounds should be protected by a compress either of gauze or of some other material which has been sterilized by baking in an oven until it is quite brown, or by boiling for thirty minutes, after which the water is poured off and the compress left to dry in the pan in which it was boiled. Wounds may be held together by bandages or strips of adhesive drawn taut over the top of a clean compress. Fresh wounds should never be sealed up with collodion or New-Skin, as this incloses germs in the wounds and gives them a greater opportunity to grow. It is well to leave a little place open at the end of a wound where any collection of blood serum or pus can run out. As sunlight and air aid in the healing of infected wounds, it is well to let the sun shine on the wound for a few minutes each day.

Cotton should never be used next to a wound, because it will stick fast and cannot be removed without making the

wound bleed. It will also dam back the pus, which should be let run out of the wound freely.

For the first few days, the wound may be protected by covering it with sterile gauze soaked in 50-per-cent alcohol. The dressings should be changed every ten hours. All dressings on wounds should be light, so that the air and sunshine can easily get to the wound.

All wounds should be kept at rest by bandages and splints.

Caring for the Eyes

B. E. Crawford, M. D.
Sioux Falls, S Dak.

THE human eye is a delicate and elaborate piece of apparatus, so designed that with proper care it will continue to perform its functions faithfully and well throughout a long lifetime.

Sight is the most important of the special senses, and no one would care to exchange his powers of vision for all the wealth of the world; and yet the eyes are almost universally illtreated.

Our eyes work for us from sixteen to twenty hours a day, and they deserve respect and proper care. But even with the best of care, the eyes are exposed to many dangers and injurious influences from both the natural and the artificial conditions under which we live. Among these may be mentioned wind, dust, bacteria, smoke, irritating gases of various kinds; bright sunlight, especially when reflected from snow or from a paved street or sidewalk; bright artificial lights; excessive heat, as from stoves or open fires; excessive dryness of the atmosphere; indigestion; constipation; the excessive use of alcohol and tobacco; working at dusty trades; exposure to lead poisoning and to the fumes of wood alcohol.

The most common and most prolific cause of eye disease is eyestrain, which results in congestion and imperfect circulation in the blood vessels of the eye and lids, followed by irritation and weakening of the delicate nerves and muscles of the eye.

A reasonable amount of work is beneficial to the eyes, although they are easily injured by being overtaxed. When one is sick and nervous, the eyes require an extra amount of rest. Headaches, neurasthenia, mental depression, irritability of temper, indigestion, and various nervous disorders often result from eyestrain.

Care should be taken not to use the eyes for close work in a poor light or in too bright a light, as both are equally injurious.

In all cases of eye disease or eyestrain the diet should be carefully regulated. Very rich foods, spices, alcohol, and tobacco should be avoided. Constipation should be corrected, preferably by proper regulations of the diet.

Every one should have the eyes examined occasionally by a competent oculist, one who has a thorough knowledge of the diseases of the eye, and who understands the close relation existing between eye troubles and the condition of the general health, and who is competent and authorized by law to treat any faulty condition that may be found present.

Interesting Views

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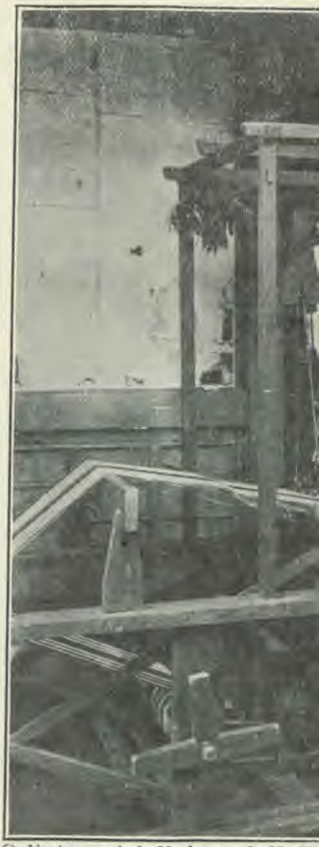
A Japanese Ricefield

A case where the wife drives the husband. Often the men act as draft animals.



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A Japan

A woman is weavin slow and mo

# of Japanese Life

Loom

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A Japanese Park

Japanese girls are feeding the deer in a park at Nara.

Dietetics

Food: Its Composition and Relation to Health

George E. Cornforth

NATURE'S food for the young, milk and eggs, serves best for the invalid." Milk and eggs are more easily digested than most vegetable foods, contain nourishment in concentrated form, and are rich in mineral elements; for these reasons they are the most suitable sources of protein in the diet of the sick.

It should be remembered that subjecting eggs to high temperature makes them less digestible. The white of a hard-boiled egg is very hard and tough and difficult to digest. To be most digestible, eggs should be cooked at a low temperature, lower than the boiling point of water, as in poaching eggs in water that is not boiling hot, or in coddling eggs in water that it not boiling.

There are two kinds of sugar. Perhaps these might be called fruit sugar and vegetable sugar. Fruit sugar is contained in fruits and in honey, and is nature's predigested food. It requires no digestion. For this reason fruit juices are most valuable in the diet of the sick, because patients who are too sick to digest food can take fruit juice and get nourishment from it. And besides this predigested sugar, fruit juices contain the medicinal mineral elements which furnish the body with recuperative power.

What we have called vegetable sugar grows in roots and stems, as beet, cane, and maple sugar. After being subjected to a refining process, it is supplied to us in a concentrated form. This kind of sugar is not predigested, but is digested, or turned to dextrose, a form of fruit sugar, in the small intestine. Being so concentrated, this kind of sugar is irritating to the stomach and capable of causing gastric catarrh. It also satisfies the appetite, so that a person who eats largely of sugar or sweetened foods is liable not to eat a sufficient amount of the other foods that the body needs. Also, refined sugar contains no mineral elements nor cellulose; and if sugar makes a large part of the diet, such a diet is sure to be lacking in the necessary mineral elements, and to be lacking in bulk. Sugar is more quickly absorbed than starch, the other form of carbohydrate, and if taken in large quantities, it is likely to appear in the urine. Sugar and cornstarch are about equal in nutritive value, but one could much more easily eat a quarter of a pound of sugar than a quarter of a pound of cornstarch. The maximum daily allowance of sugar should not be more than four ounces.

While milk sugar does not come to us from vegetables, the cow gets it from vegetables. In composition, it is more nearly like cane and maple than like fruit sugar, but it is much less sweet and more easily digested than cane sugar.

Cane sugar should be avoided in stomach trouble, because it is irritating; in obesity, because it is a concentrated food; in gout and rheumatism, because in this disease the food should be high in mineral elements; and in diabetes, because in this disease the body's power to normally use sugar is lessened.

Boiling cane sugar with an acid, changes it to invert sugar, a mixture of dextrose and levulose, two kinds of fruit

sugar. This invert sugar does not have so great sweetening power as cane sugar; therefore, to sweeten stewed fruit, it is more economical to add the sugar to the fruit after the fruit is cooked, rather than to cook the sugar with the fruit. In this way less sugar will be required to make the fruit palatable. And nowadays, when sugar is scarce, we need to make it go as far as possible.

Of the four food substances, starch, sugar, fat, and protein, starch makes up by far the largest part of the diet. Starch is our chief source of carbohydrate. Raw starch, unlike sugar, is insoluble and practically indigestible. The little starch granules are done up in sacks of cellulose, which keep the water and digestive juices from them. By subjection to heat, these sacks are broken, and the starch granules pop out and take up water, from which they are very thirsty. The starch thus becomes dissolved in the water and thickens it, and also becomes digestible, because the digestive juices can get at it.

When starch is subjected to heat for a long time, as in cooking cereals for several hours in a double boiler, or when it is subjected to a sufficiently high temperature to brown it, as in making toast, and in the crust of bread, some of the starch is changed to dextrin, a form of carbohydrate intermediate between starch and sugar, which is more easily digested than starch. By digestion, starch is changed to dextrose, a form of sugar; therefore dextrin, which is nearer to sugar than starch, is partially digested. For this reason dextrinized foods, like zwieback, browned rice, and toasted flakes, are sometimes called predigested foods, but they are only partially predigested.

In the outer coatings of grains is a substance, called diastase, which has the power, when the seed sprouts, of turning the starch in the seed to maltose, or malt sugar, to be used as food by the growing plant. "Malt" is thus made by sprouting barley. Malt extract, containing the malt sugar and diastase, is sometimes given as a medicine at meals, because the malt sugar it contains is a fattening food, and the diastase helps to digest the starch which is eaten in other foods. Malt is used in the manufacture of some ready-to-eat cereals, and the malt turns some of the starch of the cereal to sugar, giving the cereal a sweet taste, and making it partially predigested.

As cereal breakfast foods consist of a mixture of starch and cellulose, it is necessary to subject them to long cooking in a double boiler to cook them thoroughly, because, while to render starch soluble requires a comparatively short time, thoroughly to soften the cellulose, so as to enable the digestive juices to reach the starch, may require several hours' cooking, according to the size of the grain or the fineness to which it has been ground. It is a good rule to cook cereals at least twice as long as is recommended on the package.

Carbohydrates, starches and sugars, are composed of the chemical elements carbon, hydrogen, and oxygen, containing hydrogen and oxygen in the proportion to form water, so that carbohydrates may be said to be composed of carbon and water. Fats, also, are composed of carbon, hydrogen, and oxygen, but contain more carbon and less oxygen than do the starches and sugars. Therefore, having more carbon to burn, weight for weight they supply more energy to the body than carbohydrates. Fats are compounds of fatty acid and glycerin.

The fats used for human food are of three kinds, stearin, palmitin, and olein. Stearin is a solid fat which predominates in the fat of the bodies of animals. It is only of animal origin. Palmitin is human fat. It also is solid. Butter consists largely of palmitin, and palmitin is contained in vegetable fats. Olein is liquid at ordinary temperature, and is what vegetable oils chiefly consist of.

We do not believe that the Creator intended animal fat, that is, fat from the body of the animal, as lard, tallow, and suet, to be used as human food. Butter, consisting largely of palmitin, the same

kind of fat as human fat, may be used as food, and the oils of the olive, peanut, cocoanut, almond, and other vegetable substances were evidently meant for human consumption. Vegetable oils are more easily digested than animal fats. The lower the melting point of a fat the more easily it is digested.

Lecithin is a phosphorus-containing fat which is always found in living tissue, and especially in nerve tissue. It is believed to be valuable in helping to build up the health, and has been prepared from egg yolk and from brain substance, and used as a food drug. But feeding egg yolks is better and cheaper. Lecithin is also contained in milk and cereals.

Volatile oils differ from the oils we have been discussing in being entirely volatile; that is, they will entirely evaporate. They are the substances to which many flavors are due; for example, oil of lemon, oil of cinnamon, oil of rose, oil of wintergreen. Some of these are used for food flavorings. Because they do easily evaporate, cooking tends to dissipate them, and for this reason flavorings should be added to food at the last moment.

A substitute for dairy butter, called nut margarin, is made from a mixture of vegetable fats, and churned with cultured milk in the endeavor to give it a butter flavor. These butter substitutes are free from the disease germs that may be contained in dairy butter, but they do not contain the very important fat-soluble, growth-promoting vitamine that butter contains. But if the diet contains a plentiful supply of greens, the health will not be likely to suffer from the use of these butter substitutes.

The fact that vegetable fats are cheaper than cream and butter is taken advantage of in making a substitute for condensed milk from skim milk and cocoanut fat. A vegetable substitute for lard is made from cottonseed oil by a chemical process which changes it from olein to stearin.

Fat supplies energy to the body in concentrated form, while the carbohydrates supply energy in a form most economical to the body. Fat is two and one-fourth times as nutritious as starch or sugar. That is, a given weight of fat yields two and one-fourth times as much energy as the same weight of starch or sugar. Twenty per cent of the average person's body is fat. This fat the body gets mainly from fatty foods and carbohydrates. Proteins may be transformed into fat to a limited degree. The body builds fat most readily from carbohydrates. Therefore a person would be more likely to gain fat by using the easily digested starches and sugars, as potatoes, well-baked bread or toast, rice, sweet fruits, and honey, than by greatly increasing the fat in the diet.

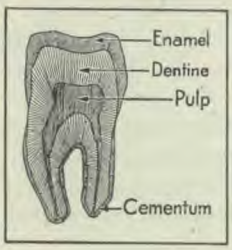
Fats are more digestible eaten cold, as butter spread on bread or oil used on salads, than when heated or cooked with food, because when cooked with food or when food is cooked in it, the fat coats over the food and hinders its digestion, for the coating of fat is not dissolved by the digestive fluids of the mouth or stomach. When the Creator makes a combination of fat with other food substances, he puts the fat on the inside of the other substance of the food, as in cream, in which the minute particles of fat are incased in the casein of the cream (such a combination is called emulsified fat; it will readily mix with water), or in olives and nuts, in which the particles of fat are incased in the other substance of the olive or nut. But when the cook makes a combination of fat with another food, she puts the fat on the outside, and spoils the digestibility of the food, except when she makes mayonnaise, in the making of which she divides the fat into minute particles, and surrounds each with a film of egg yolk. The Creator's way suits the food to digestion, for when the fat is on the inside of the other constituents of the food, these are digested by the digestive fluids of the mouth and

stomach, leaving the fat free to be digested in the intestine, where the fat-digesting fluid enters the digestive tract.

Heating fat to a high temperature, decomposes it into fatty acid and glycerin. Different fats decompose at different temperatures. Butter begins to decompose at about 256° F., lard at 360° F., beef fat at 440° F., cottolene at 450° F., refined cottonseed oil and olive oil at 600° F. At 500° F. and above, the glycerin is changed to acrolein. This is the substance that gives the smarting sensation to the eyes, nose, and throat when fats are overheated. It is very irritating to the mucous membrane. It is the substance that is produced in the burning of cigarette paper, from the glycerin in the paper; and in the smoking of cigarettes more harmful results are attributed to the acrolein than to the nicotine in the tobacco. It will be noticed that butter is the worst fat to use in frying, because it decomposes at a much lower temperature than any other fat.

Fats are somewhat hard to digest, and for this reason they should be limited in the diet of persons suffering from indigestion or of patients who are very ill. Fats are most easily digested in the form of an emulsion, which is a fat in a finely divided state that will mix with water, as in milk, cream, egg yolk, and mayonnaise salad dressing. Such fats as these are most suited to the invalid's diet. In this form the fat does not smear over the other food or the sides of the stomach and thus interfere with digestion.

Fats should be limited in diseases of the stomach, intestines, liver, and in most chronic diseases, also when gallstones are present. Fats should be prescribed for those who have diabetes, to partly take the place of the carbohydrates, which must be reduced; for children with rickets, in tuberculosis, in convalescence, and in cases of constipation, because fats are somewhat laxative.



Bad Teeth and Disease

William Curtis Dalbey, D. D. S.

THE worse your teeth are, the more susceptible you are to disease. There is no question that decaying teeth predispose to disease. Especially are decayed teeth a menace to the life of children.

Neglected mouths, with their decaying teeth, always contain decomposing, germ-laden food. Food in tooth cavities will decompose in less than an hour, and become the best possible food for germs. Germs supplied with warmth, moisture, and food multiply with great rapidity, and are brought into constant contact with the crypts of the tonsils, and constantly carried into the stomach.

This is not all. Neglected decayed teeth and dirty mouth conditions soon lead to imperfect use of the teeth and inadequate mastication of food; for as soon as decay approaches a nerve, it hurts to bite on the tooth, and the food, instead of being masticated, is bolted. Bolting or poor chewing soon brings about digestive disturbances, and disease follows.

When the starches and sugars are not thoroughly mixed with the saliva, the

first stage of digestion is imperfect. Experiments have shown that bolted food loses at least three fourths of its food value. This, sooner or later, will cause malnutrition, no matter how much food or what quality of food, is taken into the system. And one suffering from malnutrition is far more susceptible to disease than is one who is well nourished.

When there is too much food, or when the food is fermented, unmasticated, and indigestible, or when the need of normal digestion is not met, there results an acute inflammation of the stomach. Food fermented by acid-producing germs of the mouth, added to the natural acid of the stomach, produces sour stomach or heartburn. This further aggravates acid conditions of the mouth, and has a destructive action upon the teeth.

Lack of the use of the teeth and muscles of the mouth impairs the entire facial structure. Up to eighteen years the child has within the jaws developing teeth. Failure to use these teeth and masticatory muscles brings about malformation, or faulty development. The face and mouth have a diminished blood supply, and the blood fails to furnish the necessary materials required for growth of bone and muscle.

When some teeth are lost, there is not the proper contact between the jaws; the arches collapse just as an arch collapses when certain stones are removed. This results in deformity of the nasal passages and sinuses in direct proportion to the dental irregularity, terminating in poor growth and poor health.

This is a brief summary of the evil effects of lack of care of the mouth and teeth. We should awake to a realization of the importance of good teeth and their care, which means so much to the maintenance of health.

The child should be trained early to care for his teeth. This responsibility should be impressed upon him.

While the teeth are developing, the child should be taken to the dentist at least once every six months. Especially should the teeth of a child attending school be looked after. Neglected teeth mean cavities, abscesses, headache, indigestion, bad throat, and absence from school. A child with bad teeth often fails to pass his grades. The writer examined 350 school children, and only four had perfect teeth.

The defects found were largely due to ignorance or carelessness on the part of the parents. And parents are often in the same condition as their children. In nearly every mouth there is room for improvement. Only by eternal vigilance and care can the mouth be kept anywhere near a hygienic condition.

It is safe to say that most chronic diseases are either caused by, or are aggravated by, an insanitary condition of the mouth. Bad mouth conditions probably increase child mortality.

Refreshing Sleep

B. E. Crawford, M. D.

MANY persons sleep too much. The amount of sleep required depends largely upon how well one sleeps; that is to say, upon the degree to which the brain, during the sleeping hours, is free from the wearing, tearing, destructive influences at work through the day.

Before retiring for the night, all worry, all malice, all melancholy, all the cares of the day, should be laid aside, and in their place should be substituted cheerful, hopeful thoughts. One should be an optimist at least once every day, and the best time is just before one retires.

Avoid eating a hearty meal just before going to bed, and have the sleeping-room cool and well ventilated, the bed clothing warm but not too heavy.

CLASS IN FOLK DANCING, COMMUNITY SERVICE, BRIDGEPORT, CONN.

Community Service: a Doctrine of Good Will

Florence Samuels

FOR more than two years nation-wide kindly service of a homely sort to the soldier, sailor, and marine has been promoted through War Camp Community Service. Now Community Service, Incorporated, will foster the same doctrine of human good will. It applies itself through the expression of the play instinct. The leisure of all people, old and young, is its only requisite. It animates those forces in the community that will combine for social unity, that will stimulate individual participation in recreational activity. For these are the things that will finally produce civic betterment. And that means community contentment.

Like real democracy, Community Service is inclusive of every order of society. The nation rose above social barriers to undertake the great task of making the soldier happy. Those who have learned through their community experience the error of shallow judgments, are now alive to the possibilities of agreeable intercourse through applying the same principles to the community. In industrial organizations which are communities in themselves — stores, factories, or laundries — community sings, games, entertainments for all, have done as much for the worker as they did for the men in service. A little play in a day makes that day happier.

Community Service proceeds along natural lines to utilize the best that organizations have to offer their town, stimulating every worthy recreational,

MILLINERY CLASS AT WORK TO COMBAT HIGH COST OF LIVING, COMMUNITY SERVICE

educational, social, and cultural impulse in the community. It is a selective method, inviting every agency to contribute its facilities, its counsel, its service, to the greater good of the community, and uniting the activities of all under the leadership of an expert adviser.

Through it clubs, churches, organizations, leagues, and societies are stimulated to a greater and broader application of their policies. They fall in line with Community Service, for it is nonsectarian, nonpartisan, nonpolitical, and all-social. Playgrounds, parks, and com-

COMMUNITY SERVICE PAGEANT

munity houses achieve a new popularity under the leadership of an organizer, for he revitalizes these public centers of recreation through community sings, athletics, games, and pageants — the instruments of his art.

Community Service discovers the varied talent in a community. For he who, once shy, performs in concert in the protective seclusion of the crowd, eventually abandons himself to his new-felt inspiration for self-expression. The taste of performance whets his appetite for more. Taking part in the community pageant, speaking in the community forum, playing the games that the Community Service leader introduces into social meetings, at length reveals to him his unthought-of abilities; and a common participation in communal activities, shared interest and zeal in improving the community educationally, materially, spiritually, initiates one into the secret of good fellowship. Thus does Community Service teach neighborliness.

Community Service is the profession of neighborliness, developed through the practice of friendliness. Neighborliness is a lost art in some localities. Though as ancient as the existence of neighborhood, it now too often signifies merely indifference to a near-by resident, rather than the cultivation of friendly intercourse. "The gospel that allows no such term as 'stranger,' makes every man my neighbor," is the spirit of Community Service. The more intensive its application and the broader its expression, the better will be the community.

In many of the 600 communities where War Camp Community Service has operated, the resultant unity of civic interest and power of organization is sufficient to insure the success of continued community service under their own leadership,— to the community, however, instead of to the soldier. In untried fields, the work is succeeding also.

The cultivation of social civility is its incentive; civic betterment is its goal.

COMMUNITY SERVICE: LEADING LAUNDRY GIRLS IN POPULAR SONG

Epidemics

G. H. Heald, M. D.

AN epidemic is the rapid spread of an infectious disease. A disease is said to be endemic when it is always present in a locality — as malaria, in certain sections of the South.

Some epidemic diseases, as influenza and poliomyelitis (infantile paralysis), seem to have endemic foci, or breeding places, where they are always present, and from whence they occasionally start out on a personally conducted tour around the world. Dr. Simon Flexner believes, for instance, that poliomyelitis is endemic in Northwestern Europe, and influenza in Eastern Europe.

The germs of these diseases, like those of numerous other diseases, are given off with the secretions from the nose and throat of a patient, or one recently recovered from the disease, or a healthy person who has had his secretions infected, directly or indirectly, by secretions from a patient or convalescent.

In regard to epidemics, a number of facts are now known which help to unravel some of the mysteries regarding the transmission of epidemic diseases. These facts are:

1. Not every one is susceptible to a disease. The number of immunes will vary with the disease, and the length of time since there has been an epidemic, for usually an attack confers a certain degree of immunity. It is owing to these facts, principally, that an epidemic after a time dies out.

2. The disease germs which reach the nose and throat of those who are not susceptible to the disease, multiply, just as in the cases of susceptibles; and though these insusceptibles (known as "carriers") do not contract the disease themselves, they are as dangerous as those who are stricken — much more so, in fact, for the reason that they mingle, unsuspected, with the people, and take no precaution against disseminating the disease, while those ill of the disease are isolated, and are more or less under control.

3. In epidemics, usually, there are at first a number of comparatively mild cases, which may be overlooked. These, with the "carriers" who have come in contact with them, may thoroughly infect a neighborhood so that when the epidemic manifests itself, it does so with startling suddenness, so much so as to work upon the superstitious fears of the people and increase the danger; for panic-stricken people are incapable of acting with good judgment.

It may have been for these reasons that the influenza epidemic worked so rapidly and almost simultaneously over large areas at one time, quite independent of what preventive measures were used. Doubtless before such measures — quarantine, closing assemblies, opening car windows, the general use of masks, etc.— were enforced in any community, the people had already been pretty thoroughly infected, so that there were "carriers" scattered all through the community.

The questions naturally arise: How are germs transmitted from one throat to another? and, What may be done to lessen this transmission?

The methods of transmission are numerous. We are constantly trading germs. Many of these germs are harmless; but we so have the unclean habit of taking one another's germs in our mouths that in time of epidemic it is practically impossible for us to change.

Among the important methods of transmission is the droplet method. When one coughs or sneezes or talks loudly, he dislodges from his mucous membrane minute droplets of germ-laden fluid which are sprayed out into the air, to be breathed in, perhaps, by some one else. The use of masks may lessen to a considerable extent this method of infection. Probably in crowded assembly-rooms and street cars there are always such germ-laden droplets floating around.

If some of these droplets containing disease germs, lodge on the mucous membrane (nostrils, throat, eye) of some susceptible person, he contracts the disease, and wonders where he got it. If he is not susceptible, he innocently goes into the business of raising and peddling germs.

Another method of transmission is the use of eating and drinking utensils that have been used by an infected person — patient or carrier. There is the common drinking cup, now fortunately becoming more rare; the soda fountain glasses, spoons, and dishes, never properly sterilized; and the dishes, forks, and spoons used in restaurants, and seldom sufficiently scalded. Then in families there are numerous opportunities for the transmission of germs. Kissing on the lips need only be mentioned.

Then there is the "hand-to-mouth" infection. The handkerchief infects the hand, the hand infects the street car strap, door knob, etc., and these in turn infect the hand of another person, who later eats "with unwashen hands," and infects himself.

The truth is, our present habits facilitate the transfer, in many ways, of germs from one nose and throat to another nose and throat, and thus provide the means for the rapid spread of epidemic disease; and until we thoroughly reform in this regard, we shall be helpless in the face of epidemics, notwithstanding all that the health officers may do to prevent them.

Till they can get us to reform some of our habits, their principal function in time of epidemic will be to compile the mortality statistics and draw lessons therefrom.

Enormous Saving of Life

During the past twenty years, as a result of the dissemination of health educational matter and the improvement of sanitary conditions, the general death rate in the United States has been reduced from 17.6 per thousand population to 14.2. If the death rate of 1900 still prevailed in 1919, there would have died in this country 350,000 more persons than did die. In other words, improved sanitation and hygiene are saving nearly a thousand lives a day in the United States as compared with conditions in 1900.

Zinc in Foods and in the Body

Careful investigation has shown that zinc occurs regularly in minute quantities (often associated with copper) in many common foods. The fact that it is present in measurable quantities in such important foods as milk and eggs, as well as in other human foods, leads to the supposition that it must have some important nutritive function. Zinc is also found in minute quantities in the human body, and it is supposed that it may be a "normal constituent not only of the human organism, but of the animal organism in general."

Prohibition and Sudden Death

The papers have recently been filled with accounts of fatal poisoning by wood alcohol, sold fraudulently to those who were willing to pay any price for drink. There is another side to the picture which the papers are not featuring; namely, a notable decrease in deaths from alcoholism, and from accident, and from suicide, as shown by the following figures from the *Monthly Bulletin*, health department, city of Boston, September, 1919. The figures compare the months of July, August, and September, 1919, under prohibition, with the corresponding months of the four preceding years:

Deaths	1919 (dry)	1918	1917	1916	1915	Average 4 yrs.
Alcoholism	7	34	38	46	31	37
Accident	112	151	197	176	152	169

Suicides were also markedly decreased. We see here in one city thirty persons saved in three months, or ten a month, from death by alcoholism; and fifty-seven from death by accident in three months, or nineteen a month, as a result of prohibition. Could these and similar figures be checked up all over the country, they would make the wood alcohol deaths shrink into insignificance.

QUESTIONS AND ANSWERS

Answers this month by G. H. Heald, M. D.

This is a service for subscribers to LIFE AND HEALTH.
For personal reply, inclose two-cent stamp, and address Editors LIFE AND HEALTH, Takoma Park, D. C.
If you are not already a subscriber, send also the subscription price with your question.
Replies not considered of general interest are not published; so if your query is not accompanied by return postage for a personal answer, it may receive no attention whatever.
Remember that it is not the purpose of this service to attempt to treat serious diseases by mail. Those who are sick need the personal examination and attention of a physician.
State your questions as briefly as possible, consistent with clearness, and on a sheet separate from all business matters. Otherwise they may be overlooked.

Neuralgia of the Teeth

"Can you suggest any relief for neuralgia of the face coming apparently from the teeth?"

For temporary relief, try Naegeli's stretching. With thumbs and fingers under angle of jaw and back of head, forcibly lift the head upward, as if attempting to stretch the neck; then force it well back — as far as it can be made to go. This often gives temporary relief.

For permanent relief, consult a dentist. It may be necessary to have an X-ray, in order to determine the presence of some source of irritation not apparent on the surface.

Cigarette Cure

"Kindly give for the benefit of some LIFE AND HEALTH *readers the silver-nitrate cigarette cure."*

Essentially, it is a frequent washing of the mouth with a weak solution of silver nitrate. With a ⅛ to ¼ per cent solution of nitrate of silver, wash the mouth after each meal for three days, and then after breakfast only, for four days more. Be careful not to swallow the silver nitrate, which is poisonous. If there is a desire for tobacco, chew gentian root. This may be kept up, if necessary, for several weeks without injury. The diet for two weeks should consist entirely of fruits, cereals, and milk, except that a meal consisting of vegetables, cereals, and milk may be taken occasionally.

Formaldehyde Disinfection

"How much formaldehyde should one use to disinfect a room?"

For a room of 2,000 cubic feet, use 20 fluid ounces (1¼ pints) of formalin and 10 ounces of permanganate of potash. The cracks should first be carefully sealed. An iron pot containing the permanganate should be placed on the floor. When all is ready, pour on the formalin and get out *quickly*, closing the door. The reaction is violent, and irritating vapors are given off rapidly. In order to prevent the violent reaction and foaming, the permanganate may be made into briquettes, using 10 ounces of permanganate, 1½ ounces of Portland cement, and enough water to make a paste. Form into briquettes, and dry. The reaction with these briquettes is slower and less dangerous than with the pure permanganate.

In winter it is well before using the formaldehyde, to boil away say a pint of water in the room over an oil or gas stove. The moisture in the air will greatly increase the efficiency of the formaldehyde.

Erysipelas

"What treatment do you recommend for erysipelas?"

First, if possible secure the services of a reputable physician. One cannot afford to tamper with erysipelas. The following have been used successfully: (1) A buttermilk compress, the patient also drinking freely of buttermilk. (2) Picric acid, 1-per-cent solution in water, applied to the affected part. In some cases pain and swelling are rapidly relieved. In others the remedy fails to act. (3) Epsom salts in saturated solution, applied by means of a large compress of 15 or 20 layers of gauze, extending beyond the affected area on all sides. Cover with oiled silk or paraffin paper. (4) Paint with tincture of iodine and then with flexible collodion. But as said before, the treatment of this serious trouble is best given over to a physician.

Will It Jell?

"How may one determine beforehand whether a certain fruit juice will form a good jelly?"

The following is recommended as a good kitchen test: To a teaspoonful of the juice, add half a teaspoonful of sugar and a quarter teaspoonful of Epsom salts, stirring until dissolved. If the fruit juice will make jelly, the experimental mixture will set within five minutes.

Hiccough

"Please give a remedy for persistent hiccough."

Dip a lump of sugar in vinegar and let it melt in the mouth. This, at least in some cases, affords immediate relief. A small pinch of sugar will stop hiccough.

Pressure on the eyelids is also recommended.

Piles

"Can you suggest a home remedy for piles?"

The following has not only relieved, but has apparently cured piles: Simply wash the parts several times a day in cold water.

Cold Sores and Fever Blisters

"Please suggest a remedy for cold sores."

Touch each sore with a drop of sweet spirit of niter, and the sore "will disappear almost like magic," so it is said.

Beriberi

"What would you recommend for one who has already developed beriberi?

The elimination of all decorticated, or hulled, foods, including white rice, white flour and all its products, and the free use for a time of baker's yeast.

Jelly with Less Sugar

"Is it possible to use a substitute for cane sugar in making jelly?"

According to some experiments reported in the *Journal of Home Economics*, honey, glucose, corn sirup, sorghum, or corn sugar may be used to replace part or all of the sugar in making jelly. It is recommended, however, that 50 per cent of the sweetening be of cane sugar.

To Check Bleeding

"What is the most reliable method to check bleeding in an accident?"

The first thing, of course, in arterial bleeding, is the application of some constricting force to the artery above the bleeding part. If the bleeding is from veins, the pressure must be made below the injury. For bleeding of small vessels and capillaries, the wound should be packed with gauze wrung from turpentine till nearly dry. The turpentine, which should come in contact with the entire bleeding surface, is not only a styptic (arrests bleeding) but an *antiseptic*. It also acts as an antiseptic dressing, preventing infection.

Milk, Human and Animal

"Is it true that the milk of each species of animal is especially adapted to the needs of that particular species?"

There is a vast difference in the composition of the milk of different species of animals, and it would seem that this difference in composition is related in some way to the different needs of the different species. For instance, the proportion of protein in the milk seems to bear a definite relation to the rate of growth of the young, as is shown in the following table, in which the first column of figures gives the number of days required for the suckling to double its weight, and the second, the percentage of protein in the milk. The larger the percentage of protein the quicker the animal doubles its weight. But to give cow's milk to a baby, does not increase its rapidity of growth. Rather, it may set up digestive disturbances unless the percentage of protein is reduced by diluting with water and then adding sugar.

Species	Days double weight	Percentage protein in milk
Human	180	1.5
Horse	60	2.0
Cow	47	3.5
Goat	22	3.7
Sheep	15	4.9
Pig	14	5.2
Cat	9.5	7.0
Dog	9	7.4
Rabbit	6	14.4

Sweating Feet

"What will prevent feet from sweating?"

Try washing them in an astringent solution. The following is a good one:

Tannic acid	1 dram
Alum	5 drams
Water	2 quarts

If there is much odor, alternate with a disinfectant bath of 1 to 1,000 potassium permanganate (about 16 grains permanganate to a quart of water).

Bathe the feet every two or three days, using either the astringent solution alone, or the astringent solution one time and the disinfectant solution the next time.

Powder the shoes and stockings with the following mixture:

Talcum powder	10 drams
Bismuth salicylate	1 ounce
Zinc oxide	5 drams
Powdered alum	2½ ounces

Another preventive for sweating feet is glycerin, applied on the soles and between the toes, before putting on the stockings.

Still another preventive, which also prevents the odor, is to wash the feet in a 1-to-9 solution of formaldehyde. Use a dusting powder.

Birth Statistics

The United States Census Bureau has recently issued its third annual report (for the year 1917) on birth statistics based upon data obtained from birth-registration records from the birth-registration States, Connecticut, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Utah, Vermont, Virginia, Washington, Wisconsin, and the District of Columbia. From 1850 to 1900 inclusive, birth statistics made up from mortality returns, were published in connection with the reports for each decennial census. It is only in very recent years that birth registration has been complete enough in any of the States to justify reports based thereon.

BOOK REVIEWS

The Family and the New Democracy

by Anna M. Galbraith, M. D. Cloth, 338 pages, $2.25 net. W. B. Saunders Company, Philadelphia and London.

Those who are familiar with Dr. Galbraith's "The Four Epochs of Woman's Life" and "Personal Hygiene and Physical Training for Women," will be prepared for another excellent book from this author, and they will not be disappointed. If one may make a distinction, this book is the best of the three.

It introduces women (and men for that matter) to the problems of family life, and warns against its pitfalls. It is an earnest endeavor to pave the way for a higher standard of family living, not so much economically as morally. There are many books on marriage and the family life; but this book has an individuality, a freshness, all its own.

But like most modern books, this one is written from the evolutionary viewpoint, which fact naturally detracts from its usefulness for those who are stanch believers in the Bible story of creation.

Nevertheless, Dr. Galbraith has given us one of the most wholesome of books on family life. In these days when there is an insidious tendency to let down the bars and to make light of the traditions of the sacredness of the family relations, such books as this are greatly needed to help stem the modern tide of license.

Everyday Mouth Hygiene

by Joseph Head, M. D., D. D. S. 67 pages. Well illustrated. $1 net. W. B. Saunders Company, Philadelphia and London.

In view of the fact that grave systemic disease and premature death are not infrequent consequences of neglected infections of the teeth and gums, this little book prepared by a man with both medical and dental training, and who is an instructor in mouth hygiene, should be of great educational value.

The purpose of the author is, first, to emphasize the danger of neglecting mouth infections, and the importance of practising proper mouth hygiene; and second, to illustrate and explain carefully the various processes of cleansing the teeth and gums, so that with these directions any person of ordinary intelligence should be able to avoid mouth infection.

The different procedures for the care and preservation of the teeth are carefully explained and amply illustrated. In fact, the book consists quite largely of illustrations.

Food for the Sick and the Well

by Margaret J. Thompson, R. N. Price, $1. World Book Company, Yonkers-on-Hudson, New York.

The fruit of years of experience in arranging and adapting recipes for the sick and the convalescent, as well as for the well who wish to remain well, this book should prove to be valuable in hospital, sanitarium, and home.

The recipes have all been thoroughly tested and have stood the test. There are, of course, meat recipes, and cheese recipes, and some others which many LIFE AND HEALTH readers would not care to use, but there are many more recipes that they would find unobjectionable.

The "Life Boat" for 1920

During the year 1920 there will be published in the *Life Boat*, under the title "Footprints of Faith," the remarkable story of the wonderful providences and experiences connected with the founding and maintaining of the Hinsdale Sanitarium and Life Boat work. "The Story of Hinsdale" alone is so interesting that it is usually read at one sitting. The personal experiences of Dr. David Paulson, founder of the Hinsdale work and editor of the *Life Boat* magazine for fifteen years, are so closely connected with the story of the work that much of his own life history will be woven into it. The first chapter of this series of articles began in the January number, giving Dr. Paulson's early struggles in getting an education. Only one dollar a year. Address The Life Boat, Hinsdale, Ill., or your local tract society.

Blindness in Mexico

According to recently compiled statistics, Mexico, with a population of 16,000,000, has 120,000 blind persons, or one to every 125 of the population. About 80 per cent of these, or one out of every 155 of the population, are said to be blind from "baby's sore eyes," ophthalmia neonatorum, which means two things: the mother was venereally infected, and the doctor or midwife failed to put in the baby's eyes the drops which would have saved the eyes from infection.

Children's Lunches in Russia

In Russia the lunches which the children of America provided helped to keep the children in Petrograd free from diseases when the rest of Russia was being visited by a severe epidemic.

NEWS NOTES

School Lunches in Siberia

School lunches provided by the American Red Cross in Siberia have been an important factor in repopulating the schools in that country, where education was suspended during the war.

Wood Alcoholism an Acidosis

It is believed that, as a result of some experience in treatment, the ravages of wood alcohol can be partly combated by antiacid treatment. An account of the cure of a case by such treatment is given in the *Journal A. M. A.*, Jan. 3, 1920.

Wood Alcohol Deaths

Since prohibition became effective, there have been in the United States nearly 300 deaths and many cases of blindness from the use of wood alcohol. Persons buy and drink the wood-alcohol preparations, thinking they are brandy or some other alcoholic drink.

Rhubarb Juice for Scurvy

The workers at the Minnesota Agricultural Experiment Station have discovered that rhubarb juice is just as efficient in preventing infant scurvy as orange juice. This will be welcome news to some who have found orange juice to be more expensive than they could afford.

Diet and Pellagra

McCollum and his coworkers, by feeding animals on dietaries similar to those used by pellagrins, invariably caused serious malnutrition, but in no case a condition similar to human pellagra. This, according to these workers, gives support to the theory advanced by Seiler, Garrison, and MacNeil, that pellegra in an infection, and that the malnutrition caused by the faulty diet merely prepares the body for the pellagra infection as it prepares it for tuberculosis infection.

Three Vitamines

Drummond, in *Biochemical Journal*, Vol. XIII, No. 1 (1919), pages 77-80, who in his experiments has confirmed the conclusions of previous workers, states: "It may therefore be accepted as experimentally proved that the dietary requirements of the higher animals include in addition to a satisfactory balanced ration of protein, fat, carbohydrate, and mineral salts, an adequate supply of three accessory food factors: Fat-soluble A, water-soluble B, or antineuritic factor, and water-soluble C, or antiscorbutic factor." B prevents beriberi; C prevents scurvy.

Tongue Cancer

M. Ferrand, in the *Paris Medical Bulletin*, relates his experience with cancer of the tongue. Of seventeen cases only one was in an early stage. Ten were too far advanced for operation, and six nearly so. The growth begins as a warty excrescence or as a small tumor with ulceration or as a minute fissure or ulcer with hard base. One who has a suspicious development on the tongue, the result of irritation from a bad tooth or from smoking, should have the condition examined at once by a competent surgeon.

Laws Against Alcohol

The prohibition laws do not apply to wood alcohol, a much more deadly poison than grain alcohol. A movement is on foot to secure legislation similar to that for narcotic drugs, which will make it compulsory for those who manufacture and handle wood alcohol to give strict account of its disposition. Such a law would probably be administered by the internal revenue machinery.

The Quality of Milk

Research at the Minnesota Agricultural Experiment Station has shown that the nutritive value of cow's milk varies considerably in accordance with the food of the cows. When cows are fed on dry fodder, the milk is not so nutritious nor so potent in preventing infant scurvy as is the milk from cows pastured on green grass.

The Germ Contains the Vitamine

Feeding experiments conducted by Voegtlin and Myers indicate that the antineuritic vitamine (that which prevents beriberi in man) is contained entirely in the germ of the grain. This suggests the thought that this vitamine is necessary to the development of the growing plant, as well as to animal life.

Distillers Heavy Losers

According to the liquor men, their loss on account of the enforcement of war-time prohibition was $400,000,000, and they propose to collect it from Uncle Sam by law! They do not mention the billions of dollars' loss to families because of the distilleries, or say who should pay that loss.

New Zealand Voted Dry

By a majority of 6,000 New Zealand has adopted prohibition, to become effective in June, 1920.

Accidents

From two to three times as many accidents occur in American homes, streets, and roads, it is said, as occur in the industries of the country. In the war, our losses were 50,150 men. Startling as it may seem, our losses through accident in this country during the same period were 126,000 persons — five casualties in peace to every two in war. And yet this was the most terrible war in all history.

Sprue, Pellagra, and Scurvy

L. Nicholls suggests in the *Journal of Tropical Medicine and Hygiene* (London), Vol. XXII, No. 3 (1919), that sprue, pellagra, and scurvy are each caused by the combined working of two factors — dietary deficiency and infection by pathogenic germs. In sprue he thinks that the more predominant factor is the infection; in scurvy, the dietary deficiency; in pellagra, that the two factors are about evenly balanced.

Cause of Loose Joints

Dauriac, in the *Bulletin de l'Académie de Médecin*, of the Academy of Medicine, Paris, asserts that there is record of 15,000 wounded soldiers who have flail (or loose) joints. In his opinion this failure to get good results is due mainly to the "condition of chronic and profound intoxication, which was the result of the too-exclusive use of meat in the army ration. This, with the abuse of alcohol and vinegar, prevented normal repair."

Fat-Soluble A for Adults

J. C. Drummond, in the *Biochemical Journal*, Vol. XIII, No. 1 (1919), pages 81-102, reported the results of his investigations. Heretofore it has been determined that the fat-soluble A, contained in green leaves, milk, butter fat, egg yolk, and a few other fats, is essential to the growth of young animals. Drummond's observations show that it is also essential to the health of grown animals, though in smaller amounts than for the growing animal.

Birth Statistics for 1917

In the birth-registration area of the United States, comprising twenty States and the District of Columbia, and containing about 53.1 per cent of the population of the United States, there were in 1917 1,353,792 living births, representing a birth rate of 24.6 per 1,000 population, as against a rate of 24.8 in 1915. Of these births, 696,101 were males and 657,691 females, or a proportion of 1,058 males to 1,000 females.

Suggestion

Suggestion is not only a potency in treatment, but also a potent cause for error in therapeutics [i. e., treatment]. In originating and perpetuating mistaken ideas in therapeutics, suggestion acts in two ways: working on the patient's mind it endows any remedy, no matter how inert, with curative powers; and, by affecting the mind of the physician, it makes him see therapeutic success where he confidently looks for it. Furthermore, the *vis medicatrix naturæ* [the healing tendency of nature] keeps alive not only our patients, but also therapeutic fallacies and panaceas. Any remedy, even though it be worthless, that a physician uses frequently in his practice, appears to him successful because of the fact that most patients have the natural tendency to get well.— *Journal A. M. A.*

Correspondence School Catalogue

The Fireside Correspondence School catalogue for 1920 is now ready. Besides the usual matter, it contains a new plan for ordering books, an announcement of new studies, and pictures of faculty and board of managers. Send for a free copy. Address C. C. Lewis, Principal, Takoma Park, D. C.

"A Friend in the Kitchen"

If you cook, you will be interested in a little book that will show you how to cook healthfully and economically. These are two great essentials in these days of the High Cost of Living. The recipes are simple, practical, and satisfying, and the book is popular on this account.

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REVIEW AND HERALD PUBLISHING ASSN.

New York, N. Y. **Takoma Park, D. C.** **South Bend, Ind.**

CANADIAN PUBLISHING ASSN.
Oshawa, Ontario, Canada