

The background of the cover is a photograph of a tropical scene. On the left, a tall palm tree has a person climbing it. In the middle ground, there are several small buildings with corrugated metal roofs and a fence. In the foreground, a person is crouching in a field of dry grass. The background features a range of mountains under a cloudy sky.

# Life & Health

**THE NATIONAL HEALTH MAGAZINE**

---

*December 1913*

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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. Published monthly by Review and Herald Publishing Assn., Washington, D. C.

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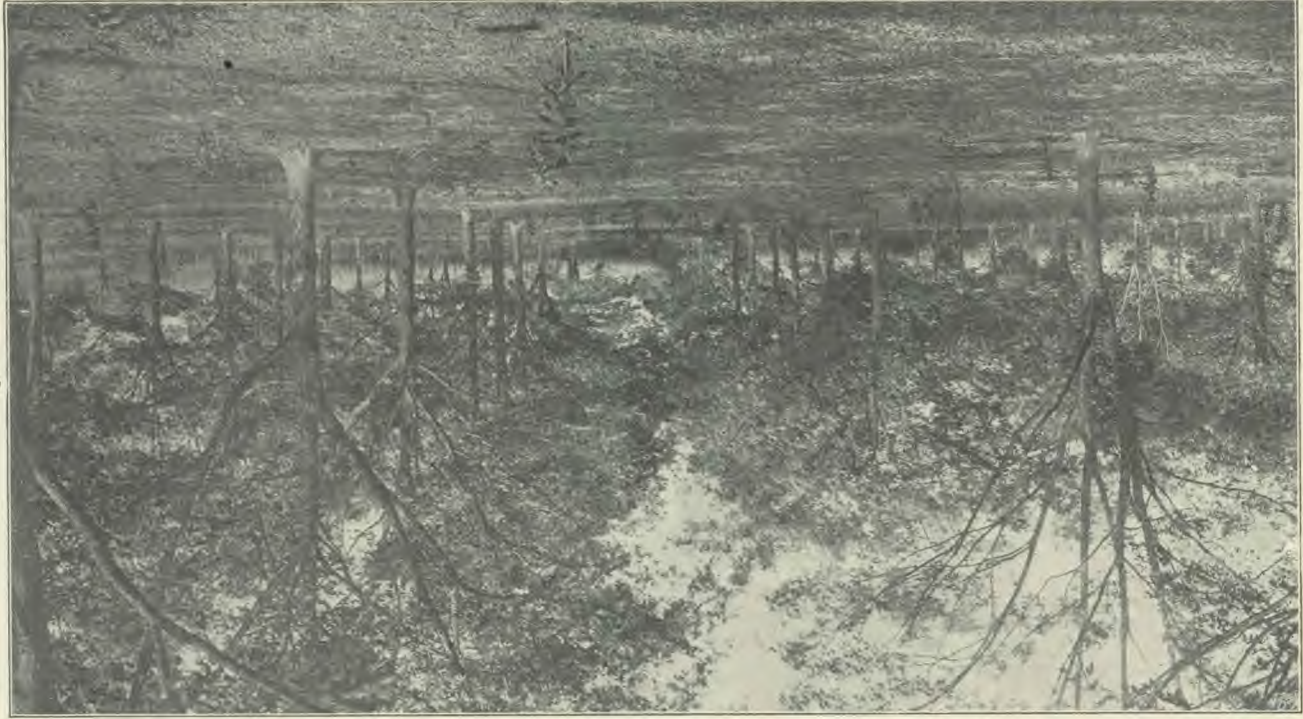
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VOL. XXVIII  
No. 12

# Life & Health

THE NATIONAL HEALTH MAGAZINE

DECEMBER  
1913

AIM: To assist in the physical, mental, and moral uplift of humanity through the individual and the home.

George Henry Heald, M. D., Editor

## The December Issue

This issue of "Life and Health" we believe will prove to be one of the most convincing documents on a rational dietary that has recently been issued.

Coming at a time when the problem of a rapidly diminishing meat supply has reached an acute stage, the articles relating to the proper supply of protein foods are particularly timely.

The article on "Colds," though differing a little in viewpoint from the one of last month, contains information which should be a help to very many readers.

Mrs. Naud's article, entitled "The Strenuous Life Without Nervousness," is a discussion of some ways of conserving the nerve-forces. She, in fact, tells "nervous" people just how to oil the bearings so as to get more work done with less friction, that is, with less wear and tear, and this is precisely the information that many nervous people most seriously need.

\*\*\*

## The Next Number

The January issue will contain a symposium by a number of writers on "What I Know About Reducing the Cost of Living." This is a live topic, one crying insistently for solution. We do not claim that these writers have said the last word on the subject, but they have said some things which may be a help to many a struggling family.

If you are not a regular subscriber, send 10 cents immediately for a copy of the January issue, or, better, send the price of a subscription.—\$1 for a year, 50 cents for six months.



# WHAT ARE COMMON COLDS?

LEONARD KEENE HIRSHBERG, A.B., M.A., M.D.

(JOHNS HOPKINS)

**T**HE only certain way of forever avoiding a "cold" is to be locked in an air-tight hut of snow, somewhere in the vicinity of the north pole. There, no other beings have ever breathed forth germ-laden air.

Explorers in the arctics for years observed that exposure to the rigors of the northern atmosphere emancipated all their men from "catching cold." When the subarctic climes were reached again, the usual epidemic of colds appeared.

"Atchew! atchew!" "You are catching a cold," remarks the spectator. Not at all, you may reply; for you have already caught it.

The correct name may be coryza or rhinitis, with red eyes and weeping nose; tonsillitis, with its swollen, aching throat and fever; bronchitis, with its inflamed tubes belching forth coughs and clouds of germ-laden spray; or la grippe, with its protean manifestations of pain, exhaustion, and fever. It matters not. To you they are all colds.

Shut your mouth and save your life. The malicious germs that linger longingly about your face, alight upon neu-

tral soil when inspired through the nose, but exhibit a voracious delight in penetrating the chilled surfaces of the mouth and throat. The complex, winding, spiral bones of the nasal cavities, are lined with a peculiar membrane made so as to quickly warm the coldest air inspired, and provided with a rich supply of germicidal blood. Mouth breathers (with their large tonsils, adenoids, or nasal obstructions) invariably succumb first to any prevalent infections.

Colds are more frequent when there is some sudden change of temperature. A rapid drop or rise of the thermometer, a cold wind, or a damp atmosphere sends a sharp chill into the unacclimated veins and capillaries. Once the surface blood is cooled below the normal, the ubiquitous microbe begins its dirty work, and a cold follows.

If only the common cold results, it is because the fighting devices of the body are strongly prepared for invading germs. The white blood-corpuscles have a voracious appetite for germs. If the blood is in a healthy state, the white cells gobble up the bacteria and destroy them,



Chicago Department of Health

THE UNVENTILATED CAR A POSITIVE MENACE



while simultaneously the other tissue juices render their toxins inert.

When from exhaustive work, intemperance in food, drink, or pleasures, loss of sleep, irritation, overexertion, or mental depression the vigor of the bodily forces is reduced, infection of some sort is inevitable.

"Hothouse plants" who live in superheated dwellings or steam-heated flats, who wear fur coats, excess of clothing, red medicated lingerie, heavy neck pieces, turned-up collars, ear and pulse warmers, and other like abominations, are shining marks for the cold bacillus. Their skins are so spoiled and coddled by overzealous care that a chronic condition of exposed and sensitive veins is always present. They take cold easily, shudder in fear at an open window, and are very free with their imprecations upon drafts.

On the other hand, those of us who begin in summer to restore our integument to its native savagery—like the bodies of the Sioux chiefs—by exposure to icy showers, open-air sleep, the thinnest underwear, and continue these practises as far into the winter as possible, never fear cold blasts. Chilly air

currents, drafts, or a tolerably good wetting have few terrors.

Simple infections are best treated by fresh air, intelligent personal hygiene, mental quiet, a sane diet, and physical rest.

Recent scientific methods show ninety per cent of the old drugs to be useless. The native tendency of living tissues to restore themselves to a normal, healthful balance, is now known not to be due very often to the measures used at the time. The coincident recovery from the malady, whether a cold or something worse, and the employment of a charm, a potion, a prayer, or a mustard-bag around the neck, is now acknowledged by all but the most benighted, not to be due to the peculiar plan or system followed.

There is no specific drug remedy for these infections. All that can be intelligently done is to maintain the sufferer's strength, keep him quiet, supply him with hot drinks, good nursing, and an alert doctor.

Above all, beware of the friend who tells you to "take something simple," or the neighbor who advises "the remedy that has never failed to work wonders."



THE SAFETY-GATES OF HEALTH

## The Prayer of the Physician

**G**OD, I pray that I may have absolute intellectual honesty. Let others fumble, shuffle, and evade, but let me, the physician, cleave to the clean truth, assume no knowledge I have not, and claim no skill I do not possess.

Cleanse me from all credulities, all fatuous enthusiasm, all stubbornness, vanities, egotism, prejudices, and whatever else may clog the sound processes of my mind. These be dirt; make my personality as aseptic as my instruments.

Give me heart, but let my feelings be such as will come over me as an investment of power, to make my thoughts clear and cold as stars, and my hand skilful, strong as steel.

Deliver me from professionalism, so that I may be always human, and thus minister to sickly minds as well as to ailing bodies.

Give me constant realization of my responsibility. People believe in me. Into my hands they lay their lives. Let me, of all men, be sober and walk in the fear of eternal justice. Let no culpable ignorance of mine, no neglect nor love of ease, spoil the worth of my high calling.

Make my discretion strong as religion, that the necessary secrets of souls confided in me may be as if told to the priest.

Give me the joy of healing. I know how far short I am of being a good man; but make me a good doctor.

Let me so discharge the duties of my office that I shall not be ashamed to look any man or woman in the face, and that when at death I lay down my task I shall go to what judgment awaits me strong in the consciousness that I have done something toward the sanity, health, and happiness of all people, something toward alleviating the incurable tragedy of life. Amen.—*Frank Crane, in Medical Standard.*

# THE STRENUOUS LIFE

## WITHOUT NERVOUSNESS

ALDEN CARVER NAUD

**B**AYARD TAYLOR, in the accompanying words, voices the true idea of the strenuous life. Nearly every one interprets strenuous living as being synonymous with vigorous endeavor and constant activity. In their zeal many exhaust their nervous energy, and instead of being strong and purposeful they become weakened and irresolute.

Excess in any direction grows into a vice. So when too much bold enthusiasm and unflagging exertion are given to the daily routine, no beneficial results are obtained; for it is as if an ordinary engine without any governor were designed to perform some specified task.

It is well to form a clear conception of any contemplated work in advance of the actual undertaking of the labor. The next prime requisite for successful achievement is that one carefully consider the probability of possible setbacks, and decide upon a course that will offer the least resistance along the line of unforeseen hindrances or adverse surprises. It is generally these surprises or temporary hindrances that are the occasion of a major portion of the friction which causes incalculable waste of nervous energy.

Poor judgment as to the proper amount of work to attempt during any given period of time induces inestimable confusion in carrying out specified tasks. This gives rise to a worthless expenditure of effort at the expense of efficient service, and renders the attempts toward accomplishment of worth-while tasks futile.

Even though good judgment is shown in the quantity of work to cover in any epoch, no desirable end will be achieved unless proper method is observed in the carrying on of the work. When a task is approached haphazard, there is found an unnecessary number of rough ends in the fabric one is weaving. An undue amount of attention must be given to the petty details, whereas careful forethought would prevent interruption. This acts injuriously on the nervous system, irritating needlessly and causing an undue amount of wear and tear.

To avoid this, the work should be carefully outlined step by step

in advance of any attempt at execution. Allowance should be made for any circumstances or contingency that might impede or impair. This is practicable in any line of work, whether it be that attempted by the artist worker or the humble laborer. The housewife resolves vaguely that she will attend to the family wash on the morrow. Now, if she is wise, she will begin well in advance by determining at once whether or not she has on hand the necessary requisites for her work,— soap, starch, indigo, clothespins, etc.,— and will see that tubs, baskets, and wringer are in proper condition. She will also have in mind a proper course to pursue in case some unforeseen happening interrupts her activities, as the arrival of unexpected guests, or the breaking of a clothes-line.

To be sure, these occurrences are annoying, but it is surprising how much the nerves are spared if one mechanically follows up the line of action decided on beforehand.

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"Sloth is sin, and toil is worship, and the soul demands an aim."

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The school-teacher could save herself an immense amount of nervous strain if she would begin each day with a clear idea of just what that day should contain, and a reserve force of previously conceived ideas regarding the possible upheavals of certain plausible emergencies.

When one is engaged in carrying on some favorite line of work, there is less dissipation of nervous energy. There is a constant realization of the importance of the undertaking, and an ardent desire to see that it is satisfactorily executed.

Where work is from necessity attempted foreign to inclination, excellent results may be obtained if one will but decide to be methodical, and will undertake nothing that has not been first carefully considered and painstakingly analyzed.

Often good work is spoiled by the laborer's continuing at the task after reaching a stage of physical exhaustion. This is very unwise, to say the least. Frequently the tension can be relieved and the nervous system spared by giving the attention to something else for a brief interval when the task in hand is beginning to be wearisome.

A young woman who has a responsible position on a large metropolitan newspaper is confined all day in a miniature office whose single window faces a dark-colored brick wall across an alley.

It is a cheerless outlook, and to most persons would prove a decidedly depressing influence. But the occupant of the office performs her exacting and arduous tasks day after day without undue fatigue or nervousness.

"I have a habit," she says, "of sometimes pausing in my work to 'catch up with myself' when I find my eyes, my head, or my nerves are becoming overstrained and are 'going to smash.' I just look across at that wall and let my imagination run riot. Sometimes those weather-beaten bricks are the Alps, beyond which I picture my Italy is lying. Again they are only bill-boards, on which I try to perceive the vari-



ous scenes from different periods and epochs of my life gleaming forth. Sometimes I merely close my eyes to shut out the ugly wall, and then I see far away beyond the building, far beyond the city, away off into the very boundless and infinite. No doubt it is all very

frivolous and very childlike, but I gain time by these harmless strategies to calm myself and get my nerves in hand. After this I am in a position to attend to my regular routine without taking cognizance of weariness and worry."

All workers, no matter whether they toil with brawn or with brain, find walls of one kind or another,—walls that harass and restrict. Wise indeed are they who make of the barriers a diversion and nerve quieter, rather than allow the walls to restrict and annoy until the spirit chafes and the nerves are worn to a frazzle.

Those who work in the open air have a great advantage over the mass who must perform their activities indoors. There is a balm for nervousness in oxygen and ozone. Oftentimes the indoor worker can gain possession of his soul and find peace and quiet by thoroughly ventilating his office. But ventilation is, after all, only a makeshift to take the place of an actual exit into the open air and free sunshine.

One can live more strenuously and retain the strenuous pace for a greater length of time if the habit is formed of spending a portion (the greater the better) of each day out of doors, even though outdoors may merely mean the city streets, or, peradventure, a tiny yard or court.

The diet is also an important factor in determining whether or not one shall keep on resolutely with forceful, efficient

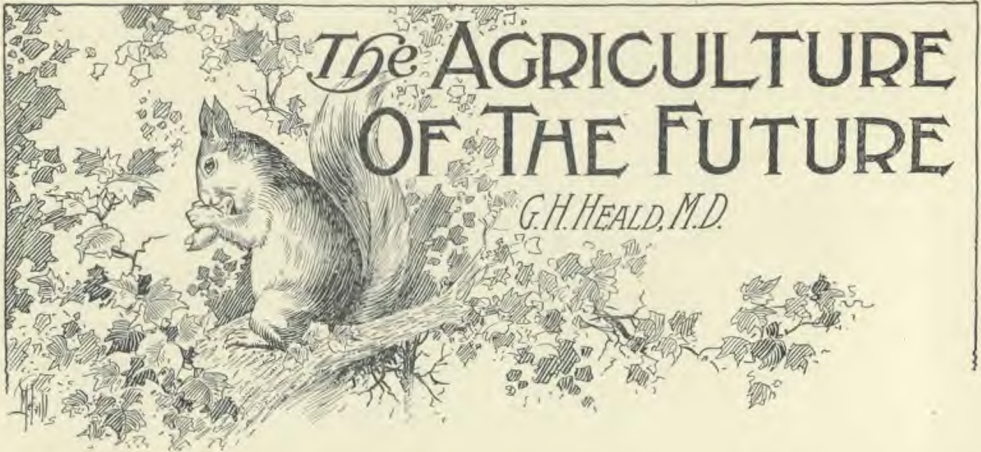
life or weakly give way to hysterical outbursts of nervous irritability. One cannot live sanely on an injudicious diet. Overstimulating foods are not conducive to quiet harmony of living. When waters of power-producing streams become choked and flooded, dams are carried away, work ceases, and mills stand idle. So, when the digestive organs are oversupplied, nerve mastery is impossible, and the brain activities become dormant.

A proper diet, both as to quality and as to quantity, is necessary to those who would be capable of giving to the world efficient lives and remain masters of their nerves rather than be mastered by them.

Working with and for others is a help toward self-control in any line. If one is big enough to live a large life all alone, then it becomes his duty to proclaim to others the method of entering into the fulness of complete life and joy of living.

Those who are determined may discover for themselves the real life,—the life of endeavor and accomplishment. However, if one would live a well-rounded, efficient, worth-while life, the nerves must be kept in subservience. Fortunate and happy are they who master the problems of life they encounter, and at the same time remain in control of their nerves, for without self-control and nerve mastery the biggest and best among humanity sink to the pitiful smallness of pygmies—in their own eyes at least. And who can live a big life, with an insignificant idea of himself?





**I**N the January, 1913, *Harper's*, J. Russell Smith, professor of industry, University of Pennsylvania, says some remarkable things regarding our chief agricultural and horticultural crops, and gives a very plausible reason why we have developed agriculturally much more than we have developed horticulturally, why we have become cereal growers rather than nut and fruit growers. Here is how he puts it:—

"While the primeval Asiatic was off hunting or tending flocks, his wife gathered wild crops, . . . picking berries, cherries, wild apples, and mulberries. For eons they had gone into winter quarters with a store of wild almonds, walnuts, filberts, and acorns. . . . But when she wanted to raise a crop herself, she wanted quick returns. . . . Our first gardener very naturally began with quick-growing plants; . . . plant in the spring and eat in the fall. The nomad wife had for thousands of years been feeding her family with walnuts, chestnuts, acorns, almonds, apples, and cher-

ries. There they stood, then as now, the great engines of nature, producing as no grains can produce. At their feet stood a few feeble plants with one or two fat seeds. These feeble ones have become the food and the agriculture of mankind, not because they were especially certain, or especially productive, or especially good, or especially nutritious, but because, being annuals, they appealed to the nomad's wife by giving quick return; . . . therefore we all eat bread made from grains. In depending upon these puny crops we give ourselves great and often needless labor, and because of the weakness of our plant servants, more than half of the productive possibilities of the world

are unattained.

"The grains are weaklings all. They are so feeble that they must have the earth especially prepared for them. . . . Special care is often necessary to protect them from . . . weeds, and when the harvest comes it is often a small handful in comparison with the yield of tree crops—the engines of nature which have for ages been giving man the most astonishing object-lessons of production, and inviting him to improve them rather than the feeble grains."



While the primeval Asiatic was off hunting or tending flocks, his wife gathered wild crops, picking berries, cherries, wild apples, and mulberries.

Professor Smith, as an example of the superior productivity of



Nature's guaranteed aseptic pure food packages of concentrated nutrition.

the nut trees, mentions the Italian chest-nut orchards, on the poorest ground, which cannot be used for agricultural purposes, entirely uncultivated, and yet yielding crops comparable to our great wheat-fields on choice soil, under the best of cultivation.

And what foods are so rich in nutriment as the nuts? The unaided efforts of nature have produced richer foods in the trees than man by thousands of years of cultivation and selection has been able to produce in the grains. If as much care were taken to improve the nuts as has been taken to improve the grains, what might we not expect, both in the quality and in the yield?

#### Writes Books on a Diet of Nuts and Fruits

Hereward Carrington, in the *Cosmopolitan*, gives the following testimony, which, even after allowing a good margin for his enthusiasm, is well worth considering:—

"I tried several diets, but soon came to the conclusion that a diet consisting of nuts and fruits taken raw—that is, in an uncooked state—is by far the best. At least it suited me best, and I began to study the question. After a number of years of careful reading and research, I now believe as implicitly that this is the best diet to live upon, when well, as I do that fasting is the greatest of all health restoratives when ill—and that is saying a lot!

"First of all, let me give a brief outline of what this diet does for one, or rather what it did for me and what I have seen it do for others. The immediate effect of the diet is to open the bowels, and the result is a feeling of great exhilaration and buoyancy. A cool, clean feeling is experienced, which is never attained

under any other system of diet. The eyes become clear, the senses keen and alert, and the complexion clears up in a marvelous manner. The mind becomes more active, the thinking clearer, the brain can work on and on, hour after hour, without the slightest indication of fatigue. The muscular system reacts perfectly to stimuli, and exercise may be indulged in which before had been impossible. More than that, there will be no resultant fatigue. The energies and endurance will be increased a hundredfold; life will become a pleasure instead of a curse. Finally, all traces of disease, of sickness and suffering, will disappear. These are a few of the many results which a fruit and nut diet will insure.

"In my own case these effects were most marked. Instead of being constantly ill and depressed, I became active and energetic. My endurance seemed trebled. The amount of work I accomplished amazed my friends. In this connection I may say that in one month, in addition to the ordinary social duties and affairs of life, I wrote two whole books,—one hundred and eighty thousand words.

"Any writer will know what that means. At the end of the month I was perfectly fresh, and ready for another such month, though the month was August and the place New York, conditions which most people would say render any hard, consecutive work impossible.

"This experience has not been mine only. I know of a large number of persons who follow this diet more or less regularly, and would not return to their old habits for anything in the world. In California there are whole colonies of people who are living exclusively on this diet, and have done so for years. They have recently been studied by Professor Jaffa of the University of California, who was forced to the conclusion that these 'fruitarians' were not in any way suffering by reason of the 'low' diet, but, on the contrary, maintained a far higher standard of health than the majority. They are never ill, and their children, too,—some of them have never tasted anything else,—are perfect specimens of health."

#### A Practical Testimony for Nuts

A. I. Root, veteran bee keeper, and

founder of the magazine *Gleanings in Bee-Culture*, says in *Nut Grower*, February, 1910:—

"If I am not mistaken, everybody used to call the pork produced by fattening the pigs on nuts, or shack, the best quality of pork, even better than that when they were fattened on grain. Now do not protest when I tell you that I am fattening up on a nut diet, just as the domestic animals got fat on nuts that they rooted out of the leaves in the woods.

"I think we can call chestnuts and other nuts God's medicines. He causes them to ripen at just the time we need them to make a 'balanced ration' with the fruits and grains that ripen in the autumn; and if you are inclined toward a vegetarian diet, the nuts will take the place of animal food better than anything else I know of."

Mr. Root apparently did not realize that there is a vast difference between the chestnut and the other nuts. The chestnut would hardly make a "balanced ration" with the ordinary vegetable foods, though, as he suggests, it is very fattening because of the high starch content, which is turned into sugar and then into fat.

#### Dietetic Experiment on Nuts and Fruits

In the *Charlotte Medical Journal*, May, 1909, and also in the *Nut Grower*, January and February, 1910, is given an account of a dietary experiment on six healthy medical students of the Atlanta School of Medicine, by George M. Niles, M. D., lecturer on physiology, who performed the experiment. For four days

the young men were fed on a diet consisting of sufficient carbohydrate in the form of bread and fruit, but with no meat, butter, beans, or peas. To supply the protein and fat, they ate between three fourths of a pound and one and one-fourth pounds of pecan, Brazil-nut, or peanut meats. Thorough mastication was enjoined, and the students were instructed to pursue their usual routine of exercise and study. With slight exception, they suffered no inconvenience, and the students "responded to the change with comfort, and satisfactorily maintained both weight and vivacity as well as on a mixed diet."

While Niles does not advocate a radical change from a mixed diet to a fruit and nut dietary, he does maintain "that when nuts are taken understandingly as an integral part of the meal and not crowded into an already full stomach; when they are chewed sufficiently, and delivered to the digestive apparatus along with bulky foodstuffs, so that their concentration will not cause distress, their sterling nutritious qualities will be more fully appreciated." He concludes:—

"Many strong men and strong nations have owed much of their vigor to a liberal consumption of meat, but thousands of healthy Americans today have learned that there is bone, sinew, and muscle in other articles of food; and as a rational substitute for meat, the staple nuts, so bountifully provided by nature, will deservedly hold the foremost place."



Pistachio-nuts at the left, cashew-nuts in the center, and pine-nuts at the right.



# The USE of NUTS as a STAPLE FOOD



PHYSICIAN of some eminence, in a rather pretentious book, says that "nuts are eaten almost exclusively for dessert.

They are agreeable, but *have very little value as food.*" If one were casting around for a "terrible example" of what a man who has had a chance to know better is sometimes capable of saying, I think one might well choose this sentence. If the doctor meant to say that the great majority of people value nuts as a dessert rather than as a food, if he meant to say that they have never really appreciated the nutritive merits of nuts, he was very near the exact truth; but apparently that is just what he did not mean. He says, continuing, "They contain a large amount of oil, a moderate amount of carbohydrate, and a *relatively large amount of protein,*" to which no objection can be made; but almost immediately he says, "Nuts are variously estimated by writers on dietetics. I do not know of any careful study of their digestibility. Owing to the high fuel value and *low protein content,* they will not make a well-balanced food when taken by themselves." The last statement is true to this extent; no single food is a well-balanced food in the sense that it is a safe food to adopt as an exclusive diet. If he meant more than that, I think he is in error. If we accept the Chittenden standard,<sup>1</sup> nuts are

<sup>1</sup> For the benefit of those who have not given this subject study, it may be stated that foods contain three organic alimentary principles,—the carbohydrates (starches and sugars), fats (and oils), and proteins (the flesh-forming food, like the lean of meat, the curd of milk, the white of egg, the gluten of wheat, the vegetable casein of peas, beans, and lentils). Many physiologists believe that a person should consume about four ounces of protein a day. Chittenden and his followers, we think with good grounds, believe that two ounces of protein is more nearly a correct requirement, and that an excess may damage the organism.

capable of furnishing more protein than the body needs, without furnishing an excess of fuel; but on account of the very large proportion of oil present, it is better to eat some food rich in starch, and then possibly some food rich in protein might be needed. As a matter of fact, there are persons who live entirely on fruits and nuts, the fruits increasing the fuel value without materially increasing the protein. They give every indication of being on a balanced dietary; and if a fruit and nut dietary does not contain a deficiency of protein, a nut dietary certainly would not. Possibly one reason why many consider the nuts poor in protein is because they include the chestnut, which is especially poor in protein, and perhaps exclude the peanut, which is particularly rich in protein.

In contrast with this expression by Davis,<sup>2</sup> which seems to represent the older medical thought regarding the dietary value of the nut, I should like to quote from Jaffa:<sup>3</sup>—

"The constantly increasing consumption of nuts throughout the United States augurs well for a better appreciation of their food value. The time when nuts were considered merely as a luxury or as something to be eaten out of hand at odd times is rapidly passing away."

There is no question that the nuts are among the most nutritious foods that we have, as shown by the average fuel value of 2,500 to 3,000 calories to the pound of shelled nuts as against 1,200 for bread, 1,000 for meat, etc. As Jaffa says: "The

<sup>2</sup> "Food in Health and Disease," second edition, 1912, N. S. Davis, Jr., A. M., M. D., Blakiston, publisher, Philadelphia.

<sup>3</sup> "Nuts and Their Use as Food" (Farmers' Bulletin, No. 332, U. S. Department of Agriculture), M. E. Jaffa, M. S., professor of nutrition, University of California. Professor Jaffa has long been connected with food investigations, and has himself conducted a series of observations on a number of persons who lived exclusively on fruits and nuts.

edible portion of nuts is, with few exceptions, very concentrated food, containing little water and much fat. In general, nuts are also rich in protein."

But foods are not valuable alone for the amount of protein, fat, and carbohydrate they contain. There are certain mineral matters (usually known to the chemists as "ash") which are very necessary to the well-being of the organism. If these minerals are absent from the foods, the body suffers from malnutrition. As to the mineral content of nuts, Jaffa says:—

"Nuts are, comparatively speaking, well supplied with mineral matter, this constituent in the majority of nuts exceeding two per cent. The ash of walnut, almond, etc., is rich in phosphoric acid, and in this respect compares favorably with the cereals. It would appear from the data on the digestibility of nuts that the mineral matter is as well assimilated as that from other foods."

The question is raised by authors as to the digestibility of nuts. And before proceeding, we would remind the reader that there is much confusion about the words "digestible," "indigestible," etc. A peach-pit is absolutely indigestible. It may be swallowed and pass entirely through the body without losing the least bit of its substance, and yet it will cause, perhaps, no distress. In the true sense, it is indigestible. But ordinarily by "indigestible" is meant that the food causes more or less distress. For instance, some

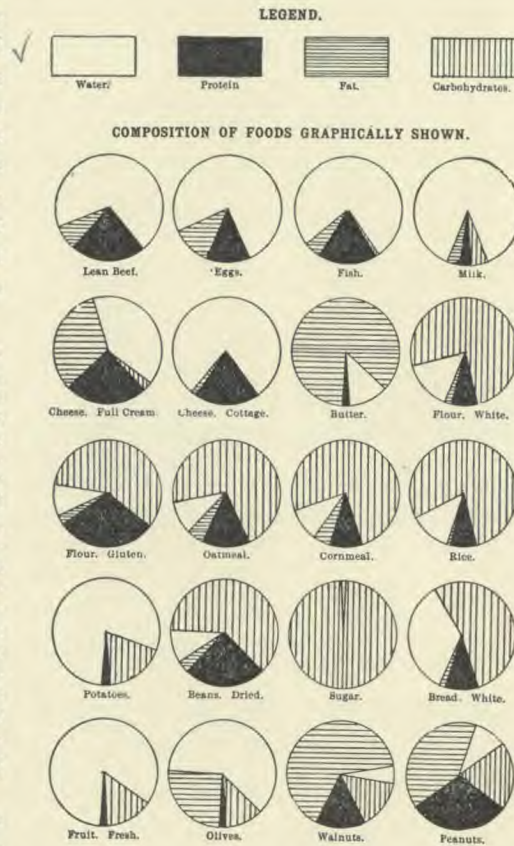
persons after eating, say, a little cheese, may have a hard time for several hours; and yet the cheese may be entirely digested, and completely absorbed. In the scientific sense, the cheese is perfectly digestible; in the popular sense, it is very indigestible. It is in this sense that nuts have the reputation of being indigestible. They are likely, under certain conditions, to cause

distress. But is this distress due to some property of the nuts themselves, or to the way they are eaten? The latter seems to be the real cause of their apparent indigestibility; for when persons masticate the nuts carefully and eat them as food,—not as dessert after a full meal nor between meals,—they have little trouble with them.

On account of their fibrous nature, if they are imperfectly masticated, lumps of fibrous material are swallowed which the digestive juices can do

little with, and trouble is bound to result. Inasmuch as the nuts themselves are concentrated nutriment, it is folly to eat them after a full meal, thus overloading not only the digestive tract, but the blood current as well, with material the disposal of which must necessarily tax the body. Jaffa says: "Too much stress cannot be laid on the necessity of thorough mastication of nuts."

It would not matter how rich in nutrient matter nuts are if the body was



not capable of appropriating the nutriment; in other words, if the nuts were indigestible in the scientific sense. According to Jaffa, "It has been shown by numerous investigations that nuts are rich in fat, and that these nutrients can be fairly well assimilated. . . . It might be expected, then, that nuts could be most advantageously used in connection with more bulky foods, such as fruits, vegetables, bread, and crackers. Most rationally used, they should constitute an integral part of the menu, rather than supplement an already abundant meal."

A few more striking quotations from Jaffa, because of his extensive experience and because of his radical disagreement with some of the older writers, may not be amiss:—

"Investigations made at the California station indicate clearly that considerable quantities of nuts properly eaten do not cause distress." "In general, the nuts rich in protein and fat should be used in combination with carbohydrate foods,—bread, fruit, green vegetables, etc.,—while such nuts as the chestnut, which do not contain much protein or fat but are rich in carbohydrates, may be combined with . . . foods containing protein and fat." "A fruit and nut diet may be arranged to furnish sufficient protein, mainly from nuts, to satisfy the requirements of the body."

It is admitted that the protein of nuts, as usual with vegetable proteins, is not quite so well utilized in the body as is the case with the protein in wheat and other grains. This may be due largely to the fact that the protein is encased in a woody envelope, which makes it more difficult for the digestive juices to reach it; and for this reason, the better the mas-

tication, the better the protein is likely to be utilized. Doubtless when the nuts are ground into butter, they are better utilized than when they are eaten whole.

But it must not be thought, from the statement that the proteins of the nuts are not so well utilized as the animal proteins, that a large proportion of the food is wasted. The expression is used comparatively. In his summary, Jaffa says: "Nuts are a very concentrated food, even

more so than cheese; but when rationally used they are well assimilated, and may form a part of a well-balanced diet. Nuts are a valuable source of protein and fat." "As a whole, nuts may be classified among the staple foods, and not simply as food



INDIANA PECAN

accessories." The Maine Agricultural Experiment Station issued a bulletin (No. 54) in 1899 giving the results of the then-available American analyses of nuts, and discussing the value of nuts as a food for man. In general, the discussion is favorable to nuts as a food, but at that time there were "no reliable data regarding the digestibility of nuts." The writers, however, shrewdly suspected the truth, which they couched in the following words: "Our present practise of munching them at odd hours, or as a dessert, when sufficient food has been taken to meet the requirements of the body, overtaxes the digestive organs, and places the nut under a reproach that is in part at least undeserved." Evidently Dr. Davis himself had some unfortunate experiences with nuts, or else relied on the statements of those who had.

# THE PROTEIN PROBLEM IN FOOD REFORM<sup>1</sup>

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

**T**HERE are many classes of food reformers. Some follow a strictly vegetarian diet, abstaining not only from animal flesh, but also from animal products. Certain fruitarians go still farther and confine their diet to fruits and nuts, avoiding most if not all vegetables as well as the products of the dairy. But by far the greatest number of food reformers, according to my observation, adopt the lacto-vegetarian diet; that is, they take milk, cream, butter, and eggs in addition to fruits, nuts, cereals, vegetables, and grains. When I speak of food reformers or vegetarians, it is this latter class that I shall refer to.

## Proteins Versus Carbohydrates

The food of man and beast consists of fuel and building material, both of which can be obtained exclusively from the plant kingdom, but in the case of most men and animals are partly obtained from the animal kingdom. Generally speaking, sugars, starches, and fats — all non-nitrogenous articles — form the fuel for the living machine, although protein also contains a starchy moiety which is utilized as fuel. Until recently it was thought that nitrogenous material alone, in the form of proteins and albuminoids, was capable of building body tissue. On account of this exaggerated view with regard to nitrogenous food, the preeminent place was naturally given to proteins; and in order to insure proper and efficient nutrition a large quantity, varying from one hundred to one hundred and fifty grams of protein, was considered necessary for the daily ration. But in the face of the scientific investigations of nutrition during the last ten or fifteen years, we can no longer accept the doctrine of the supreme value of protein over carbohydrates. The leading physiologists are beginning to recognize that

the non-nitrogenous carbohydrates also have an important rôle to play in the building of the tissues, which is only second to that of protein, if not of equal importance. Now that the problems concerned with nutrition are being studied by scientists who are able to lay aside old prejudices and preconceived notions, we are getting more light, and many supposed facts are turning out to be fallacies. To begin with, these problems are far more complex and intricate than they were once thought to be, and many of our old ideas regarding nutrition have to be abandoned.

## The Crux of the Problem

In food reform the crux of the whole problem lies in the question of protein supply. No responsible authority, as far as I am aware, questions the ability of the human body to utilize vegetable fats and oils successfully in place of animal fat, and as far as sugars and starches are concerned, they are of necessity obtained from the plant kingdom; for we can neglect the small amount of glycogen, or animal starch, with which flesh supplies us. Furthermore, as regards salts, there is a general consensus of opinion that they, too, can be obtained in abundance and without difficulty from a fleshless diet.

## The Sanitarium Diet

The fallacious teaching that the human body requires the large amount of protein indicated by the standard diets of Voit and other physiologists has held sway altogether too long. The standard diets generally recommended are purely empirical as far as the proportion of the various food elements is concerned, and have no really scientific basis. Their fallacy has been completely demonstrated during the past few years by numerous investigators as well as by practical experience.

The Dukhoborts of Canada live a very simple but active life, avoiding not only alcoholic beverages, but also tea, coffee,

<sup>1</sup>Read before the fourth congress of the International Vegetarian Union at The Hague, Aug. 26, 1913.

and animal flesh. Travelers who have visited these people speak with enthusiasm of their fine physique and superb health and efficiency. Disease among them is an accident rather than a common occurrence as among people generally, and their aged men and women manifest marvelous vitality.

#### The Investigations of Chittenden

Professor Chittenden, of Yale University, was one of the first scientists to give careful investigation to the protein problem, and he has written two books dealing with this subject. He made experiments covering from five to six months on five university professors and teachers, eight trained university athletes, and thirteen soldiers, all of whom volunteered for the purpose of these experiments. I need not weary you with the details of these classical experiments, but may summarize their results by saying that Professor Chittenden demonstrated that the protein intake could be safely and advantageously reduced to half, or even less than half, the usual amount thought necessary. He found that fifty-five to sixty grams of protein per diem afforded ample nutrition; and all his men thrived wonderfully well upon what would usually be considered a very light and insufficient diet.

Before experimenting upon others, Professor Chittenden began in 1902, at the age of forty-seven, to cut down his own food supply, particularly the proteins, and found that his health improved instead of deteriorated, and that "a rheumatic trouble in the knee-joint, which had persisted for a year and a half and which only partially responded to treatment, entirely disappeared." He further sums up the general effect of the minimal protein diet upon himself in the following words:—

"Health, strength, mental and physical vigor, have been maintained unimpaired, and there is a growing conviction that in many ways there is a distinct improvement in both physical and mental condition. Greater freedom from fatigue, greater aptitude for work, greater free-

dom from minor ailments, have gradually become associated in the writer's mind with this lowered protein metabolism and general condition of physiological economy."

#### The Temptation of Flesh

Professor Chittenden is undoubtedly one of the greatest living authorities on the subject of nutrition. For many years he has given special attention to the various problems concerned with the nutrition of the body; and I feel that the counsel of a man of his high standing in science and his long experience deserves the most careful attention and consideration. I take pleasure in making another quotation from his book on "Physiological Economy in Nutrition." In dealing with the question of overeating, he writes:—

"We are all creatures of habit, and our palates are pleasantly excited by the rich animal foods with their high content of protein, and we may well question whether our dietetic habits are not based more upon the dictates of our palates than upon scientific reasoning or true physiological needs. There is a prevalent opinion that to be well nourished the body must have a large excess of fat deposited throughout the tissues, and that all bodily ills and weaknesses are to be met and combated by increased intake of food. There is constant temptation to increase the daily ration, and there is almost universal belief in the efficacy of a rich and abundant diet to strengthen the body and to increase bodily and mental vigor. Is there any justification for these beliefs?—None, apparently, other than that which comes from the customs of generations of high living."

#### Hindhede's Experiments

During the last few years an eminent European scientist, Dr. M. Hindhede, of Denmark, has also been giving special attention to the subject of nutrition, and has carried out some very important experiments. Dr. Hindhede's book "Protein and Nutrition," which has already appeared in the Danish and German lan-

guages, has this summer been translated into English and published in London. Dr. Hindhede is the son of a Danish farmer, and, as he tells us, "was born and reared in simple circumstances in west Jutland." His diet, which he describes as "very monotonous fare," contained but a "negligible quantity of . . . meat." As a medical student at the university, he was much surprised to find that according to modern physiological standards the diet of his childhood and youth had been a very inadequate one, and he set himself to investigate the matter, trying both the generous protein diet and the vegetarian diet. Writing of the latter experiment, he says in his book:—

"For one month I restricted myself to purely vegetarian diet; and what is more, selected only those vegetarian foods as poor in protein as I could think of. I lived chiefly on butter, bread, potatoes, sugar, and fruit, especially strawberries. I wanted to find out how long I could live on such a limited quantity of protein. Of course, it was not my intention to prolong the regimen until death threatened; I merely wished to keep to it until I felt myself becoming really weak. To make more certain, I applied myself, meanwhile, to vigorous physical exercise,—gardening, cycling, etc. But, strange to

say, no infirmity evinced itself; to the contrary, I experienced excellent health, I never had that feeling of tension and sluggishness which usually follows the consumption of a 'good beefsteak.'

#### Voit Not a Safe Guide

According to Dr. Hindhede, Voit is no longer a safe guide as regards the quantity of protein

matter that the human being requires. Hindhede believes that "the science of nutrition as it finds favor today" is based "on over-feeding." He declares that the old doctrines concerning protein and nutrition are "built on sand—on sand and nothing but sand." The Danish scientist holds with Professor Chittenden that "nearly all of us more or less overeat." He adds:—

"It is certain that we could be satisfied with less aliment, and

particularly with less protein, than we think. I have a suspicion that a vast number of ailments—disorders of the stomach, nerves, liver, and kidneys, not to mention gout—are to be attributed simply to overfeeding. I believe that in this respect we physicians have done infinite harm to our patients. When all those dyspeptic and nerve-weary people come to us complaining of drowsiness, debility, general disgust with life, how often have we exhorted them to eat plen-



tifully! 'Take plenty of invigorating food,—meat, eggs, etc.!' We sometimes recommend 'Port wine and quinin,' 'stout,' or 'Burgundy' to be taken with the food in order to help it down. But the more the food is thus assisted on its downward course, the weaker do our patients become; while it is certain that with the aid of an apparent 'hunger diet' we should in many an instance have been able to restore them to strength. Rich meat has a singular power of tempting the palate, and we are thereby induced to overload our poor stomachs. It strikes me as not at all so improbable that the undoubted triumphs of vegetarianism over certain ailments are to be ascribed to the circumstance that a 'lentil beef-steak' does not induce to overfeeding."

From the investigations of Drs. Chittenden and Hindhede, and also Dr. Kipiani, of Brussels, whose painstaking scientific work I should like to refer to if time permitted, and other scientists, and the practical experience of sanitarium physicians, nurses, and workers, and the splendid records of Karl Mann, Eustace Miles, the cyclists Olley and Grubb, and

other famous vegetarian athletes too numerous to mention, I think we may fairly and justly conclude that food reformers are able easily to secure all the protein that the body can use to advantage without resorting to animal flesh, and that when the general conditions are at all favorable or reasonable, they not only do not suffer loss by abstaining from meat, but in the vast majority of cases actually gain greater health and strength and an enhanced efficiency for the duties of life. The protein problem in food reform solves itself easily and naturally when we realize that we do not have to take the large proportion of protein which the old authorities thought necessary. With the addition of milk and eggs to plant foods, there is not the slightest difficulty in obtaining a well-balanced, nutritious diet without the consumption of such large quantities of food as some think necessary. From my own personal observation and experience I believe that vegetarians as a rule eat less than do meat eaters, and at the same time are able to maintain the highest standard of health and physical and mental efficiency.





# HEALTHFUL COOKERY

## VEGETARIAN SANDWICHES

George E. Cornforth

**I**T is said that the sandwich originated when John Montagu, the fourth Earl of Sandwich (1718-92), not wishing to interrupt a game in which he was interested, called for something which he could eat and go on playing. A loaf of bread and a joint of meat were brought. He buttered two slices of bread, and, placing a slice of meat between them, made a combination which he could eat while continuing his pastime. Ever since that time the sandwich has been found to combine foods in a very convenient form for a picnic, party, luncheon, or other informal meal, so much so that even vegetarians have appropriated it, having discovered that many other foods besides meat can be used in making sandwiches that are a delight to the taste, and quite as nutritious and satisfying as those made with meat, and far more wholesome; for the least wholesome meats are commonly used in sandwiches, and hot condiments seem to be a necessary part of them.

The bread used in making sandwiches should be fine-grained. All kinds can be used — white, whole-wheat, Graham, rye, nut, and steamed brown bread. The bread should be one day old, as fresher bread is less wholesome and cannot be cut into smooth, thin slices. The butter should be creamed, not melted. The filling should be something of pronounced flavor, such as cottage-cheese, ripe olives, jelly, or, if that which is to be used as filling has little flavor, something should be used with it to add more flavor. We do not recommend removing the crust

from sandwiches, which is usually thought necessary; for the crust is the best part of the bread. However, if something especially nice is desired, the crust may be removed. In that case the crust should be cut off before the bread is buttered. This will avoid wasting butter, and the crust can then be dried and made into zwieback-crumbs, for which there are many uses.

If it is desired to make the sandwiches specially thin and dainty, this can be most easily done by cutting the loaf of bread in two in the middle, spreading each cut surface with butter, cutting off a thin slice from each buttered end, and putting the two slices together. Continuing thus, the slices will all fit together. After they have all been cut and buttered, the filling can be put in; but for ordinary sandwiches the desired amount of bread should first be sliced, the slices being piled together as they are cut off, then the slices should be spread with butter and put together in pairs. Next spread the filling on one of the slices, and press the second slice upon the filling. After the sandwiches are all filled, they may be cut into any desired shape. Cutting them cornerwise makes a convenient shape, or cutting them twice parallel with the edges makes oblong sandwiches. Sandwiches are sometimes cut into diamonds, crescents, rounds, and other shapes, but this is wasteful, and is done only because the person desires to do something different. To make round sandwiches the bread can be baked in small round tin cans.

If the sandwiches are not to be used at





JELLY SANDWICHES GARNISHED WITH NUTS

once, they should be covered with a cloth wrung out of cold water, and set in a cool place to keep them moist.

Like other foods, sandwiches can be made more attractive by a little attention to garnishing. Lettuce or parsley placed between the slices so as to make a pretty green edge around the sandwich is very attractive. Lettuce, parsley, carrot tops, ferns, or other pretty green leaves, also flowers, may be used to garnish a plate of sandwiches. Sandwiches should be served piled on a plate covered with a doily.

#### Baked Bean Sandwiches

Mash the beans enough to break them up a little, not enough to make purée of them, because the sandwiches are nicer if there is something to chew; use the beans plain, or season them with lemon-juice, or spread one slice of the bread with salad dressing. Brown bread may be used for these.

#### Lentil Sandwiches

When you have lentils left over, make them into dry purée, by cooking them down dry and rubbing them through a colander; season the purée with salt and a few chopped walnuts, and you have a splendid sandwich filling.

#### Nut Sandwiches

Spread chopped nuts of any kind upon one slice of buttered bread, and cover with the other slice; or use peanut butter; or season the peanut butter with a little lemon-juice and salt, or a little tomato-juice and salt; or make a mixture of chopped nuts of two or three kinds with a little peanut butter, adding salt to season, and enough oil to make the mixture soft enough to spread. Garnish with one or two nut meats pressed on top of each sandwich.

#### Jelly Sandwiches

Spread one slice of buttered bread with jelly, and cover with the other slice. Garnish with halves of walnut or pecan meats.

#### Nut and Jelly Sandwiches

Use any kind of chopped nuts. Spread the bread with butter, then for each sandwich spread one slice of the buttered bread with the chopped nuts, and the other with jelly. Graham or brown bread is nice for these.

#### Cottage-Cheese Sandwiches

Use cottage-cheese seasoned with salt and cream (sour cream may be used) as a filling, or mix a little mayonnaise salad dressing with the cheese. Rye bread is nice for these.

#### Nut and Date (Fig or Raisin) Sandwiches

Chop together two parts dates and one part nuts, and use as sandwich filling; or use raisins or figs; or use peanut butter with chopped dates or figs.

#### Ripe Olive Sandwiches

Pit and chop fine a few ripe olives, and mix a little mayonnaise with them; or use chopped ripe olives and chopped nuts; or chopped olives, chopped nuts, and mayonnaise; or chopped olives and chopped celery.

#### Cottage-Cheese and Ripe Olive Sandwiches

Use two parts cottage-cheese and one part chopped ripe olives, and a little mayonnaise salad dressing; or use cottage-cheese, ripe olives, and a little peanut butter, just enough to give a faint flavor, using oil or water to moisten the filling if necessary.

#### Peanut Butter and Ripe Olive Sandwiches

Dilute peanut butter with water to the proper consistency for filling. Add chopped ripe olives, and salt to season.

#### Cottage-Cheese and Walnut Sandwiches

Use two parts cottage-cheese to one part chopped walnuts or other nuts.

#### Cottage-Cheese and Jelly Sandwiches

Spread one slice of the buttered bread with cottage-cheese, and the other with jelly.

#### Cottage-Cheese and Celery Sandwiches

Season cottage-cheese with salt and cream, and mix finely chopped celery with it.



MAKING ROUND COTTAGE-CHEESE SANDWICHES

The bread has been baked in a round tin can.

### Egg Sandwiches

Use either scrambled eggs or velvet eggs as filling. Spread one slice of the bread with mayonnaise if desired, or mix mayonnaise with the egg mixture after it gets cold. To make the scrambled eggs, slightly oil an omelet pan. Put into it one-fourth cup cream or two table-spoons milk, then break in three eggs. Add one-fourth teaspoon salt. Cook slowly, stirring and scraping the egg from the bottom of the pan, till the egg is of the desired consistency, but it should not be cooked too hard, or it will be difficult of digestion. Or use tomato-juice instead of the cream or milk.

To make the velvet eggs, use —

- 2 eggs
- $\frac{1}{4}$  cup milk
- A bit of salt

Beat together and cook in a double boiler, keeping the water in the lower part of the double boiler a little below the boiling-point, till the mixture thickens, but do not cook it so long that it curdles.

Another nice way to prepare eggs for sandwiches is this: —

Cover the bottom of a slightly oiled omelet pan with a thin layer of the velvet egg mixture, and cook over a moderate heat till it sets into a thin sheet, then cut this sheet into pieces of the desired size and shape for the sandwiches.

Chopped ripe olives or chopped nuts, or both, can be added to any of these egg fillings.

### Fresh Tomato Sandwiches

Put a thin slice of tomato between two slices of buttered bread, or spread one slice of the bread with mayonnaise, or lay a lettuce leaf on top of the slice of tomato.

### Lettuce Sandwiches

Spread one slice of bread with butter, the other with mayonnaise, or spread both slices with mayonnaise, and place between the slices a fresh, crisp lettuce leaf which has been washed and thoroughly dried.

### Cucumber Sandwiches

Spread half the slices of bread with butter, the rest with mayonnaise, or spread mayonnaise on all the slices. Pare a cold, crisp cucumber, cut it into thin slices lengthwise, cut the slices the length of the slices of bread, place two strips of cucumber side by side on a buttered slice of bread, and cover with a slice which is spread with mayonnaise. Then cut the sandwich in two between the slices of cucumber, making two oblong sandwiches each having a strip of cucumber between the slices.

### Celery Sandwiches

Use chopped celery mixed with mayonnaise as a filling, or make —

### Rolled or Diploma Sandwiches

Trim the slices of bread, steam them slightly, spread with butter, then roll a slice of the steamed bread around a stick of crisp celery, tie with baby ribbon, and trim off the celery even with the ends of the sandwich.

Other kinds of rolled sandwiches can be made by spreading any kind of filling on the steamed and buttered slices of bread, rolling and tying with baby ribbon.

### Watercress Sandwiches

Spread half the slices of bread with butter, the rest with mayonnaise, and lay sprigs of watercress between the slices, or chop the cress fine and mix it with mayonnaise.

### Radish Sandwiches

Use thin slices of radish between slices of bread, one of which has been spread with butter, the other with mayonnaise.

### Apple Sandwiches

Pare, quarter, and core nice eating apples and chop them fine. Mix a little mayonnaise salad dressing with the apples, and use for sandwich filling.

### Apple and Cottage-Cheese Sandwiches

Use a mixture of cottage-cheese and chopped apple.



DIPLOMA SANDWICHES

#### Strawberry Sandwiches

Use sliced, fresh strawberries between buttered slices of bread. A little sugar may be sprinkled on the berries if desired. Other fresh berries may be used.

#### Fresh Peach Sandwiches

Use sliced fresh peaches for filling. Slices of sponge-cake may be used for making these sandwiches. No butter is needed on the cake.

#### Pineapple Sandwiches

Use thin slices of fresh pineapple between buttered slices of bread, or chop the pineapple fine, drain off the juice, which may be used for some other purpose. Spread one slice of bread with butter, the other with mayonnaise, and use the pineapple for filling.

#### Hub Sandwiches

Trim, toast, and butter three slices of bread. On one slice spread chopped ripe olives with which a little mayonnaise has been mixed. Place on this a second slice of toasted bread. Lay on this a lettuce leaf and a thin slice of

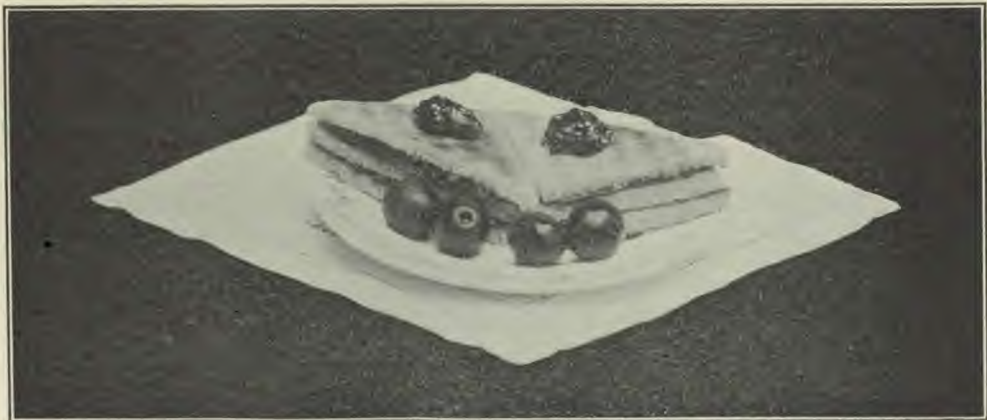
tomato. Cover with the third slice of bread. Cut cornerwise. Then place on a plate with two ends together so as to form a diamond shape, as in the illustration. Garnish with ripe olives, and a bit of jelly placed on top of each sandwich.

#### Ribbon Sandwiches

Use white bread and dark bread. Trim the bread so that the slices are all the same size. Spread the slices with butter. Then pile four slices one on top of the other, using the white and dark slices alternately, and using any kind of filling desired between the slices. Press well together, then with a very sharp knife cut the pile into one-fourth-inch slices, so as to make sandwiches composed of alternate strips of white and of dark bread with filling between.

#### Three-Layer Sandwiches

are attractive, made of two slices of white bread with a slice of dark bread between, and filling between the slices. Cut into three oblong strips, making three sandwiches about as wide as they are thick.



HUB SANDWICHES

# UNCLE SAM AS CATTLE RAISER

SUGGESTED THAT THE GOVERNMENT STOCK ITS LANDS.

## COULD AVERT MEAT FAMINE

A. M. Dubin, of New York, Delegate to Meat Packers' Convention, Says Drastic Action Is Needed—Wants United States to Raise Cattle, Use the Cavalry as Cowboys, Supply Meat at Cost to Packers, Then Price Would Decrease.

Chicago, September 23.—It is the duty of the United States to stock its government lands in the West with cattle, put the Army, especially the cavalry, to work as cowboys to handle the animals, supply the packers with this beef at cost, so that the price will be lowered to the people and a threatened meat famine, due in six or eight years, averted, in the opinion of A. M. Dubin, of New York, a delegate to the American Meat Packers' Association, who today declared that only by some drastic action could the meat shortage be prevented.

"My suggestion is perfectly simple," said Mr. Dubin. "The government lands in the West could be made into great pastures where countless cattle could be raised to relieve the present high cost of meat and avert the famine that surely is coming otherwise.

"Unless some such action is taken there will be no meat on the tables of American workingmen in the next decade. The government has no higher obligation than to relieve this situation, which every day is becoming more serious. The land so stocked could supply the Army with meat first, then the rest could be sent to the packers at cost and the consumer could get it with the price of a dress added. The price of meat would be astonishing. The price of a thing just as efficient as this would be at once.

"I have taken this to the delegates. Some of them say it is too good to be true, however, must not be taken as relief when an animal is in the face."

The American Meat Packers' Association task for wasting the fourth part of all the meat raised in the country, and the rest is wasted; poor food is being produced, and the great American family of meat-eaters is passing the point where demand for the great American family of meat-eaters falls to practice proper economy in its food.

# MEAT FAMINE PUT UP TO FARMERS

Responsibility of Averting it is Laid Upon Them.

## SITUATION GETTING SERIOUS

AMERICAN PACKERS SUGGEST SOME REMEDIES.

At Convention in Chicago All the Speakers Agree That the Rapid Decrease Must Stop—Farmers Are Not Raising Cattle, and As a Result the Demand Far Exceeds the Supply—Conditions Found More Precarious Than at Any Time in Our History.

Chicago, September 22.—The responsibility of averting a future meat famine was put up to small farmers by speakers at the eighth annual convention of the American Meat Packers' Convention today. All the speakers agreed that if the decrease in meat production of the last 10 years is not stopped the question of the meat supply for the people of the United States will be most serious.

Among the remedies suggested by the speakers were: Every small farmer should raise at least two beef steers a year to offset the decreased production of the great ranches of the West.

The remaining ranges should be cut up in farms and put all farmers on an equal footing. Development of the hills of New England, with their bountiful springs and prevailing shade as a beef-producing country. Substitution of corn for cotton in the Southern States and the consequent development of the cattle and hog production.

## CONDITIONS PRECARIOUS.

The report of the committee on the meat situation of the American Meat Packers' Association is both in a serious and a precarious history," the report says.

conditions in the production of food products which have been thought impossible 10 years ago. The shortage of live stock, which has been expressed upon us as packers for several years, has not been relieved during the last year. Our production is growing at its normal rate. We have passed the point where demand for the great American family of meat-eaters exceeds the supply.

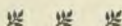


# EDITORIAL

## OUR NATIONAL CRISIS

**T**HE people of the United States face a fearful crisis, if the meat packers are to be believed — meat famine! Associated press despatches from Chicago, dated September 23, inform us that speakers at the eighth annual convention of the American Meat Packers' Association were agreed that if the decrease in meat production which has been apparent for the last ten years is not stopped, the problem of supplying the American people with meat will be most serious.

One member predicted that on account of the shortage in meat Americans would soon cease to be a red-blooded people. Others issued an urgent appeal to the farmers, especially the small farmers, to give more attention to the raising of cattle for beef. One suggested that the United States government lands in the West be made into vast grazing ranges where countless cattle could be raised "to relieve the present high cost of meat, and avert the famine that surely is coming otherwise." "Unless some such action is taken," he continued, "there will be no meat on the tables of American working men in the next decade. The government has no higher obligation than to relieve the situation which every day is becoming more serious." He suggested that Uncle Sam's soldiers be employed in the rearing of cattle on these great ranges.



Certainly the case is serious — for the meat packers. With the diminishing supply of live stock, with the bulk of the people meantime learning that they can do quite as well without a heavy meat dietary, with an inevitable increase in the cost of the live cattle and an impossibility of screwing up the prices of meat proportionately, the great slaughtering business, which has been creating a class of millionaires at the expense of the consumers, will have a slump from which it will never recover.

One cannot blame these men, who live by meat alone, as it were,— whose business is dependent entirely upon an adequate supply of cattle,— for believing that man cannot have red blood without a heavy meat dietary,— one's beliefs are very apt to lie in the line of his monetary interests,— but the man-in-the-street is learning better. Notwithstanding the accumulated prejudice and tradition to the contrary, he is learning that it is not meat that makes red blood in the ox and the horse, and that there are other nutritious foods — foods that make red blood and that are well digested and assimilated by man — besides meat. Moreover he is learning that any intelligent plan to reduce the cost of living must include a change in the menu, substituting for meat lower-priced foods which meet the physiological and nutritive requirements of meat.

Possibly man's digestive juices have for a few generations been elaborated with reference to a meat dietary; perhaps in some cases, a change of ration, especially if made without reference to nutritive value and digestibility and proper balance, has been followed by unfavorable results; perhaps in some persons the carnivorous "taste" has been so highly developed by habit and education that non-meat foods do not appeal, and the appetite juice may therefore be lacking; but possibly, after all, these eventualities have all been exaggerated by the "stand-pat" advocates of a carnivorous fare.

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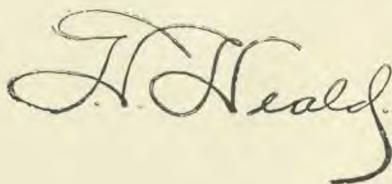
At any rate, we seem destined to see brought about through necessity what might have been impossible through education,—for education progresses slowly indeed against a highly capitalized industry which if necessary can well afford to devote millions to a propaganda campaign,—the gradual elimination of meat as a staple article of diet.

And if those who are so fond of the juicy porter-house could step behind the scenes and view the preparation of the meat, could see the diseased condition of the animals from which it comes, could appreciate the sanitary or, rather, insanitary conditions under which it is prepared; if they could realize the possibilities of food intoxication from bacilli of the Gärtner type,<sup>1</sup> even when there is no evidence to the senses of any decomposition,—an intoxication which is not prevented by the thorough cooking of the meat,—if they could see all these disagreeable and sickening things and sense all these disconcerting possibilities; if they could realize the superiority, esthetic, hygienic, and economic, of a menu including nuts and other of nature's "pure foods," would there not be a demand for these foods that would eventuate in foresting with nut trees the hills and valleys now lying fallow, and in making these foods, instead of meat, the staple?

One who eats a beefsteak exercises a high degree of faith, and faith which is contrary to evidence. When, on the other hand, he eats a few pecan meats, for instance, just taken from the shell, he needs to exercise no faith, for he can know that he has a food that is neither diseased, nor adulterated, nor misbranded. It is "guaranteed" under the pure food laws of nature. But this is not to say that man should live on nuts alone, or that nuts should be the principal article in his menu; but it is to say that with a wise choice of nuts, fruits, and cereals, together with garden vegetables, one can gradually wean himself away from a carnivorous regimen, and in doing so he may realize that his dietary has been, not impoverished, but greatly enriched.

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<sup>1</sup> See discussion of this by the London *Lancet*, and comments, article "Bacterial Food Poisoning," also the articles "Poisoning by Meat" and "Cheap Meat Suggestions," on page 557 of this issue.





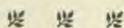
**Cheap Meat Suggestions**

THE proposition to import cheap meat from South America seems to have been grasped by many as a straw is grasped by a drowning man; but the Washington *Times* (September 28) foresees that no permanent relief can be expected from this source. It would seem that any one would appreciate the wisdom of the following, taken from the *Times* editorial:—

“Solutions of the meat problem are offered in fifty-seven varieties. One suggests lower freight rates; another, public slaughter-houses; another, no tariff; etc. But can you raise cattle in a slaughter-house? Can you raise them on cattle-cars? Can you fish them out of the sea with a no-tariff hook if they do not exist? Can you even raise them cheaply on the abandoned farms if it costs so much more to feed and fatten them for market that either the price to the consumer has to be sky-high or the producer has to quit?

“That’s the whole trouble. It is that there isn’t enough beef to go round. There isn’t enough in the United States; there isn’t enough in Canada; there isn’t enough in South America; there isn’t enough anywhere to go round in the old way; and freight rates and abattoirs and tariff legislation and magazine articles on abandoned farms cannot create enough.”

Undoubtedly we shall soon face the problem of obtaining the bulk of our protein from non-flesh sources. The process of adjustment will be disagreeable, but once adjusted to the new order of things, we shall look back on the carnivorous age with a feeling something akin to pity.



**Bacterial Food Poisoning**

THE London *Lancet* of Sept. 13, 1913, discussing foods that have been rendered poisonous by the action of bacteria, says:—

“It must be remembered that in the great majority of cases there is no suspicion of the food being unfit for consumption: it looks, tastes, and smells sound, and yet may be infected. . . . The most intelligent person may of course be unsuspecting and caught by the Gärtner bacillus, though he possesses an olfactory sense which would easily reject a putrefactive taint. . . . A ham or tongue may be a particularly choice one, exhibiting no signs of offense at all, and yet may prove to be tainted either with the active bacilli of the Gärtner group, or their toxins, or both. Such negative characters form the most disturbing feature of the case, while they introduce considerable difficulty in regard to setting up a scheme of preventive measures that can be observed by the consumer.”

We think there is no need for such pessimism. Let the “customer” do without ham and tongue, and, in fact, all meats, and he will reduce to a negligible quantity the risk of being poisoned by the Gärtner bacillus.



**Poisoning by Meat**

THE Appletons have recently published a book on “Preventive Medicine and Hygiene,” by Milton J. Rosenau, formerly director of the Hygienic Laboratory, United States Public Health Service, and now professor of preventive medicine and hygiene, Harvard, containing a chapter on “Meat Poisoning,” from which the following quotations are made:—

“Meat poisoning is almost always due to the presence and activity of certain bacteria belonging either to the paratyphoid or the hog-cholera group. The meat may be infected as a result of disease in the animal before slaughter, or it may be contaminated post-mortem from soiled hands, butchers’ tools, rags, paper, dust, or other objects that come in contact with it.”

“Outbreaks caused by *B. enteritidis* of Gärtner, *B. cholera suis*, and their congeners are frequent. In Germany at least two hundred and sixty outbreaks have been recorded during the years 1898-1908. Although Ger-

many is preeminently the home of meat poisoning, outbreaks occur from time to time in most European countries, and in America."

"The meat of cows and calves is most often responsible for meat poisoning, though that of horses, pigs, and goats has also been responsible."

"Paratyphoid fever, both clinically and etiologically, is a first cousin of typhoid fever. The two diseases are frequently indistinguishable at the bedside."

"The paratyphoid bacillus does not, as a rule, multiply in nature, except in meat, perhaps in other foodstuffs."

"The paratyphoid bacillus does not necessarily exist in the tissues of the animal at the time of its death, but the meat may become infected while it is butchered or during the stage of its after-care. The paratyphoid bacillus deposited upon a roast, steak, or a carcass will grow readily and rapidly through the mass, especially if kept warm. It is easy to conceive how meat may thus become infected through the contamination of dirty hands, butchers' implements, soiled meat blocks, unclean cloths, etc."

"Meat inspection affords but little safeguard against the meat-poisoning group of bacteria, for the reason that these microorganisms may pervade the meat without in the least changing its appearance, color, flavor, or odor. Their presence may only be detected by bacteriological examination."

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**Are We Protected From Insanitary Foods?**

DR. CARL L. ALSBERG, chief chemist, United States Department of Agriculture, rendered the country a good service in his address before the American Public Health Association at Colorado Springs, September 9, when he showed the limitations of the federal food law, technically known as the Food and Drugs Act, and popularly known as the Pure Food Law. This law was enacted after years of the most bitter opposition by an interested lobby; and in its final form it was somewhat of a concession to the interests that were determined that there should be no adequate supervision of the manufacture and distribution of foods. With the law on the statute-books, many have supposed the battle for pure foods to be practically won.

But there are serious limitations to the efficiency of the law. Not only is there a constitutional limitation which makes it ineffective within State borders, but the act is, after all, an economic measure

rather than a health measure. In the words of Dr. Alsberg:—

"Its particular work has been to see that food products are properly branded, so that the consumer knows what he is getting and is not cheated into paying a high price for a product adulterated with a cheaper. This must, of course, always be one of the purposes of the act; but we must not be deceived into believing that this very important economic function of the act is of great hygienic significance. Misbranding does not demonstrably affect the death-rate of the country. If the efforts devoted to prevention of misbranding were to be concentrated more largely upon the suppression of the traffic in contaminated milk, meat, vegetables, and other products that may carry disease, a positive reduction of the country's death-rate would inevitably result."

Moreover, the act by protecting the larger cities, which obtain their supplies largely through interstate commerce, makes the smaller places and the rural districts the dumping-ground for all that is of inferior quality. In the same way that the administration of the meat inspection laws, by shipping out all the first-class meat to Europe, lowers the average quality of the meat that is retained for home consumption, so the laws which protect the large cities make for worse conditions in the smaller places. The forces in the Bureau of Chemistry realize the shortcomings of the law in this matter, and as Dr. Alsberg says:—

"The Department of Agriculture feels that it should give more attention to the protection of these rural communities. This means that the work hitherto largely confined to detection of the presence of preservatives in labeled foods which do not carry organic diseases, and the prosecutions for misbranding which might work a momentary fraud on the consumer, should be widely and rapidly extended to the control of interstate commerce in the dangerous unlabeled foods which can transmit, and which do transmit, serious diseases."

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**Colds in the Head**

PROF. LEONARD HILL, who has upset the prevalent theory regarding ventilation, asserts that colds in the head are caused by going out into the cold air after having the nasal mucous membrane infected with bacteria in a warm and perhaps moist room. He says:—

"The altered conditions seem to us to be such as may increase the liability to infection.



In a warm, crowded room the swollen mucous membrane of the nose of an individual, covered as it is with thick secretion, will be massively infected with bacteria explosively sprayed out by the other occupants who sneeze, cough, and speak in the room. On passing out into the cold, misty, outside air, the blood-vessels constrict, and at the same time the nose is chilled by the greater conduction of heat, due to the cold particles of water in the inspired air. The defensive mechanisms of the blood, the immunizing properties of the plasma, the cleansing action of the ciliated epithelium, and the phagocytic action of the white corpuscles are diminished by the low temperature, while the pathogenic bacteria find a suitable nidus for their growth in the secretion and tissue lymph of the swollen mucous membrane. The immunity to colds of those who live an open-air life is well known. Massive infection does not occur, and so long as they are exposed to the cold outside air the mucous membrane, like the skin, remains pale and taut, moistened with a scanty secretion.

"Apart from the general question of health and immunity, we believe it is the direct massive transmission of bacteria from one to another in warm, confined atmospheres, and the subsequent exposure to the cold, moist air which together contribute to the infection of the susceptible individuals."

He suggests that we can lessen our liability to such infection by keeping the air of our rooms and crowded meeting-places cool and moving. For this purpose he considers a fan answers nearly as well as an open window. We have hardly been convinced on this point. He advises radiant heat, such as from fireplaces, rather than convection heat, as in rooms heated by pipes, stoves, or hot air, the latter unduly swelling the mucous membrane of the nose.

In order to lessen the liability of mass infection, he would have those who must cough or sneeze do so into a handkerchief.

When speaking with one who has a cough, one may protect himself from mass infection by holding a paper in front of the mouth and nose.

We have not yet come to realize that colds are infectious just as measles and whooping-cough and smallpox are infectious, and that by means of a little care those who are susceptible may often prevent infection.

A consideration of this quotation will reconcile the seeming discrepancies between Dr. Rogers's article, "Chilly Feel-

ings," in the November issue, and Dr. Hershberg's article, "What Are Common Colds?" in this issue.

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**Who Is the More Consistent?** RECENTLY a prominent New York physician asserted his confidence in vaccination by saying that it ought to be compulsory, and that he would hesitate to send his child to a school where it was not compulsory.

To this another physician, also of world-wide reputation, replied that he, too, was a thorough believer in vaccination as a protective. He had such confidence in its protective power, in fact, that he would be perfectly satisfied to trust his vaccinated children in a school where other children were not compelled to be vaccinated. He thought that if there are those who in face of the evidence in favor of vaccination refuse to protect themselves by it, they ought to be privileged to take the risk of smallpox, though he did not think that children should be sacrificed to the obstinacy and the neglect of parents.

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**Immunization Against Diphtheria** IN spite of the good that has resulted from the use of anti-toxin, we have not yet scotched diphtheria. It is still with us and very much alive. In fact, it is reported that in Berlin the disease is more prevalent than it was some years ago.

Recently two preventive measures have been proposed which may help to lessen the prevalence of the disease. The first is the use, by means of a spray and swab, of a broth culture of *Staphylococcus aureus* (pus germs) in the throats of diphtheria carriers. The remedy has proved successful in hastening the exit of the diphtheria germs from the throat, and seems to have been followed by no ill effects. This prophylactic treatment, if it proves as efficient and harmless as first reports indicate, ought, if used in connection with all who are exposed to any

case of diphtheria, to go far to control the disease.

The second method, recently recommended by Von Behring, is the use of a mixture of diphtheria toxin and antitoxin standardized by trial on guinea-pigs. The antitoxin prevents any evil effects; the toxin acts as a vaccine, causing a reaction in the body which produces defensive products or antibodies, thus making the patient immune to diphtheria. Though this method is recommended by a doctor of the highest authority, it will have to be tried out in actual practise in order to determine its real value.

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#### Exercise in the Tropics

THE writer was recently presenting before a group of nurses and doctors a paper calling their attention to the necessity, on the part of professional people, of exercise and recreation in order to maintain health and efficiency. Had he been questioned as to whether this applied also to the tropics, he would have replied that possibly a tropical climate would change the situation, and that exercise there would have to be reduced to a minimum.

For this reason he was surprised, on the discussion of the paper, when missionary physicians returned from the tropics, testified that the need for exercise is as important there as in a temperate climate, and that much of the illness of missionaries could be avoided if in addition to their other hygienic precautions, they took proper physical exercise.

One physician who had to return to a temperate climate, disabled with sprue (which is often counted incurable), testified that he had fully regained his health here by an active open-air life, and that he should probably have avoided illness had he been more careful to take active regular exercise when in the mission field.

Another physician, who was for a number of years in a trying tropical cli-

mate, made it a practise to have a game of tennis afternoons, and he found it helped him to maintain his health.

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#### Money to Burn

THIS slang phrase suggests to the editor of the *National Advocate* that any man who acquires the smoking habit must certainly have "money to burn." The editor figures that by a very moderate use of cigars, a young man will in the course of twenty years burn up over \$1,315. Moreover, not only is money burned in cigars or cigarettes, but often valuable property is burned through the use of these things.

A few years ago some one lighted a cigar in a New York hotel, and threw his match aside; it set fire to a lace curtain, and the place was soon a seething caldron in which more than fifty men and women were consumed. It is said that the Triangle fire, which roasted to death nearly one hundred and fifty working girls in New York City, was caused by a cigarette thrown into a mass of waste. It is said that another more recent disaster, with a loss of thirty lives, in Binghamton, N. Y., was caused by a cigarette; and that the fire which swept the little village of Cameron, N. Y., out of existence was due to a cigar stub carelessly thrown aside in a lodge meeting. Certainly a very large amount of money and valuable property is sacrificed on the altar of nicotine.

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#### Red Cross Christmas Seals

HAVE you purchased a card of red cross seals for your Christmas correspondence. The seals will not carry your letters through the mails, but your letters will carry the seals, with their words of good cheer. Meantime, every seal that you purchase will net something to the antituberculosis work in your locality. If you have not already done so, accost the first person you see selling seals, and purchase a supply, and you will be helping a worthy cause.

# THE MEDICAL MISSIONARY AT WORK



## MEDICAL MISSIONARY WORK IN MEXICO

Alice M. Swayze, M. D.

**N**EARLY twenty years ago the medical mission was opened in Mexico. From the very beginning, many came for treatments. Gradually the influence of the work extended, until for a radius of one hundred miles or more the fame of the mission was made known. Many came to receive the benefit of the treatments, and God blessed their coming by restoring their health.

The work has not at all times been carried on as it should have been, but the light has never entirely gone out. We still have a dim candle burning, and are praying that the Lord will send young workers, full of the Spirit, to brighten the light, and water the seed that has been sown.

Through the providence of God, the power of the Roman Catholic Church is being broken, that this people may receive the gospel. The real issue of the present revolution is for liberty from Rome. Now is the time to enter the field. Only one third of the population can read; but the most ignorant are learning, and they are buying a one-cent paper daily, to know what is going on around them. In the country the priests are even forbidding the people to read a newspaper, because they see that the people are being enlightened and that they cannot hold them. Thus the way is opening for our literature.

I will relate two experiences. A man was taken sick, and a doctor was called. He at once gave powerful sedatives, but

no medicines with actual restorative power. The man's relatives begged me to see him as a friend. I told them that with a few water treatments he would be well; but I had no nurse to give the treatments. He kept on taking the doctor's medicine, and in one month died, leaving a wife and five children. With proper care I feel certain his life might have been spared.

A father came to the house and begged me to go to see a child of five years, who had been sick with fever for three weeks. In the evening I went. I had just got the child into bed when the doctor came in. He reprimanded me for having given the child a bath, as he said it had pneumonia. But on examination I found that it was suffering from calomel-poisoning. In three days its temperature was reduced from one hundred and three degrees to normal. The child is now well, and the mother insists that it would have been dead in three days without the treatments.

Had I the strength to attend them, I could have many such cases; but I can do no more than spend three hours in the treatment-rooms in the morning.

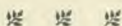
Some of my patients of years ago, among the best families, now ask me about our faith. Only in eternity shall we know the results of this medical mission. Satan has fought hard against it; for this reason we know that the work is of the Lord, and we must not give it up. The priests say, "Do not go to that mission, even if you can get well, as once

going will have a lasting influence upon you."

On account of the equable climate, and the fact that this state is not revolutionary, many people come here. Thus it is a good place for missionary work.

The Lord told Abraham, "Get thee out

of thy country." It was that he might better serve the Lord. So it is with any one who leaves former associates and surroundings; the bands are broken that hold him, and he is able to let his light shine clearly. We send the Macedonian cry, "Come over . . . and help us."



## KARMATAR, INDIA

D. BURROWAY

**T**HAT dread disease, consumption, had taken hold of a neighboring Hindu. He had offered goats in sacrifice to the devil for years, hoping to appease his wrath, and thus get well. He at last sent for one of our native Christians, telling him that his sacrifices were all in vain, and asking to be taught a better way. After considerable study he asked for baptism. All preparations were made, and a carriage was sent to take him to the place of baptism. But the enemy would not yield his victim so easily; we found the man's courage had failed. His village

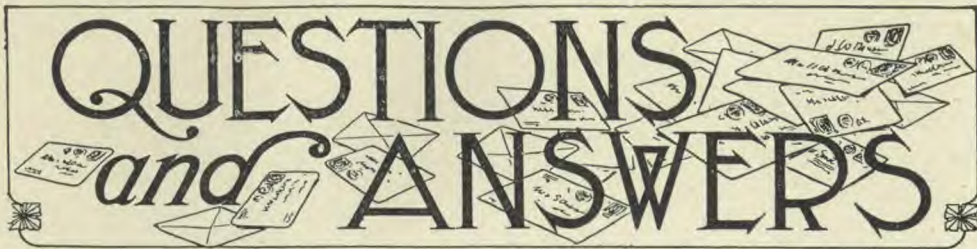
people threatened to stone our native worker if he entered the village.

We left the man for a few weeks, and prayed. Again he sent for us, saying he would take his stand before death. A day was again set, but before the time arrived our Hindu brother laid down his life. As he realized that he was dying, he sent for the worker who had visited him almost daily. He would have no one with him but this Christian brother. We believe that he, as well as the thief on the cross who had no opportunity for baptism, will be raised to dwell with his Lord in paradise.



ONE OF OUR FREE DISPENSARIES IN INDIA

# QUESTIONS and ANSWERS



THE editor can not treat patients by mail. Those who are seriously ill need the services of a physician to make a personal examination and watch the progress of the case. But he will, in reply to questions sent in by subscribers, give promptly by mail brief general directions or state healthful principles on the following conditions:—

1. That questions are *written on a separate sheet* addressed to the editor, and not mixed in with business matters.
2. That they are *legible and to the point*.
3. That the request is *accompanied by return postage*.

In sending in questions, please state that you are a subscriber, or a regular purchaser from one of our agents; or if you are not, accompany your queries with the price of a subscription to LIFE AND HEALTH. This service is not extended to those who are not regular readers.

Such questions as are of general interest will, after being answered by mail, also be answered in this department.

**The Use of Creosote.**—"Baby has had pneumonia. Doctor has ordered creosote, ten drops every four hours. Is this too severe? Should you advise taking baby West?"

The principal difficulty with creosote would probably be that it might cause indigestion. I should not think it well to keep up this treatment too long. Baby might do better in a dry climate. It is possible that the amount of medicine the child has taken has something to do with the slow recovery.

**Cold Hands and Feet.**—"My hands and feet are always cold, otherwise I am in good health; no aches nor pains, except pain in teeth, caused by neglect. I try to live hygienically as to diet. I take no drugs. My bowels move. No diarrhea for three or four years. I eat largely of bran, wheat, corn, tomatoes, lettuce, and fruits, also Graham bread. I seldom have a cold, but I suffer from the cold in winter. I am anxious for advice."

You are *not* in good health if you have poor circulation. I judge that you tend to constipation from the fact that you are using bran. Now your trouble *may* be "high blood pressure," that is, contraction of the capillaries, caused possibly by autointoxication, though from your diet one would hardly expect that.

I should suggest that you give first attention to your teeth. Get them into good condition, or if that cannot be done, have them pulled and get plates. Some who have been ailing for years, improve in health when they get all the bad conditions in the shape of loose and decayed teeth out of the mouth. Next form a habit of mouth cleanliness, and make it a matter of religion ("cleanliness is next to godliness"). Be sure to have abundant bowel movements at least twice a day. In addition to bran, use agar and liquid vaseline if necessary. For diet use nuts and fruits, and not so much cereal. Occasionally eat quite freely of vegetables.

Locally, take a hot and cold foot-bath morning and night. Have one pail of scalding water, and one as near ice-water as you can get. Dip feet in hot water as long as you can stand it, then briefly into the cold, and alternate in this manner for five or ten minutes, ending with cold, and then a thorough towel rub, especially between the toes. In winter wear felt shoes.

**Nursing Mother.**—"Please tell me the best diet for a nursing mother, eighteen years old; baby five weeks old, fat, but not too fat, and seems to be healthy. Nearly everything I eat gives her colic."

I regret that you did not tell me what you are eating, so I might point out the offending food or foods. Are you certain that it is what you eat that causes the colic? You say that *almost* everything you eat causes colic. This indicates that some foods, according to your observation, do not cause colic. Possibly if you will note carefully what you eat, and the effect on the baby, you will detect the offending foods.

You can be pretty certain that if you drink milk, it will not cause your baby trouble. Fruit is more apt to cause distress to the baby. It is possible that the baby is particularly susceptible to certain articles that you eat quite often, and if you can detect what they are, you will be enabled to avoid a great deal of trouble.

**Bad Breath.**—"What will cure offensive breath?"

Bad breath may be due to bad teeth (for which consult your dentist, and use some anti-septic dentifrice, or mouth wash, thoroughly several times a day) or to catarrh (consult a nose and throat specialist for examination and treatment) or to constipation. For the latter use such foods as vegetables, coarse grains, and laxative fruits, which will give you two or three good movements a day, one after every

meal. If this diet is insufficient, make use of agar as described in former magazines, or liquid vaseline, or both. A high colonic lavage, or enema, so taken as to carry the water the full length of the colon, and continued until the colon is completely emptied of its contents, may be used by some persons, two or three times a week, to advantage. This does not relieve the tendency to constipation, but it removes some of the rotten products of the constipated condition.

**Tender Face.**—"My face is so tender that I cannot shave without pain. What should you suggest?"

For a very tender face, the best remedy is, perhaps, the exchange of the razor for a clipper, at least until the tender condition is improved. It is possible that the razor may be too dull. Sometimes one shaving at home finds it makes his face sore, whereas at the barber shop he has no such trouble, for the reason that the barber's razor has a keener and smoother edge, and possibly the barber has a more delicate touch.

**Contagiousness of Consumption.**—"I am nursing a woman with consumption who is very poor and too weak to walk. Every one seems to be afraid of her, and I am the only one she can get to help her. I do not think it safe, but somebody must care for her. What advice have you for me?"

Provided you are careful and your patient is careful, there is very little danger in nursing such a case. The patient must be educated to take proper care of the sputum, using old rags to spit in that can be burned, and never spitting around and soiling the bedding. The nurse should have a disinfectant solution to be used after washing her hands before she eats. Both should live practically the outdoor life, summer and winter. If you observe these precautions, and get your exercise and sleep, and plenty of nourishment, you will probably avoid infection.

**Buttermilk and Digestion.**—"Please explain the effect of buttermilk on digestion."

Buttermilk itself seems to be more digestible than fresh milk, possibly because it contains less fat, but more probably because it contains lactic acid and also lactic acid germs, which tend to prevent decomposition. It is a question, though, whether it is safe to use everything that goes under the name of buttermilk, because the milk from which the buttermilk was made may have been badly contaminated.

Where a person requires a soured milk for any purpose, it is perhaps best to use Pasteurized milk artificially soured by means of a good reliable tablet containing the Bulgarian bacillus.

**Buttermilk and Babies.**—"How soon can buttermilk be given to a baby?"

A physician recently reported four cases of babies from three to five months old that had been troubled with diarrhea, and in whom

the intestinal trouble ceased immediately when he began feeding them buttermilk. It should be remembered, however, that much depends upon the quality of the buttermilk.

**Typhoid and Diphtheria Inoculation.**—"Will typhoid and diphtheria inoculation make children under six years of age sick?"

It may produce some indisposition, or it may not; but at any rate, the danger from this is not nearly so great as it is from an attack of typhoid or diphtheria.

**Catarrh of the Bowels, and Constipation.**—"Is liquid vaseline a safe remedy to use by one who has catarrh of the bowels (mucous casts being thrown off)? Do you recommend daily hot enemas for constipation? Is the use of bran all right in this case? Is it true that catarrh of the bowels is of nervous origin?"

Personally, I do not like liquid vaseline quite so well as the vaseline made by melting together the liquid vaseline with the solid vaseline, so that it is about half solid at ordinary temperature, that is, so it will almost run. My opinion is that this would be, in a catarrhal case like this, better than the bran. Hot enemas undoubtedly can be overdone. The fact is, I think, that very often better results are obtained by the use of cold.

You probably know something about the use of agar, chopped up fine and taken with the food in tablespoonful doses. I should think this would not be so irritating to the bowels as bran, although in all these things every patient is a study, and one in using any treatment must always observe the results.

It is doubtful that catarrh of the bowels is the result of a nervous condition, although, as in many other organic disturbances, when the nerves are in good condition they are able to offset many of the symptoms, and then when the nerves are run down the symptoms are more manifest. These catarrhal conditions are primarily intestinal, and the treatment is one largely of dietetics, reinforced by other hygienic measures, such as fresh air, sunlight, and exercise.

**Ptomain—Endocarditis.**—"My little daughter died of endocarditis. She was taken sick four weeks before with what the doctor said was ptomain poisoning from eating colored candy. She vomited four days, and the doctor said it affected the heart. She had an attack of endocarditis two years ago following pneumonia, and for five months was unable to walk. Can one have ptomain poisoning from candy?"

Ptomain is a substance produced by the putrefaction of nitrogenous organic substances, like meats. I cannot understand how there would be any ptomains in candy. The doctor may have misused the expression, simply meaning poisoning from the color of the candy. It is, however, possible that your daughter may have had ptomain poisoning from some other substance.

What is usually attributed to ptomain poisoning is generally due to other poisons formed in the meats; for ptomains, many of them, are perfectly harmless, and most of them are rather mild in their effects, whereas some other poisons formed in meats, etc., are very violent in their effects. No one description would answer for the symptoms of ptomain poisoning, as there are very many ptomains.

Endocarditis is not necessarily a fatal disease. It simply means the inflammation of the inner lining of the heart, with perhaps a resulting leaky valve. When a valve begins to leak, the heart, in order to compensate, becomes thicker, that is, it increases the muscle just the same as the muscle in a blacksmith's arm increases from work. Many have endocarditis throughout life, and perhaps never realize it. If anything, as overwork or poor nutrition, prevents the proper compensation of the heart, it begins to stretch, or dilate, and things go from bad to worse. The swelling of your daughter's limbs would indicate that it was a case of heart failure.

**Catarrhal Difficulty.**—"I have dry catarrh and neuralgic condition of the head. Have doctored to no result, and now am going to try baths and exercise. Do you think this a good method?"

You probably have some condition in the nasal passages that needs remedying, and that brings on your frequent attacks of cold; but you say that you have doctored for it with no result. Perhaps you have not been to a regular nose and throat specialist.

Your plan of taking exercise and baths is good. I would suggest also that you keep the nose moist, if it becomes too dry, by means of cold-cream or vaseline, and that once a day you draw gently up into the nostrils from a tin cup, which you could keep for this purpose, a warm solution prepared as follows: One pint of water, and one teaspoonful of baking-soda or common salt, or a half-teaspoonful of soda and an equal amount of salt.

Be careful about blowing the nose after using these treatments, as you may drive some of the water and infected fluid up into the ear and cause ear trouble. As you draw

the fluid back into the nose, you will find it will go into the throat, and it may be ejected from the mouth. A daily treatment of this kind will in a short time make your nose feel very much better.

You can accomplish the same result by using a nasal atomizer if you can get one strong enough. The hand atomizers are hardly strong enough to be worth much.

**To Nourish Child.**—"What should you do for a child who appears to be well, but gains no flesh, and cannot eat sweets without having a sour stomach?"

Try the child on butter, cream, cream toast, and the like, using as much fat as possible, and avoiding the use of sweets. It may be that you can find some form of sweet that the child can use to advantage. She may be able to use more sugar or honey. It may be that the fermenting of the sweets is from using such things as cake and puddings. Possibly the child could handle some pure form of sweets, such as rock-candy or stick candy, taken in moderate quantities.

**Backache.**—"What should you do for a woman who has constant backache, which an operation did not relieve? She gets tired very easily, and is losing flesh."

Many operations leave the patient worse off so far as backache and the like are concerned. Doctors in the past have been too free in advising operations for the relief of such things, but they are learning better.

It is impossible to answer questions of this kind without knowing all the facts, and it is impossible to get all the facts by means of correspondence. Your best course is to have some near-by physician make a careful examination.

**Dribbling Urine.**—"At night there is a constant dripping or dribbling, and also when I lie down in the daytime; but when I am on my feet, I may go for five or six hours. Is there anything I can do for it?"

Your trouble is one which I feel pretty certain would not yield to self-treatment. Consult a good physician. You may have to go to one of the larger cities for this purpose.



# SOME BOOKS



**When to Send for the Doctor and What to Do Before the Doctor Comes**, by Frieda E. Lippert, M. D., and Arthur Holmes, Ph. D., with sixteen full-page illustrations and colored frontispiece. Net, \$1.25. J. B. Lippincott Company, Philadelphia and London.

This compact little book, without the use of any unnecessary words, takes up one by one the symptoms which perplex the young mother, such as crying, cough, sore throat, fever, stomach trouble, bowel trouble, headache, skin eruption, contagious diseases, nervous diseases, nervous habits, various physical defects, wounds, and emergencies, and attempts to answer the queries that naturally come to the anxious parents: "What does this condition signify?" "Can I do anything to prevent or remedy it?" "Is it serious enough to require the visit of a physician?"

Many times an anxious mother sends for a physician when really no physician is needed, the result being a bill the family can ill afford, though they gladly pay it in order to get the physician's assurance of safety. On the other hand, because of the expense, the parents often hesitate to send for the physician when an early visit by the physician might save the life of the little one.

A glance at this book from time to time may save unnecessary visits of the physician, and, what is more important, may save life by warning of real danger.

**Spiritual Life**, by Uriel Buchanan. R. F. Fenno & Co., New York.

Like most of the works by this company, this is one that would not commend itself to the believer in the Bible as the inspired word of God.

**Good Form and Social Ethics**, by Fannie Dickerson Chase. Price, 75 cents, post-paid. Review and Herald Publishing Association, Washington, D. C.

This book covers a vast range, touching the conduct not only of boys and girls and young men and women, but also of those of mature years in various walks of life. The general

**The Reduction of Domestic Flies**, by Edward Halford Ross, with illustrations. Cloth, \$1.50 net. J. B. Lippincott Company, publishers, Philadelphia.

The object of this book is to bring to public notice the necessity for the reduction of domestic house-flies in cities, towns, villages, and rural districts. The author, who has also written a book on the "Reduction of Mosquitoes" and one on "The Prevention of Fever on the Suez Canal," gives the life history of the fly, and explains its danger to human beings, and the part it plays in causing misery, sickness, and death, and gives practical directions for reducing the numbers of the fly, so that its dangerous influence may be lessened. He has so marshaled his facts and illustrations as to make a very convincing thesis on the dangers of the fly. One chapter is devoted to a description of how to reduce flies, but mainly the book is devoted to the aim of bringing vividly before the people the necessity for such reduction, and to directions for public antily campaigns. And doubtless the author is right in his method; for the antily warfare must be a community work. One person may be ever so cleanly about his own premises; if he has careless neighbors, he will suffer from the flies bred about their premises. One has not only to look after his own garbage-can and manure pile, but he must help to educate his neighbors for a community effort, and it is for such an effort that this book is intended.

principles underlying the demands of good society are brought out, and those who desire to familiarize themselves with these demands ought to obtain a copy of this useful book.

**The Hand of God in History**, by W. A. Spicer. Paper, 25 cents; cloth, 50 cents. Illustrated. Review and Herald Publishing Association, Washington, D. C.

This interesting book is a veritable mine of useful information concerning the working of God's providence as revealed in the study of human history, which is shown to have fulfilled the predictions of the prophet throughout the ages.



# ALCOHOL

**THE PUBLIC THINKS:** It is only Heavy Drinking that harms.

**EXPERIMENTS SHOW:** That even Moderate Drinking Injures Health and Lessens Efficiency.

**THE PUBLIC THINKS:** Alcohol braces us for hard work and against fatigue.

**EXPERIMENTS SHOW —**

That Alcohol in no way increases muscular strength or endurance.

**Alcohol Lowers Vitality; Alcohol Opens the Door to Disease.**

Resolved, at the International Congress on Tuberculosis, 1905, to combine the Fight Against Alcohol with the Struggle Against Tuberculosis.

At the Massachusetts General Hospital, Boston, the use of Alcohol as a medicine declined 77% in eight years.

Most modern hospitals show the same tendency.

Alcohol is responsible for Much of Our Insanity, Much of Our Poverty, Much of Our Crime. OUR PRISON COMMISSIONERS REPORTED THAT 95% OF THOSE WHO WENT TO PRISON IN 1911 HAD INTEMPERATE HABITS.

**YET THE PUBLIC SAYS:** We need the Revenue from Liquor.

**THE PUBLIC SHOULD KNOW:** HOW SMALL IS THE REVENUE compared with the Costs of Carrying the Wreckage.

**YOUR MONEY SUPPORTS THIS WRECKAGE.**

**YOUR WILL ALLOWS IT.**

**YOUR INDIFFERENCE ENDANGERS YOUR NATION.**

Commercialized Vice is promoted through Alcohol.

**CITIZENS, THINK !**

ARRAYED AGAINST ALCOHOL are ECONOMY, SCIENCE, EFFICIENCY, HEALTH, MORALITY —

The Very Assets of a Nation;

The Very Soul of a People.

**THINK !**

“Think It Over” Poster Committee,  
11 Mason St., Cambridge, Mass.



**National Quarantine.**—According to Assistant Surgeon-General Rucker, the United States is the only government in the world that has a complete national quarantine system.

**Infant Hygiene in Schools.**—Seventeen trained nurses in Cleveland, Ohio, are now giving lessons in infant hygiene to the girl pupils attending the public schools. The girls show an intense interest in the lessons, absorbing eagerly all that pertains to the proper care of babies. This kind of enthusiasm in the public schools represents something more and better than the activity of faddists. Considering the great death-rate of infants in the United States, such instruction is timely.

**Curability of Cancer.**—The *Medical Record* of September 20, says: "A specific cure for cancer has not yet been found,—perhaps it never will be,—but to say that cancer is never cured except by the knife is to assert what is disproved by the experience, not of one man, but of hundreds. The idea of the utter hopelessness of malignant disease is so ingrained in medical consciousness that it tends to kill incentive and to discharge the search for curative measures," which, in our opinion, is pretty near the truth.

**Alcohol as a Food.**—Commenting on some recent research that seemed to show in a new way that alcohol is burned in the body with the liberation of energy, the *Journal A. M. A.* of September 20 says, editorially: "In emphasizing these facts regarding the behavior of alcohol in nutrition one cannot point out too emphatically that they do not commit us to the dictum that alcohol is an excellent, or even an advantageous food. To say that alcohol may be a food is not to deny that it is a dangerous one. If it is given freely, its oxidation is incomplete, and, what is more important, the untoward nervous effects become prominent. In ordinary conditions of health there is no occasion for the use of alcohol, and its introduction into the regimen of daily life can scarcely be defended on the grounds of nutritive needs."

**Pellagra a Food Disease.**—The writer was very much surprised to find that so careful a man as Rosenau, in the face of all the evidence to the contrary, should, in his recent work on "Preventive Medicine," give so much credit to the theory that pellagra is caused by the use of spoiled corn. Rosenau says: "For the present, pellagra is included among the diseases due to poisonous food, for the bulk of evidence indicates that it is caused by spoiled corn. This disease is, in all probability, another example of a food intoxication caused by some toxicogenic saprophyte. There is also a suspicion that insects (*Simulium* or *Stomoxys*) may be concerned in its transmission." So he places the guesses of a large number of American physicians above the careful work of such men as Sambon, whose brilliant work fixed upon the mosquito the blame for malarial transmission, and whose study of pellagra would seem to indicate that it is an infection transmitted by means of an insect.

**Die of Prenatal Causes.**—Nearly one half of the infants of the United States under one month old die of prenatal causes, according to a monograph prepared by the Children's Bureau of the Department of Labor. In 1912 the deaths of children under one year totaled 300,000 for the United States, and nearly one half of these did not complete the first month of life.

**Treatment of the Leper.**—In a paper read before the meeting of the American Medical Association, Surgeon-General Blue said that leprosy "should not be regarded as a negligible factor in public health administration, nor should it be an object of unreasonable aversion on the part of the public. Education is necessary to overcome the latter. Public health officers and physicians should systematically teach the people the nature of the disease and the extent of its contractibility, and above all, the humane treatment that should be accorded lepers." Dr. Blue advocates the establishment of a national lepers' home for the care and treatment of such cases as may be turned over by State and local health authorities for the purpose.

**Cause of Chronic Arthritis.**—Dr. Frank Billings, of Chicago, at the Minneapolis meeting of the American Medical Association, read a paper reasserting, as the result of extended observation, his former statement that arthritis deformans—that form of chronic rheumatism which gradually deforms the joints and destroys their motion—is in a large proportion of cases caused by inflammation in the head, either inflammation of the tonsils or alveolar abscesses (gum-boils, loose teeth), or chronic inflammation of the sinuses or bone cavities connected with the nasal passages. In a few cases it appears to be secondary to infection of the prostate and other pelvic organs, probably gonorrhoeal, and it may possibly follow infection of the appendix, bile ducts, or other parts.

**Leprosy a House Disease.**—Dr. William H. Bracken, of St. Paul, Minn., in a discussion of leprosy at the American Medical Association meeting, said: "It was said in the past that we had no American-born lepers in Minnesota. We now have a record of seven lepers born in Minnesota, four of whom are still alive. When a resident of this State becomes infected with leprosy, we can attribute it to one of two causes,—either a failure to diagnose the disease sufficiently early in those who are exposing others, or to an insanitary condition in the family that makes it almost impossible to prevent infection. This disease is not contracted casually; it is not picked up in the railway-cars or in the street-cars; it is a house disease. From the administrative point of view, it should be easier to control than tuberculosis; but yet people have the greatest dread of leprosy, and practically pay little or no attention to tuberculosis. This is not reasonable." He says that in 1900 there were records of twenty-seven living cases of leprosy in Minnesota, and now there are but thirteen cases known, showing that the disease is gradually disappearing in that State.

# Something's Going to Happen!

You realize, dear reader, as well as any one else, that the present deplorable conditions in human affairs cannot last much longer:—

The calamities on every hand  
The unmentionable sins and vices  
The wanton extravagance of the rich  
The strained conditions among nations  
The unbearable oppression of the poor  
The ungovernable grafting municipalities  
The church appealing to the government  
The dissolution of the Turkish Empire  
The increasing desire for "cheap" amusement  
The general tendency to lower morals  
And hosts and hosts of others

These things are ominous; they mean something; they are signs of the times. Of what benefit is a sign to you if you pay no attention to it? If you disregard these signs and do not know their meaning, you will be unprepared for, and cannot survive, the events to which they point. Knowledge of the way gives choice to the right course.

There is only one place, ONLY ONE, where the meaning of these things can be learned. That is in the Bible—the Word of God. There they are all made as plain as A B C, easily understood by any thinking person. They are there for you, YOU PERSONALLY. Why not take a few minutes' time and look them up? They mean everything to you. You need a knowledge of them in your business, your pleasure, and your home.

We can help you study them. The SIGNS OF THE TIMES MAGAZINE was designed for and is accomplishing that very thing, and is almost alone in the field—a student of fulfilled and fulfilling Bible prophecy—the most entertaining, interesting, instructive, and important study in this world. We invite you to study with us. A dollar will place your name on our list for a year.

Ten cents in coin or stamps for sample copy

**SIGNS OF THE TIMES MAGAZINE**  
Mountain View, California

**Milk in London.**—The health officer of the city of London says that the milk arriving at the railway stations of London has been systematically sampled since 1902, and submitted to bacterial examination. Of all the samples, 20% were dirty, 46.6% "fairly clean," and only 33.3% clean. Tubercle bacilli were present in 6.6% of the samples. That is, only one third of the milk was clean, and out of every sixteen samples, one sample contained tubercle bacilli.

**Typhoid From Watercress.**—Of forty-three guests at a wedding breakfast in Philadelphia, nineteen ate watercress sandwiches, and eighteen of these were ill a month later with typhoid fever, only two of them being in Philadelphia, the others being scattered in various places along the entire Atlantic coast. Investigation developed the fact that the watercress came from a farm in a very insanitary condition; and in some way, the water in which the cress was grown must have been contaminated with fecal discharges from the family.

**Rocky Mountain Spotted Fever.**—It has been known for some time that Rocky Mountain fever is transmitted by means of a certain tick which infests the valleys of the Rocky Mountains in northern United States, especially in Montana. But it has not been known how to get rid of the ticks, which in some places exist literally in millions; and any ordinary method of eradicating them would seemingly be futile. Dr. Fritz has observed that the ticks, when placed in the wool of sheep, die; and next year he proposes to further test the matter by pasturing thousands of sheep in a tick-infested region. If it is found that flocks of sheep destroy the ticks, it will take away a serious drawback to a region which otherwise is most excellent for agricultural purposes.

**Camp-Fire Girls.**—This organization, incorporated in March last year, now has a membership of 60,000. The purpose of the organization is "to perpetuate the spiritual ideals of the home under the new conditions of the social community. The specific ways by which it aims at this large result is to show that the common things of daily life are the chief means of beauty, romance, and adventure; to aid in the formation of habits that make for health and vigor, the out-of-door habit, and the out-of-door spirit; to devise ways of measuring and creating standards of woman's work; to help girls and women to serve the community, the larger home, in the same ways that they have always served the individual home; to give status and social recognition to the knowledge of the mother, and thus restore the intimate relationship of mothers and daughters to one another." Membership is open to girls of twelve years and over. The George H. Doran Company, New York, has recently issued a revised manual giving the latest information about the organization of local camp-fires. It is well illustrated. The price is twenty-five cents, post-paid.

**Cholera in Eastern Europe.**—Cholera is again threatening to invade Europe. Already in southeastern Europe it is making inroads, and doubtless before the epidemic is under control, it will have run wild through Russia, and perhaps the Balkans.

**The Unvaccinated Susceptible to Smallpox.**—Dr. Victor C. Vaughan, of the University of Michigan, states that on one occasion there was in the engineers' department of the University of Michigan a mild epidemic of smallpox, so mild, in fact, that it was not recognized until a student was noticed picking scales from his body. An examination developed the fact that it was a case of true smallpox, though in a very mild form; and further investigation showed that every unvaccinated person in the department had contracted this mild form of the disease.

**The Spread of Leprosy.**—Surgeon-General Rupert Blue of the United States Public Health Service has made the following statement regarding leprosy: "It is a menace to the public health, and deserves special consideration because of the possibility of the spread of the infection, the hopeless nature of the disease, and the aversion of the public to persons so afflicted. . . . While the spread of leprosy in recent years has not been marked, it must be remembered that cases of the disease have developed from time to time in American-born persons, some of whom had not been outside of the United States."

**Plague on the Pacific Coast.**—In Martinez, Cal., September 13, a man died of bubonic plague, probably the result of ground-squirrel infection. Surgeon-General Rupert Blue has urged that vigorous measures be taken to exterminate the ground-squirrels, which are not only a menace because of the plague infection, but their depredations cause an immense loss to the farmers.

**And This the Twentieth Century?**—It is reported that a leper was brought from the West in a box car in order to be deported, and that when he left the car at the port of sailing, the car was burned. And yet leprosy in this country has not a fraction of the infective power that tuberculosis has. What would one think of burning a box car because a consumptive had ridden in it? It is the unusual that we fear, which shows that we are not so much different from the primitive savages. We can sleep in peace when typhoid fever (which kills one hundred thousand to one of leprosy in this country) is right under our noses. We hardly take interest in the fact, which has been proved, that typhoid carriers are in our dairies and in our restaurants, and we do not even successfully prevent the access of typhoid flies to our dining-tables; and if a member of the family departs by the typhoid route, it is taken as a matter of course and soon forgotten. Yes, we may even eat raw oysters from beds not above suspicion of typhoid contamination; but if a leper rides in a box car, *burn it!*

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# LIFE AND HEALTH

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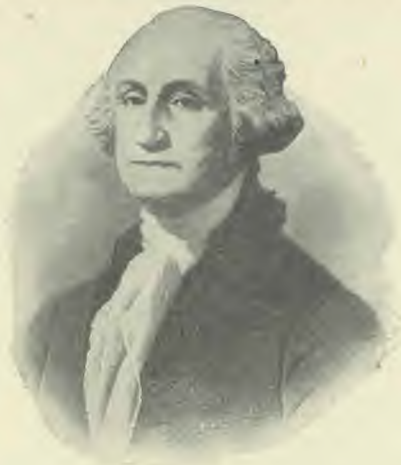


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