Life & Health

THE NATIONAL HEALTH MAGAZINE

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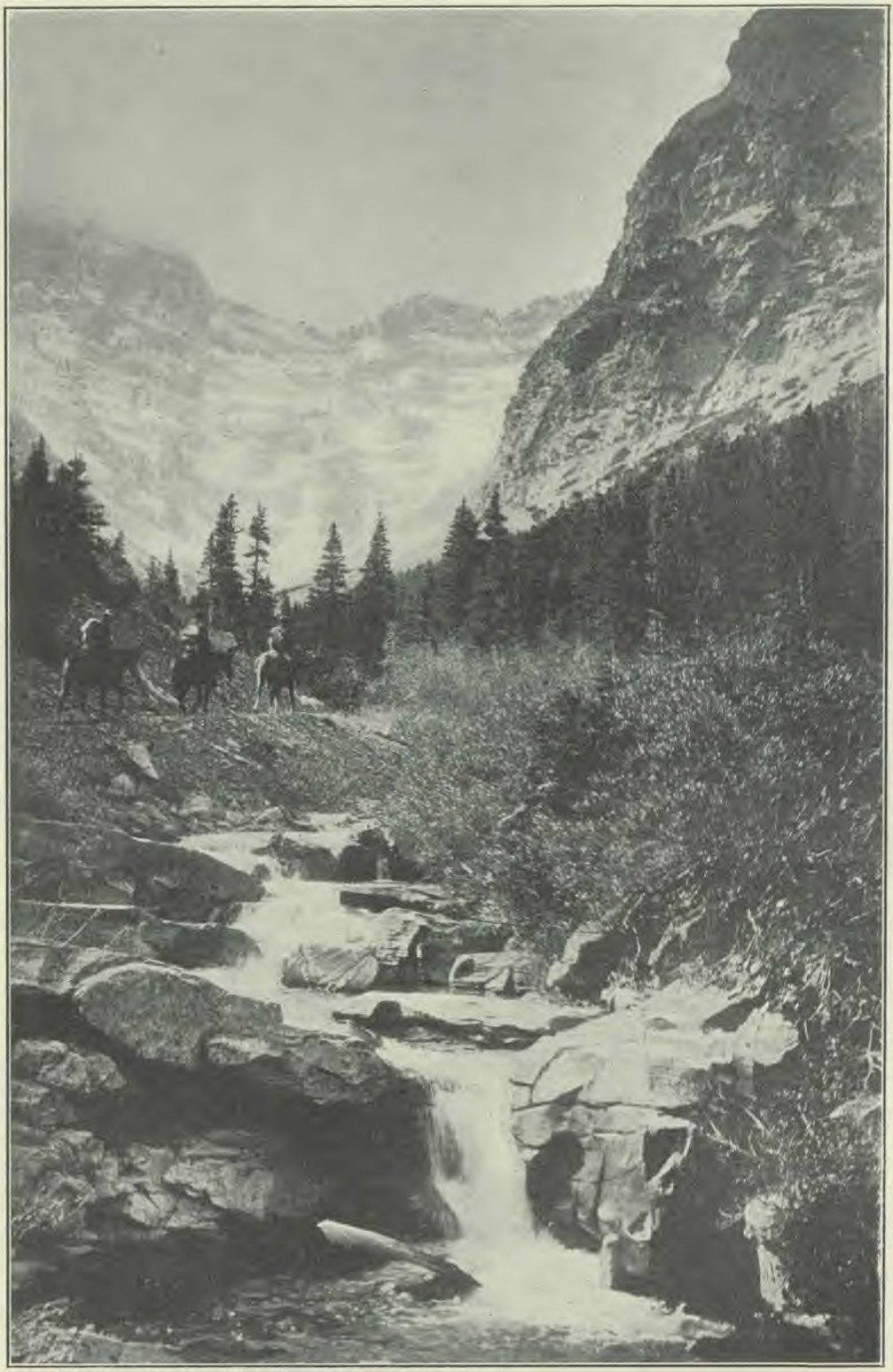

GOING UP CANYON CREEK, GLACIER NATIONAL PARK, MONTANA

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No. 11

Life & Health
THE NATIONAL HEALTH MAGAZINE

NOVEMBER
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 November "Life and Health"

This issue is devoted to the consideration of the legumes, or pulses, in the same way that the October issue was devoted to fruits. In general, the discussion shows the value of the pulses in a hygienic dietary, calling attention to some pulses that should be in more general use, and giving recipes for the preparation of wholesome and attractive dishes.

What is the cause of a cold? We used to think that we knew, until the germ specialists convinced us, or part of us, that we did not know anything about it, and that colds are, after all, not colds, but infections. We used to believe that the best place for a person with a cough was in a warm room, or in bed. But with the open-air propaganda for the cure of tuberculosis, some of us began to think that possibly the best treatment for all colds would be the open-air treatment, though experience seemed to indicate that tuberculosis and non-tuberculous colds responded very differently to the outdoor treatment. The writer has known a child who coughed, and continued to cough, notwithstanding all treatment, until she was given a warm room with a minimum of outdoor air, to sleep in. This may be heresy, according to the modern idea, but it was the experience.

The article "Chilly Feelings," by James Frederick Rogers, is a valuable contribution to our knowledge of colds, and its perusal by those who have in the past been subject to winter colds will be worth the price of several years' subscription to the magazine.

Anne Guilbert Mahon, well known to old readers of "Life and Health," gives some excellent suggestions on "Strengthening the Delicate Child by Exercise."

Large space is given to the discussion of the "International Congress of School Hygiene," which recently convened in Buffalo. There is no subject before the public of more vital importance than school hygiene.

The December Number

The discussion of the predicted meat famine and our attitude toward it constitutes the forthcoming number of "Life and Health" one of the most important ever issued. Do not miss it!

The subject of "Colds" will also be taken up from another viewpoint by another physician.

Preparing The Home For Winter

O.C. Godsmark, M.D.

NO other season of the year requires such careful attention to the little things about the home as do the fall and winter. The trees have shed their leaves, and unless care has been taken, the wind has piled them up in every nook and corner about the porches and steps, where, wet by the fall rains, they begin a slow decay that poisons the air about the home in which we live. True it is that the snow will cover them over, and the frosts of winter will stop their decay, but there they are, ready for the first thaws of spring to give forth their germ-laden fumes. With many, especially in the rural districts, it is a custom to bank up the wall about the house with straw, to keep it warm and the cellar from freezing. This may not be objectionable, provided only clean straw is used, and care is exercised to remove it in the early spring before warm weather permits of decomposition setting in, and thus sickness and perhaps death invited into the home.

The custom of throwing suds, dishwater, scraps from the table, etc., about the back door is a most pernicious one. Criminal indeed is the parent who will allow such a condition to exist. The helpless child or the innocent babe must, when the return of spring comes, be subjected to all the dangers of croup, diphtheria, scarlet fever, etc., and if he dies, who is the responsible one?

The throwing of such waste material about the back door is in summer bad enough, but during the fall and winter it

The trees have shed their leaves, and the wind has piled them up in every nook and corner.

is tenfold more dangerous. In summer the rains wash much of it away, the sun's rays destroy many of the germs, the growing vegetation takes up much of the poisonous gases, and besides this the children are in some more inviting part of the premises at play away from this breeding-place of disease. During the fall and winter this filth accumulates, as much of it freezes as fast as it is thrown out, often forming a solid bank, ready to melt when spring comes and give up its load of disease germs, endangering the health, perhaps sacrificing the life of some member, of the family.

The little child in its play about the house is exposed to the cold drafts from under the doors, in a way that we older ones, who stand erect, are not. Being down upon the floor, he gets the chill from every crack and crevice, and especially from beneath every loose-fitting door.

Hundreds are sleeping out of doors and receiving benefit.

Often the odors from a cellar, where are stored the winter's supply of fruits and vegetables, sometimes in a condition of partial decay, are plainly noticeable by a stranger entering the room from the pure air without. The child gets all these germ-ladened drafts in a much greater degree than the adult, because of his being on the floor. All these things should be carefully looked after, and much unnecessary suffering will be saved the younger members of the family.

The freezing of refuse matter does not destroy its disease-producing qualities nor render it inert. The substance retains its virulence, ready, at any time, to give up its load of disease germs, which are carried by the air into the home, or washed by the melting snow into the well from which the drinking-water comes, or it may be carried in the same manner to the pool from which the milch cows obtain their supply of drink.

Whole families are frequently the victims of their own carelessness in this way. We cannot be too careful about the cleanliness of our homes, especially at this season of the year.

The question of proper ventilation in the home during the cold of winter, is a matter of no small importance. We have long since learned that to shut out the pure air of heaven from the home is to rob it of its most precious boon, health and happiness. No man nor woman, no matter how strong, can long be confined within close, ill-ventilated rooms, shut away from heaven's pure air, and not suffer the consequences. Pure air properly breathed means pure blood, and a free circulation of good rich blood to all parts of the body means health, always.

It is a simple matter to ventilate a living-room in the winter-time. First see that the openings about the mopboard and the spaces beneath the doors are tightly closed so as to stop the cold drafts upon the floor; next cut a common lath the exact length of the width of the window, and tack it on the bottom of the lower sash. This will raise the lower

part of the window about one-half inch above what it was. This does not let any cold air in at that part of the window, but it does make an opening just that width between the upper part of the lower sash and the lower part of the sash above, and the opening is of such a nature that the cold air coming in from without is deflected directly upward, so that it mingles with the warm air of the upper part of the room, purifying that portion of the air that is breathed, in place of chilling the feet and ankles by cold drafts upon the floor.

Hundreds, today, are sleeping outdoors, and are receiving benefit thereby, who but a few years ago were spending their nights in closed, stuffy bedrooms. The pure air agitation is working wonders for thousands, and we hope it may continue. If we cannot take our work to the great out of doors where health rules supreme, then let us open up the windows wide and let the great out of doors come in to abide with us. Pure water, pure air, plenty of sunshine, and a proper amount of exercise are God's great remedies left here on earth for us.

IS TUBERCULOSIS CURABLE?

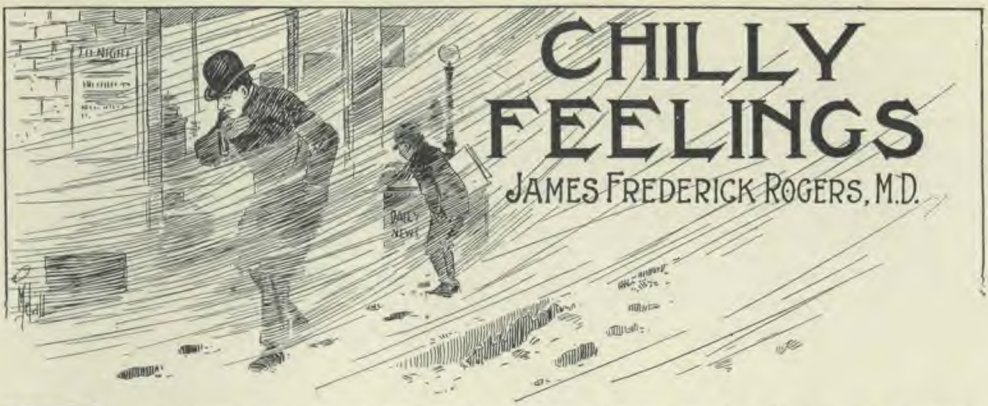
Edward Quinn, Jr.

THIS incident is related with the hope that it may inspire courage in the hearts of those having tuberculosis: —

A number of years ago a friend of mine was afflicted with tuberculosis, and the disease had made such inroads upon his constitution that his physician told him he was beyond the possibility of recovery. He was so weak that each movement he made required an effort; he had lost so much in weight that he was but a mere shadow of what he had been. While he was in this condition, a friend who owned a large tract of land, on which his house was built, pitched a tent and invited the sick man to spend the rest of his days there, promising to do all he could for the patient's comfort. Literature was obtained which told of a number of cases of recovery from tuberculosis through simple methods. *He determined that he would get well, and not succumb to the disease.*

He obtained a load of sand, and with a bucket and shovel, such as children use at the seashore, he began the work of recovery. At first he was able only to lie down in the sand and fill and empty the bucket, but he kept at it persistently, and was rewarded by a slight increase of strength. As the days grew warmer, he began to take sun-baths, lying in the sand with his body exposed to the rays of the sun. He ate nourishing food, and between meals feasted on oranges.

In a few weeks he was able to walk a short distance, and later, mild exercises were added to his program; still later he began to trot slowly around the grounds. In a few months his recovery was complete.



CHILLY FEELINGS

JAMES FREDERICK ROGERS, M.D.

WE are furnished by nature with certain sources of warning that danger threatens our bodily integrity. Besides those very definite signals which come by way of eye or ear, warning against destruction by automobile, trolley-car, and the like, there is the feeling of pain, the sense of too great heat, the feeling of fatigue, the sensations of hunger and thirst and of satiety, and the perception of chill. Of these various alarms all but the last two are pretty generally obeyed. There is, however, so much pleasure in the wonderful creations of cookery that the instinctive feeling that we are eating more than we need goes unheeded. We stop feeding, not when satisfied, but when surfeited. Why the warning which comes from a chilly feeling is not more promptly acted upon than it usually is, is not so readily made out, but we seem to think this of comparatively little importance, beside other things with which we may be for the moment engaged.

Warning against destruction by automobile.

Of all the enemies of life, cold is probably the greatest, as it is the most treacherous. Cold is a stimulant to the healthy, vigorous body, that is, it stirs up the bodily functions to resist its too intimate approach; but every stimulant may become a depressant, and cold sooner or later tires out the efforts of the body to keep it at arm's length. We are warned of this failure of the heat-maintaining and heat-regulating apparatus by the uncomfortable feeling of chilliness. So late does the warning come that we can ill afford to let other interests prevent in the least our heeding it, for otherwise a "cold" or something more serious will be the outcome.

Colds were well named by our forebears, for almost invariably cold is somewhere at the bottom of these distressing and often serious affections. It opens the door for the bacteria which lurk always in our respiratory passages, and which, otherwise, would remain harmless. Save for a few such afflictions coming on in summer from

exposure to heat-extracting influences, colds, bronchitis, pneumonia, rheumatism, and the like are cold-weather diseases. Huddling together in ill-ventilated rooms helps in the spread of especially vicious germs of these diseases, but the bad air and housing are but results of cold, or cold plus a false economy in saving fuel by too slow change of room air.

It is true that other agencies predispose to the taking of colds, as fatigue, constipation, insufficient food, loss of sleep, coddling of the body, and the overheating of apartments; but these only render the body the more susceptible to the influence of cold. It should be remembered that these conditions are not often followed by colds in summer-time.

Dust is of late much blamed for colds, but it is that borne by the heat-extracting winds of early winter when we are not as yet adequately clothed or are otherwise unadjusted to colder weather, or, in March, when we are tired out with fighting cold and too readily relax our vigilance against it, which produces colds. There is vastly more dust in the air between May and October, and the bacteria which ride upon it are in better fighting trim, since they, too, are depressed by cold weather, except under the warming influence of residence in the body. Bacteria, in combination with heat-extracting breezes, are a fine combination for the production of colds.

Dampness and wet make cold doubly dangerous, since water is a far better conductor of heat than dry air, while evaporation of moisture from the body serves still further to dissipate its heat. Wet shoes and stockings are as dangerous conditions now as they were before the discovery of bacteria, and peculiarly dangerous since part of the body is rendered colder than the rest. Animals immune to certain bacteria are promptly rendered susceptible to infection by causing them to stand in cold water for a short time. Rubber overshoes, worn only out of doors, have prevented more cases of colds, bronchitis, and pneumonia than all

Huddling together in ill-ventilated rooms helps the spread of especially vicious germs.

the drugs ever invented have cured.

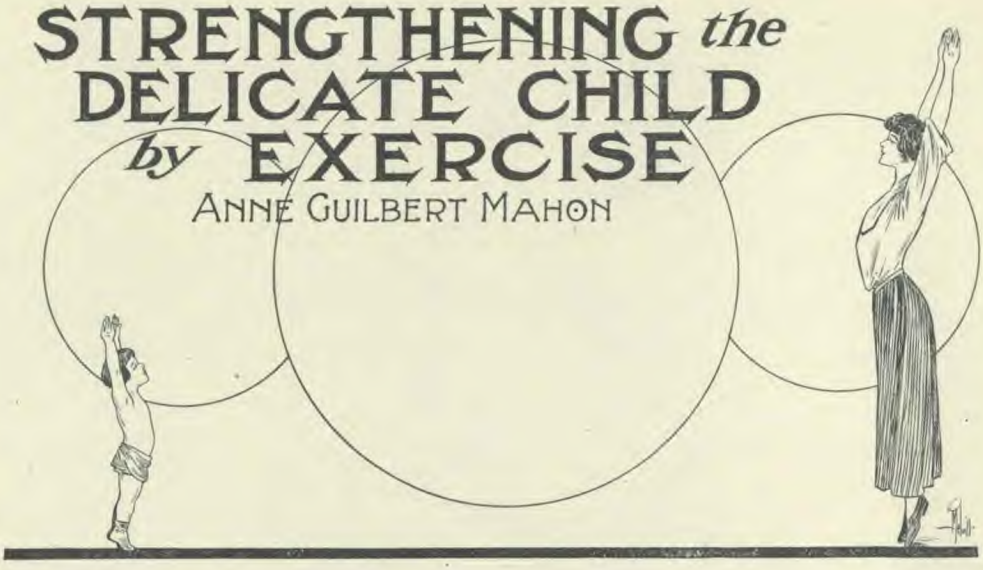
At ordinary comfortable temperatures the unconscious heat-regulating apparatus of the body keeps us adjusted to slight changes of temperature; but when it finds itself unable to cope with greater changes and prolonged lowering of the temperature, it informs us of its failure in the sensation of chilliness. It behooves us to act accordingly and promptly. In giving up the fight for maintaining the temperature of the whole body at its proper point, it withdraws the full supply of blood from the outposts, the extremities, to the trunk and the internal organs. Response to the warning to consciousness will of course mean the reversal of this condition by the putting on of additional clothing, by the prolonged application of external heat, and by adding to our internal heat by hot drinks. The earlier we get the circulation back into its normal channels, the more sure we may be that damage will not result. The various warnings against bodily damage are given for our protection; we should cultivate a healthy acquaintance with them, for, aside from the fact that they are complicated somewhat by civilized conditions of living, they are as true guides as are the instincts of the lower animals, and are certainly the only tests we as individuals have of the influences which affect our health. Moreover, they, together with our sense of general well-being and capacity for work, are the only practical guides we have in determining the good or the bad, the useful or the injurious, in the various confusing health fads of the hour.

New Haven, Conn.

Vastly more dust in the air between May and October.

STRENGTHENING *the* DELICATE CHILD *by* EXERCISE

ANNE GUILBERT MAHON



DELICATE children can be wonderfully helped by judicious physical exercises. A mother whose child inherited a tendency toward pulmonary troubles, and whose infancy had been extremely delicate, noticed with alarm that on reaching the age of three years the little fellow was decidedly narrow-chested, stoop-shouldered, and generally weak. She recognized the importance of overcoming this condition and making him strong, but she did not know just how she should go about it, nor how she could teach him the exercises that would be of so much benefit to him until he was old enough to understand their value and importance.

One day she conceived the idea of "playing" exercises with him and her success was beyond all her hopes. The little fellow was so happy over it, did the exercises so well, that the mother *played* them with him twice every day, early in the morning and again in the afternoon.

She called it a "gymnasium march," and explained to the baby that it was what she used to do when she went to "real gymnasium." Of course she did all the exercises with him, to foster the idea of play, and also to show him the correct way of doing them.

She chose, above all, those exercises which would broaden and develop the chest, keep the shoulders in proper position, maintain the correct poise of the body, and stimulate the internal organs. First she taught him to *hold himself like a soldier,* head up, chest high and forward, shoulders back and down, toes pointing out.

After he was in correct position, they would march around the room with finger-tips resting on their shoulders, elbows pointing straight down, and chest thrown out.

The next command would be "Neck firm," when mother and baby would march around the room with finger-tips touching the back of the neck, palms in, and elbows extending straight from shoulders.

"Arms down and back," with hands clasped, was the next position while they marched. Singing some easy, familiar tune in march time seemed to put more vim and enjoyment into these exercises, and the baby would laugh and dance and enjoy them hugely, especially as *mother was playing, too.*

"Swimming position, now," the mother would call for the next exercise, and baby soon learned to place his little hands on his chest, palms facing outward, elbows straight and out on a level from the shoulders. The swimming

stroke was then taken, flinging the arms out at the sides, then bringing them back to the chest. Baby would laugh gleefully and do this with great enthusiasm while they continued marching up and down *like soldiers*. This, the mother found, was most beneficial in broadening out the little one's chest and strengthening chest, arm, shoulder, and back muscles.

Then mother and baby each grasped a small stick, with hands parallel reaching high over head, arms held straight and close to the ears. This was a great favorite with the little fellow, and was excellent for invigorating the vital organs, giving poise to the body, and stretching and strengthening almost every muscle of the trunk, chest, back, and arms.

Next, hands would be placed behind the back with the stick grasped firmly and held down as far as possible. "Up! Down!" mother would sing, and the stick would be raised to shoulder height then lowered again, forcibly, forming a splendid exercise for broadening the chest and strengthening weak muscles.

There were a few exercises bearing directly on the leg muscles, but the mother felt that these were not so much needed, as the baby ran about a great deal, and the marching also exercised the leg muscles while the arm and chest exercises were being taken.

The "knee raising" exercise, however, she felt they could practise with profit, and so the movement would be varied at every other step by raising the knee alternately as high as possible. This, the mother knew, was a good exercise to stimulate the internal organs as well as to develop the leg muscles and those of the lower part of the trunk.

There was also one of alternate toe pointing in front and in back,[1] which helped the little body to acquire its proper poise and insured correct standing and walking position.

These exercises were faithfully played twice each day, and after several weeks the mother was much pleased with the great benefit that had resulted in the child's improved carriage, broadened chest, and muscular strength. She found, too,— something she had not calculated upon or even thought of,— that the exercises had benefited her also, and that her carriage and general health were much improved in just those few minutes, morning and afternoon, playing with and developing her child.

The little fellow got so he could do all the exercises perfectly, and as he grew older and understood better what they were for, other and more complicated exercises were added, which, in time, entirely corrected the deformities of childhood and helped to make him a strong, healthy boy, with no evidence of the trouble which the mother had so dreaded.

The mother took care never to allow the spirit of enjoyment, the spirit of play, to diminish. She knew that exercises undertaken in that spirit and thoroughly enjoyed proved more beneficial than those taken perfunctorily. She was also careful that the rooms in which they marched and exercised were full of fresh air, that the windows were wide open, and that the child was breathing in quantities of the fresh, life-giving air at the same time he was exercising his muscles.

Any mother who has a weak, underdeveloped child with a tendency to be narrow-chested and restricted in its breathing capacity will be repaid if she employs this simple and easy means of strengthening and developing the little one. She will demonstrate for herself that the results in happiness, strength, and permanent benefit to the child will be inestimable.

[1] Standing on left foot with hands on hips, carry right leg well forward, at same time extending foot (that is, pointing downward), then carry the leg backward and again extend foot. Alternate forward and back six to ten times, keeping the body erect. Then, standing on right foot, perform the exercises with left leg.

LEGUMINOUS FOODS, OR PULSES

G. H. Heald, M. D.

Pulses in Ancient Times

WHENEVER vegetation can support itself, there, in some form, one may find legumes, or pulses, the class of plants to which belong our familiar beans and peas, and possibly less familiar lentils. The mess of "red pottage" which the shrewd Jacob traded off for the birthright of his brother Esau was composed of lentils, probably the Egyptian lentil; and the "pulse" which Daniel and his companions chose in preference to the "king's meat" was some form of legume, probably lentils, or at least included legumes.

Having the property of maturing within a few weeks, pulses can be grown in the short summers of the arctic regions; and because of their excellent nutritive qualities they have been the staple food in countries lying almost under the equator. On every continent and in every clime pulses are valued as food. Northern Europe shows a preference for the pea, southern Europe for the bean, and some of the Oriental countries are partial to the lentil. Americans use both beans and peas freely, but have not yet learned to use the lentil to a great extent, or at least to grow it in commercial quantities. Practically all our lentils are imported, though some are grown in the Southwest.

There is some reason to believe that the lentil was the first vegetable cultivated by man. It is found in the remains of the Swiss lake-dwellings, and so dates back at least to the bronze age.

The bean was grown and used by the Greeks and Romans, and can also be traced back to the time of the lake-dwellers, and to ancient Egypt. The Chinese used beans before the Christian era, and from China they were introduced into Japan and India.

When America was discovered, the Indians possessed a knowledge of agriculture, to the extent, at least, that they cultivated maize and beans. If, as is supposed, the bean is a native of Asia and was taken over to America in the migrations of its people, its use must date from a very remote period. But possibly the cultivation of the bean was developed independently by the American natives, as was certainly the case with maize. In that case there must have been beans native to America.

From linguistic studies the pea is supposed to have been known to the ancient Aryans, and to have been introduced by them into Greece and Italy. The pea is also found in the débris of the Swiss lake-dwellings.

Composition of the Pulses

The accompanying table, prepared carefully from the standard tables of the United States Department of Agriculture, will repay diligent study.

It will be noticed that potatoes at two cents are comparatively quite expensive as a source of both protein and energy; and to be as economical a source of protein as are the legumes they would have to be sold at one-half cent a pound, or one and one-half cents a pound to be as economical a source of energy.

Meats at twenty-five cents are very expensive as a source of both protein and energy, as is also milk at eight cents a quart.

Another noteworthy fact, apparent from this table, is that the dried legumes, peas, beans, and lentils, are very similar in nutritive value. The peanuts, because of their high oil content, belong in a class by themselves. Called a nut, classed botanically as a legume, the peanut is, from a dietetic standpoint, neither nut nor legume; it is a peanut.

There are two varieties of bean that have a notable proportion of fat, the soy-bean containing nearly half as much, and the chick-pea about one sixth as much, as the peanut, or five to six times as much as our ordinary legumes.

Growth in Popularity

With the problem of feeding great masses of persons, where rice or some cereal furnishes the bulk of the nourishment, man, long before he knew anything regarding chemistry, seemed instinctively to realize the need for some food furnishing a greater proportion of protein than the cereals, or at least than rice, which is poorer in protein than most of the other cereals; and thus, wherever man has gone, unless he took his protein second-hand from the animals, he has made generous use of the legumes.

Gradually the varieties have been increased and improved so that now the choice that is given us is almost bewildering.

Strangely, many excellent varieties of the pulses have never been introduced to the American table, perhaps because the American palate, having inherited the carnivorous taste of our hunter ancestors who lived when land was plenty and it was easier to secure game or raise stock than to cultivate the soil, has gone on developing the appetite for meats rather than for legumes.

The increasing population running the price of meat up to a prohibitive point; the increase of disease among animals, because of the necessary congestion; and the increasing nervousness of our population from overstimulation, all now call for a halt and a return to a more rational diet. The physiologists have be-

	A	B	C	D	E	F	G	H
	Per cent of Protein, Fat, and Carbohyd.	Per Cent of Protein	Per Cent of Fat	Per Cent of Carbo-hydrates	Nutritive Ratio	At Cost Per Pound	Cost of 72 Grams Protein	Cost of 2,700 Calories
String-beans	10	23	3	74	1 : 3.5	cts.	cts.	cts.
Shelled peas	24.4	29	2	69	1 : 2.6			
DRIED								
Navy beans	83.9	27	2	71	1 : 2.8	6	4¼	10
Lentiles	85.9	30	1	69	1 : 2.6	7	4½	11¾
Peas	87.6	28	1	71	1 : 2.6	6	4	10
Peanuts	88.8	29	44	27	1 : 2.4	10	6¼	10½
White bread	64.2	14.5	2	83.5	1 : 6.1	5	8⅔	11¼
Potatoes	16.6	11	1	88	1 : 8.3	2	18	14
Lean meat	29.2	73	27		1 : 0.8	25	19	92½
Whole milk	12.7	26	35	39	1 : 4½	4	19	33
White flour	87.5	12	1	87	1 : 7¼	3	4	6½
Skim-milk	3.7	02		8	1 : 0.1	1	5	16

Column A gives the percentage of protein and fat and carbohydrate in each food. Columns B, C, D, taking this total as 100, give the percentages of each of these foodstuffs (protein, fat, and carbohydrate). For instance, the percentage of protein, fat, and carbohydrate in string-beans is 2.3%, .3%, and 7.4%, respectively, which together make 10% (column A). Now multiplying each of these by 100 and dividing by 10, I get the results above ($2.3 \times 100 \div 10 = 23$, etc.).

The nutritive ratio (column E) is the ratio between the protein and ($2\frac{1}{4} \times$ fats) + carbohydrates; or $(2\frac{1}{4}F + C) \div P =$ ratio. Some authorities who favor a high protein dietary would place this at 1 : 4½ or even 1 : 3½. Others, we think with more reason, place it at 1 : 6 or over. The foods like the legumes, with a narrow ratio, should be combined with foods like potato, with a wide ratio.

In column F has been given what may be considered an average cost per pound for the different articles, and on this cost has been calculated the columns G and H.

Column G shows how much worth of each food at the price given, if eaten alone, would be required to give 72 grams protein — a day's requirement.

Column H shows how much worth of each food at the price given would be required to furnish 2,700 calories of energy — a day's requirement for professional or office work. It will be noted that the legumes are very economical, whether considered as a source of protein or of energy. White flour at one cent a pound furnishes a cheaper food; at three cents, or six dollars a barrel, is about as economical; and skim-milk at two cents a quart (one cent a pound) is about as economical as the legumes as a source of protein.

gun to call for it. The doctors are learning to tell their patients to go light on meat; and especially the rapid increase in kidney disease in the fourth, fifth, and sixth decades of life, with the knowledge we have that the only relief is in a restriction of the protein, all call for a return to a more simple and natural dietary.

And this does not mean a dietary consisting largely of pulses or legumes. Such a dietary, if anything, would be even worse than a fairly heavy meat dietary.

We must realize that the cereals furnish so nearly a balanced dietary, so far as the proportion of protein is concerned, that only a comparatively small quantity of such foods as the legumes, or pulses, is needed in order to give the necessary protein for the repair of tissue. This, at least, after the body has attained its growth.

LENTIL [1]

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Characteristics of the Pulses

The legumes, or pulses, so rich in nitrogen that they have been styled the "poor man's beef," are in very common use, especially in countries where flesh is not largely used. The pyramids were built on pulses. Not only are these foods rich in nitrogen, but this nitrogen is in a fairly available form. Only a small percentage is of a non-protein nature, so that it is to a very large extent utilized in the body.

The leguminous plants are most important in the economy of nature, for two reasons: They capture atmospheric nitrogen and store it up in their tissues, and fertilize the soil by the addition of nitrogen; and they furnish a most valuable source of nitrogen for animals and man. Whether man gets his nitrogen from animal or vegetable sources, it must eventually come from the air, having been captured by some such plants and stored up as plant nitrogen.

The chief protein, or nitrogenous principle, in the pulses is legumin, which is a vegetable casein allied to the curd of milk, and hence is a phospho-protein.

The relation between the protein in the pulses and that in milk is shown in the fact that the Chinese and Japanese coagulate, or curd, this casein, making from the soy-bean, which is especially rich in protein, a sort of bean cheese.

In cooking legumes it must be remembered that the legumin, or vegetable casein, unites easily with lime, to form an insoluble product. For this reason if beans, peas, or lentils are cooked in hard (that is, lime-containing) water, they will not soften, and consequently they will be less digestible.

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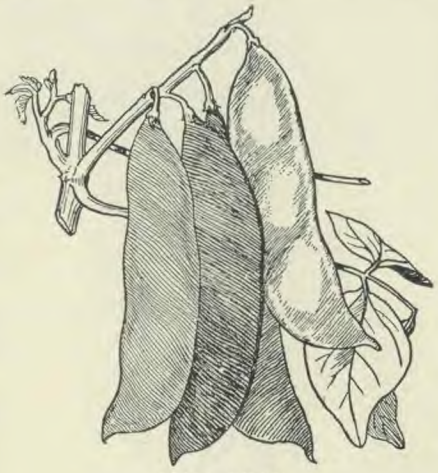
Bad Reputation of Pulses

Possibly one reason why the pulses have the name of being indigestible is that they are so often spoiled by being cooked in hard water. If sufficient soda (the bicarbonate) is added to the water to precipitate the lime before the legumes are added, the formation of this insoluble lime-casein will be avoided. If the hardness of the water is due entirely to the magnesia and *not* to lime, it will not injure the legumes.

Another fact that may have something to do with the bad reputation sustained

[1] The line cuts of peas, beans, and lentils are from one of the publications of the United States Department of Agriculture.

by some of the legumes, is that they, or some of them, are very rich in sulphur, which in the digestive tube is converted into the offensive sulphureted hydrogen gas, thus causing a flatulence of a very disagreeable and sometimes very embarrassing type. The formation of this gas is not, however, an indication that the nutrients are not being properly utilized. That is, the production of this gas is not a measure of indigestibility. This unfortunate characteristic is to an extent obviated by removing the skins and by thorough mastication.



LIMA BEAN

Lime salts are comparatively abundant in the legumes, and some have thought that in this lies the explanation of the fact that the Trappist monks and others who live largely on leguminous foods have early hardening of the arteries from the deposition of lime. It may, however, be the result of autointoxication from an excess of protein, and perhaps it matters not so much whether this protein is of flesh or plant.

SOY-BEAN

It will be noted from the table on a previous page that these foods, with a few notable exceptions, as the peanut, the soy-bean, and the chick-pea, are especially poor in fat, and when used should have added to the dietary some form of fat or oil. This may explain why one almost instinctively dashes a little olive-oil or salad oil over a plate of beans.

Salads made of the pulses and oil are well balanced so far as the protein and fat are concerned, but require more carbohydrate. A well-balanced and tasty sandwich can be made with one of the pulses, probably in form of purée, to which is added a little salad oil, and such flavor as desired. A lettuce leaf adds to the attractiveness.

In the dried form, these foods become quite hard, and unless they are soaked for a long time before cooking, they are not sufficiently softened for easy digestion.

Another characteristic of the legumes, is the large proportion of mineral matter, or salts. This, except for the large proportion of lime, is excellent; and where these foods are eaten merely to increase to a proper amount the protein content of the food, and not in excess of the protein requirement, this mineral matter is valuable to the organism.

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Special Varieties of Pulses

In addition to the peas and beans commonly used in this country, there are other pulses not so largely used which deserve more attention. The lentil is if anything more digestible than the pea

or bean, and is less likely than the bean to cause flatulence. It can be obtained at all good groceries at prices which compare favorably with a good quality of peas or beans, and it should be in more general use. It affords a pleasing variety.

The Lima bean eaten shelled, both green and dry, though slightly poorer in protein than most of the other legumes, should be added to the menu from time to time in order to give more variety.

COW-PEA

The cow-pea, which is really a bean, much used in the South where it has been grown for several generations, was imported from China, and has such a distinctive flavor that it is to all intents and purposes another vegetable, and usually one has to acquire a taste for it. In the South it is claimed that one is able to tell a Southerner by noting whether he likes cow-peas. But the cow-pea deserves to be a staple food in the North as well as in the South. Its nutritive value is much the same as the other pulses.

Another bean, the soy-bean, cultivated in this country chiefly as a fertilizer and for stock feeding, is deserving the attention of our culinary experts. Because of its high protein content it is a staple dietary article with the Chinese and Japanese, who make from it a sort of bean cheese and other highly nutritious dishes. It furnishes the "meat" to the poor of Japan, who are supposed to be essentially rice eaters. The rice, being rich in carbohydrate and poor in protein and fat, combines well with the soy-bean, which is very rich in both portein and fat.

Another variety of pea, used somewhat in the South, but not known so well as it deserves to be, is the edible-podded pea, of which there are a good many varieties. The seed can be obtained from most seedsmen. The pod is much more tender and is thicker and fleshier than in the shelling pea. It is ordinarily eaten like the string-bean.

EDIBLE-PODDED OR SUGAR PEA

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Amateur Dietetics

In showing the superiority of the dried foods — beans, peas, and cereals — to meat, it used to be customary to speak of them as containing 75 to 85 per cent nutriment, as against 20 to 30 per cent nutriment in meat. But to make a fair comparison it should be between dried beans and dried beef, when the nutritive value would be about as high as in the cereals and pulses. In fact, the nutritive value, as given in this way, means practically everything but the water, and to say that dried beans are 85 per cent nourishment, is to say that they contain only 15 per cent water.

(*Concluded on p. 503*)

HEALTHFUL COOKERY

CAKES

George E. Cornforth

THE objection is sometimes made to cakes in which soda or baking-powder is not used and which are made light by beating air into them, that they are dry and unpalatable compared with cakes made in the usual way. The reason they seem dry is because they contain no shortening (fat in some form), which is used in cakes of the ordinary kind to make them moist and tender. Cakes made light by beating depend for their lightness upon air beaten into the eggs which are used in them. Fat of any kind added to the eggs will prevent them from catching air and becoming light. Therefore shortening cannot be added to such cakes in the usual way. But it is possible to add a little oil to cakes of this kind if it is added at the right time and in the right way, and this makes the cake more moist and more tender.

In making cake always get all utensils ready and have all ingredients measured or weighed out and ready for use before beginning to make the cake. Use a tin measuring cup, not a common earthenware cup, for measuring the ingredients.

Following is a recipe for a cake in which a little oil is used: —

Cake With Oil

3 eggs
¼ teaspoon salt
¼ cup boiling water
1 cup sugar
1½ cups sifted pastry flour
¼ cup cooking-oil
Grated yellow rind of one lemon.

Break the eggs into an earthenware mixing bowl. Set the bowl in a pan of hot water. Add the salt to the eggs. Beat the eggs with a Dover egg beater till they become light and stiff. Beat the boiling water into the eggs and beat again till stiff. Gradually beat in the sugar, adding it a little at a time, and beating well between the additions of sugar. Beat in the lemon rind. Now comes the most particular part of the making of the cake — the folding in of the flour. It is easy, if care is not taken, to work out all the air that has been beaten into the batter, and the air is what is depended upon to make the cake light. A flat wire whip is the best utensil to use in folding in the flour. Sift a little of the flour over the top of the stiffly beaten batter. Fold it in by dipping the folder edgewise down at the side of the bowl and lifting it up flatwise through the center, placing that which is lifted on some other part of the batter. When this flour is partly folded in, sift on more flour and fold it in in the same way. When about half of the flour has been folded in, pour a little of the oil over the flour when it is sifted over the batter, and fold the oil and flour in together. Continue folding flour and oil in till all the flour and oil have been used. But do not fold a stroke more than is necessary to get the flour and oil completely blended with the batter. Pour at once into a cake tin which has a piece of oiled paper fitted into the bottom. Do not oil the sides of the tin. Bake in a moderate oven till a broom straw run into the cake comes out clean. When the cake is taken from the oven, turn it upside down, placing something under the edge of the tin so that air can circulate under the tin. Then if the cake falls, it will fall upward and be lighter. When the cake is cool, it can be removed from the tin by running a knife around the sides of the cake.

By baking this batter in three pie tins it can be used for a layer cake. It will not be necessary to fit oiled paper to the bottom of the tins. Instead, oil the tins, then sprinkle them with sugar or flour. This batter may also be baked in the form of cup cakes.

It should be remembered that cakes of this kind depend for their lightness entirely upon the *method* of making them. The oil can be added to the cake only at the time, in the process of making, and in the way, the recipe describes.

ILLUSTRATING USE OF ORNAMENTING SYRINGE IN CAKE DECORATING

Oil can be added to angel cake, and it will be more tender. Following is a recipe: —

Angel Cake

1 cup of egg whites
1 tablespoon lemon-juice
½ pound sugar
¼ pound pastry flour
¼ teaspoon salt
1 teaspoon vanilla
¼ cup oil

Sift the flour and sugar together. Add the salt to the whites and beat them till creamy. Add the lemon-juice and beat till stiff and dry. Beat in the vanilla. Then sift some of the flour and sugar mixture over the stiffly beaten whites. Partly fold it in with a few strokes. Sift on more flour and sugar and fold again. After about half the flour and sugar has been folded in, pour a little oil over the flour and sugar when it is sifted on the batter, and fold the flour, sugar, and oil in together. Then sift on more sugar and flour and pour on more oil and fold again. Continue till all the sugar, flour, and oil have been folded in, but do not fold a stroke more than is necessary to get the ingredients together, because too much folding works the air out and makes the cake less light.

Perhaps this cake will be nicest baked in a round tin having a hole in the middle. It is not necessary to oil the tin nor to fit paper into it. Only wet it with cold water just before pouring the batter into it. Bake the cake in a moderate oven, and when it is done turn it upside down to cool. If this batter is baked in the form of cup cakes and the cakes are frosted, they may be called angel cakelets.

Molasses Cake

3 eggs
¼ teaspoon salt
½ cup sugar
⅔ cup molasses
1½ cups sifted pastry flour
1 tablespoon browned flour
¼ cup oil

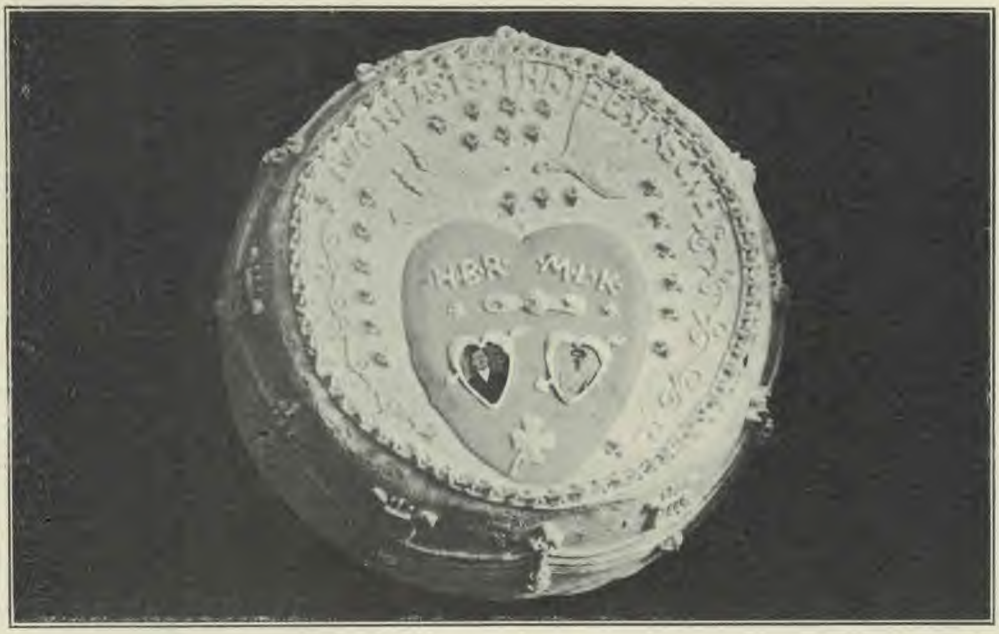
Break the eggs into a mixing bowl. Add the salt. Set the bowl in a pan of hot water. Beat the eggs till they are light and stiff. Gradually beat in the sugar and beat till the batter is very stiff. Have the molasses heating while the eggs are being beaten. When the egg and sugar mixture is beaten very stiff, pour the boiling molasses in a fine stream into the eggs, and fold it in with a wire folder. As the hot, frothy molasses is folded in, the batter rises considerably. Then fold the white and browned flour and the oil into this batter according to the directions for the folding in of the flour and oil in the first recipe. Pour into two small bread tins, into the bottom of which oiled paper has been fitted. Bake in a very moderate oven. Anything made with molasses scorches easily. The cake will be nicer if baked as a thin cake than if baked as a deep loaf.

A fruit-cake which seems to me to be superior to the usual fruit-cake is made as follows: —

Fruit-Cake

6 oz. sugar
6 eggs
5 oz. flour
¼ cup rich cream
½ pound finely chopped walnuts
¾ pound raisins cut into pieces
¼ pound citron cut into small pieces
A few grains salt

Separate the whites from the yolks of the eggs. Beat the yolks till stiff and lemon colored. Beat in the sugar a little at a time and continue beating till the mixture is very stiff. Add the salt to the whites and beat them till stiff and dry. Pour the yolk mixture into the whites. Sift on a little flour and sprinkle over a few nuts. Fold with three or four strokes. Sift on more flour, sprinkle on more nuts and some raisins and citron, and fold again. Sift on more flour, sprinkle on



WEDDING-CAKE

This and the birthday cakes were decorated by Mr. John A. Wahlen, Melrose, Mass.

more nuts, raisins, and citron, and pour over a little of the cream, then fold again. Continue thus till all the ingredients are used, but do not fold one stroke more than is necessary to mix the ingredients. Too much folding works the air out and makes the cake heavy. Pour the mixture into two bread tins, into the bottom of which oiled paper has been fitted. Bake in a very moderate oven one hour.

The citron can be cut up easily if it is steamed a few minutes to soften it.

Instead of baking the cake, I prefer to steam it two or three hours and then bake it long enough to dry it off. This cake may be kept a considerable length of time.

Date Loaf Cake

Some time ago there was published a recipe for date loaf cake. The cake is so nice that I desired to give the readers of LIFE AND HEALTH the benefit of the recipe. Therefore with the permission of the editor of the *Boston Cooking School Magazine,* I am including the recipe in this article.

1 lb. stoned dates, not chopped
1 lb. walnut meats, not chopped
Sift over these
1 cup pastry flour
½ teaspoon salt
Which have been sifted together.
With a spoon mix the flour with the nuts and dates.
Add
1 cup sugar
Mix well again.
Then mix with these ingredients
4 egg yolks, well beaten
1 teaspoon vanilla
Then very carefully fold in the
4 egg whites beaten dry.
Turn into small bread tins, into the bottom of which oiled paper has been fitted, and bake in a slow oven one hour.

Because this seems to be a peculiar recipe do not think there is a mistake in it, as some readers did when it was first published in the *Boston Cooking School Magazine,* and not following the recipe exactly but changing it to what they thought it ought to be, they failed to make a good cake, and then laid the blame to the recipe. If the recipe is followed exactly, something very nice will be the result. Notice the dates are not chopped but only stoned. The nuts are used just as they come from the shell.

Cake Decorating

When it is desired to put a fancy decoration on a cake, the cake is first covered

BIRTHDAY CAKE

with a smooth frosting, which is allowed to dry. This foundation frosting is made of beaten whites of eggs and powdered sugar beaten together in the proportion of two egg whites to one-half pound of sugar, a few drops of lemon-juice being added to the whites when they are beaten. When the foundation is hard, the design is drawn on it with a pencil. For the ornamenting, a mixture of whites of eggs and powdered sugar similar to that used for the foundation is used, with a little more sugar added so as to make it stiff enough to hold its shape. This mixture is put into an ornamenting syringe to which tubes of many different shapes can be attached for making various ornaments, such as leaves, flowers, stars, scrolls, and by following with this tool the lines drawn on the foundation frosting with a pencil the desired design is put on the cake.

BIRTHDAY CAKE

A variety of ornaments made of sugar, such as flowers, borders, and complicated designs, can be bought at confectioners' supply houses, and with a little frosting these can be fastened to the foundation to make designs which could not be put on with the syringe.

If it is desired to put a design on a cake in colors, powdered sugar may be stirred into a teaspoonful of strawberry-juice or cranberry-juice till it is stiff enough to hold its shape when put on the cake, or powdered sugar may be stirred into the yolk of an egg to make a yellow color, or spinach-juice may be used to make a green color.

THREE WAYS OF USING LEGUMES

George E. Cornforth

LENTILS were popular thirty-seven hundred years ago. A Hindu proverb says, "Rice is good, but lentils are my life." Some years ago a young man from one of the northern countries of Europe told me a way that soup is made from lentils in his country. The skins, or hulls, of the brown or German lentils are the dark part, the part which gives a dark color to anything made from them. The inside of the lentils is yellow. To make a light-colored, mild-flavored soup the hulls are removed before cooking. This is done by grinding the raw lentils through a coffee-mill or food-chopper, not grinding them fine, but grinding them enough to break the hulls and loosen them from their contents. Then when the lentils are washed in cold water, the hulls rise to the top and can be poured off.

Prepare one cup of lentils as already described. To what remains after the hulls have been poured off, add one-half cup of well-washed rice, and cook slowly till the rice is tender and the lentils are thoroughly softened and cooked to a pulp. Care must be taken that the pulp does not stick to the bottom of the dish and become scorched. When well-cooked, the whole may be rubbed through a colander, or the soup may be made without rubbing the pulp through a colander. Then thin the soup to the proper consistency with milk or cream, or water may be used and two or three tablespoons of vegetable oil or peanut butter added; salt as desired.

Baked Red Lentils With Cream Sauce

As they are bought, the red lentils have no hulls on them. They look like split peas, but are very much smaller.

Wash one pint of red lentils and allow them to soak in cold water overnight. In the morning put them into a baking pan. Add one teaspoon salt, two tablespoons cooking-oil, one clove of garlic cut fine, if desired, and hot water to cover them. Put into the oven and bake very slowly for two hours or longer, adding boiling water when necessary. When done, they should be baked down dry. Serve with cream sauce made by heating one pint of rich milk in a double boiler, and thickening it with one-fourth cup of flour stirred smooth with a little cold water, adding one-half teaspoon of salt.

Lima Bean Salad

After soaking, slowly stew one cup of Lima beans till tender but not broken, which will require three or four hours, or perhaps longer if the beans are old. They should be stewed down dry, or nearly so. If any liquid remains, it should be drained off; it can be used in soup. When the beans are cold, add to them one-fourth cup of chopped ripe olives, one hard-boiled egg yolk, chopped, and sufficient mayonnaise salad dressing to moisten (about two thirds of a cup), or French dressing may be used. Serve on lettuce leaves, and sprinkle chopped pecan meats or walnut meats over the salad.

LEGUMINOUS FOODS, OR PULSES

(*Concluded from page 498*)

Now when these dried beans are cooked and water is added, the nutritive value is reduced to about that of meat when it is cooked.

Perhaps such claims for the superiority of vegetable foods are not put forth so frequently as they were some years ago. There are other and better grounds on which to base the superiority of the vegetable foods.

It is true that, when considering the economic side of the question, the price per pound, this nutritive value may have considerable force.

EDITORIAL

NATURE AND IMPORTANCE OF DIET

BEFORE a section of the International Hygiene Congress (Washington, September, 1912) Dr. Med. W. Plönies, of Hanover, Germany, read a paper which was afterward printed in full in the *Medical Review of Reviews*, January, 1913. The full title of the paper is: "On the Nature and Importance of Diet as a Weighty Factor in Severe Diseases of the Stomach and Intestines, in Troubles of Metabolism, Kidney Troubles, Disorders of the Circulation, in Pulmonary Diseases, and in Nervous and Mental Diseases." Truly a comprehensive view of the importance of diet as a factor in the causation of health and disease. The doctor begins his paper with the statement: —

> "The great importance of diet in connection with the numerous ailments of the body is due to the fact that, given a properly regulated diet, the latter in itself is able to correct, in a certain and lasting way, the disorders of the gastro-intestinal chemical process, the process of fermentation and decomposition of food."

This is decidedly more optimistic than the pronouncements of Herter referred to in former issues. Herter's work was based quite largely on laboratory research, which, however, was checked by bedside experience. The present paper seems to be based entirely on bedside experience with almost a show of contempt for the work of the laboratories. His rather startling claims, and his tendency to set entirely at naught the work of other scientists, makes one read him with caution. His paper does not give any evidence of more than a casual knowledge of bacteriology, and the fact that his statements are in violent variance with Metchnikoff, Herter, and other laboratory workers should be kept in remembrance. But, notwithstanding this, Dr. Plönies' paper is still worthy of respectful attention. As to the far-reaching effect of diet, he says: —

> "A dietary treatment is of itself able to bring about the immediate and lasting dispersion of the extremely numerous irritation symptoms which are observed in the brain,— and consequently in the mind,— in the cranial nerves, and in the organs of sense, in the throat, in the heart and lungs, in the back, and even in the extremities. These are cases in which up till the present time medicines could have, at the most, only a transitory effect, or must have failed altogether, for here medicines alone could not possibly benefit, owing to the continued existence of the predisposing cause, and to the impossibility of removing the latter by medicines alone. These are disorders which, having been regarded as of nervous origin, have hitherto occupied the attention of specialists for nerve diseases, and which even to a certain extent assert their place in the text-books as independent diseases, although they are in fact nothing more than symptoms of a disease."

The doctor's claims are not characterized by an excess of modesty, and it must be conceded that if his contention can be sustained, our present methods of treating disease ought to go into oblivion with those of the Chinese doctors.

Plönies agrees with Metchnikoff, Herter, and others, that a large number of the diseases of body and mind originate in the intestinal tract, but he differs materially as to the location of the putrefactive processes, for he says that —

> "only the stomach and small intestine need be considered, as the decomposition processes in the large intestine, in which the colon bacteria play a part, are, as is well known, of a physiological nature, their principal function being probably to render accessible to the process of resorption the nutritive salts of cellulose."

His aim is to prevent fermentation and decomposition in the stomach and small intestine. To this end, the food must be so finely divided or so thoroughly masticated as to avoid injury to the irritable stomach and intestinal walls. He believes that examinations for the purpose of estimating the amount of hydrochloric acid in the stomach are absolutely valueless as a guide for the proper prescribing of a dietary, and that the information obtained in this way does not pay for the distress it causes the patient, and for the possible danger of injury; and those who know something of the vagaries that have at one time or another been foisted on suffering humanity as scientific examination of the stomach contents, will be inclined to think that he is right. He denies that there is such a thing as digestive trouble secondary to nervous trouble. The trouble always originates, he says, in the digestive system, and the nervous trouble follows, though it may be the first observed by the patient and others.

Among the articles which ferment and decompose, and which should therefore be stricken from the dietary of patients, is *sugar,* not only cane-sugar, but also fruit-sugar and milk-sugar. Of course, fruit of all kinds, containing sugar, is rigidly excluded, as is also a vegetarian régime. These dietaries, he says,—

> "not only aggravate the primary stomach complaint, but have also a gravely prejudicial effect on the lesions of the large intestine usually present at the same time. Multiplying the fermentations and decompositions, they intensify the atony of the intestine which is brought about by the toxins of these processes, and have frequently enough a pernicious influence on a possible latent appendicitis, or on lesions of the large intestines, but above all on the gravely disordered functions of the small intestine."

He further urges the *total exclusion of fat and butter.* Even milk is tabooed, not only on account of the sugar, but because of the butter content. He is convinced that in a diseased digestive tract all fats ferment with the formation of irritant fatty acids. In the convalescent stage he permits the use of butter because it is more easily digested than other fats.

One has always to keep in mind the tendencies of doctors to generalize freely from their personal experiences. Hence one can understand that the doctor himself may have had trouble with these particular foods, or may have begun his studies in a prejudicial attitude; for there are unquestionable cases where physicians have treated patients successfully, relying almost entirely on the foods that Plönies condemns. Moreover, he seems, if we may judge by his paper, to use practically the same dietary for all manner of digestive disorders, irrespective of the kind of bacteria that are doing the damage. His dietary, in a few words, is abandonment of all sugars and fats, all fruits and vegetables, and the restriction of the patient practically to cereals and proteins. To quote: —

> "As starch, white of egg, and lean meat do not tend to produce fermentation and decomposition in the intestinal tract, these substances, in their different forms, must serve for the nourishment of such invalids. Starch is best given in the form of dry toast or rolls three days old, which forms of bread are very readily broken up by the act of mastication. Roasted wheaten flour, barley meal, oatmeal, rolled oats, or barley passed through a hair sieve, potato sago, groats, rice soaked for twelve hours, or flaked rice may be given in the form of soup or porridge made with water, to which a little salt is added."

Graham bread, as a matter of course, he forbids, as being too irritating for the intestinal mucous membrane. Instead of checking the results of his work by bacterial examinations of the intestinal contents and by chemical examinations of the excreta, he takes the very convenient method of measuring the stomach height, the width of the colon, and the width of the heart, which he is assured, he is perfectly able to do, and he is quite certain that he knows the significance of these various measurements.

He very strongly urges *rest* as a therapeutic measure, a very sensible suggestion, by the way; and in severe toxic albuminuria, he permanently forbids the use of alcohol, tobacco, coffee, and highly spiced foods.

It may be interesting to know some of the diseases he proposes to cure by purely dietetic means. The list includes: Gall-stone disorder in the early stage, appendicitis, sciatica, lumbago, gouty manifestations, emaciation if not too severe, anemia, diabetes, heart-disease, asthma in many cases, tuberculosis, mégrim headaches, vertigo, certain mental disturbances, and especially neurasthenia, sleeplessness, and insanity. Regarding the relief of arteriosclerosis by dietetic measures, he is not so sanguine.

For drugs, he does not seem to have very much use. He objects strenuously to the use of purgatives for constipation, of heart stimulants for cardiac disease, and of hypnotics for insomnia; but if we were to take these away, the ordinary physician would have very little to fall back upon in the treatment of the cases that usually come to him for treatment. Plönies says:—

> "After the factor of rest, the dietetic treatment is, for a very great number of most important disturbances and diseases, the most influential factor in the cure. . . . We must at length do away altogether with the old routine of palliative treatment, which is good for nothing but to prescribe a remedy for every disorder, never asking whence the disorder originates, to what primary malady it owes its moving cause, and, above all, what further injuries of the body are involved in the overlooking of this primary disease."

For the prevention of tuberculosis he recommends suckling the child till completion of the first year, cautious feeding during the following years of childhood, in order to prevent decompositions, and carefully watching the child during the later years of childhood, with immediate treatment of even trifling gastro-enteric diseases.

Though he forbids all sugar and fruit to patients, he does not place this restriction on healthy persons, and as soon as patients can tolerate these foods, he adds them cautiously to the menu.

While we are not prepared to accept *in toto* the dietetic program of Plönies, we believe that he is sound in the contention that the intestinal tract is the place of origin of a very large proportion of diseases, physical and mental.

International School Hygiene Congress

THE Fourth International Congress on School Hygiene (the first to be held in America), which convened in Buffalo August 25-30, was one of the most important gatherings ever held in this country, not only because it concerned the practise of hygiene at that period of life when the health is apt to be most markedly affected by right or wrong environment and habits, but also because of the eminence of some of the contributors to the program.

The scope of the work of the congress can be partly appreciated from the fact that each of the following bodies contributed its share to the program: The school feeding committee of the American Home Economics Society, the National Mouth Hygiene Association, the American Federation of Sex Hygiene, the Society for the Prevention of Blindness, the Society of Illuminating Engineers, the American Physical Education Association, the Society for the Prevention of Tuberculosis, the Society of Directors of Physical Education in Colleges; and in addition specialists contributed papers on such subjects as the Binet-Simon test, and the mentally deficient child.

* * *

A Crowded Program

As is usually the case in large congresses, there were a number of simultaneous meetings (five in this case), and a member interested in more than one topic was in a position similar to a person attempting to view the performances in a five-ring circus with each ring in a separate tent. Seeing one, he would miss the rest. Not infrequently one might have to choose between two, or even three or more, topics of equal interest under consideration at the same hour. A measure adopted at the International Tuberculosis Congress which met in Washington in 1908 — the printing, for the use of all members, of abstracts of all papers to be presented to the congress — might have enabled members the better to choose the section which they should attend, and would have given some knowledge of the papers read in the sections not attended. It is a matter for regret that this printing of abstracts is not a regular feature of all congresses which divide up into a number of simultaneous sessions.

* * *

Varying Emphasis

ANOTHER feature that might puzzle the uninitiated was the varying emphasis laid on different phases of school hygiene in the different sections. This is illustrated by the words of a member who came into one section from another: "I have just come from a room where I learned that the most important thing in school hygiene is care of the teeth, and in this room I learn that school lunches is the all-important requisite. I suggest another very important matter for consideration, one that seems to have been entirely ignored by this congress, and that is the clothing of the children." According to the session one happened to be attending, he might get the notion that school hygiene consists essentially in a proper arrangement of the light, windows, blackboards, etc., or in the care of the teeth, or in bodily posture, shape and size of desks, etc., or in rest and recreation after each study period, or in school lunches, or in sex hygiene, or in medical inspection and prevention of in-

fection. But while there was a varying emphasis according to the varying viewpoint, there was on the whole an avoidance of extreme faddism, and a realization of the fact that not one factor, but many, constitute school hygiene. The net result of the convention is doubtless a realization on the part of all who attended, that school hygiene is a many-sided affair, and that to secure the highest efficiency in the rising generation it is important to give careful attention to all these phases.

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Abnormal as Well as Normal

NOT only the so-called normal children and their needs received attention, but the abnormal as well. Not only should the exceptional child be segregated from the normal child for his own good as well as for the good of the normal child, but he should have such educational advantages as will best fit him for a position of comparative usefulness and enjoyment of life; and not only should the exceptional child be thus cared for, but it is the duty of society to see to it that exceptional or defective children are no longer propagated. Dr. Charles W. Eliot, president emeritus of Harvard University and president of the congress, in his opening address rather startled the audience with what may have seemed to them as revolutionary doctrine. He said, in part: —

"It is the plain duty of the State to provide segregation of the defective, the insane, and the habitual criminal, in order to prevent the breeding of human beings from such stock. It is not yet clear how good breeding can be promoted among free men and women, but it is clear how bad breeding can and should be prevented."

The doctor here hints at a measure already adopted in some States, namely, the sterilization of the unfit. Among other measures favored by Dr. Eliot were medical inspection of schoolchildren, and the teaching of sex hygiene in the schools. He believes that prostitutes are usually mentally defective, and that to an extent prostitution may be prevented by the correction in youth of things that make for feeble-mindedness, and by the institutional care of those who are feeble-minded by heredity. He advocated shorter hours for factory work and the elimination of child labor, and he would improve the condition of the workers by doing away with "uninteresting and worrisome work, done without cheerful motive, and therefore without enjoyment." And he would eliminate any school work that resembles factory work in this regard, and so he would have "short periods of school work for strenuous attention," and much work of the kind in which the child takes interest.

This speech of the president, perhaps, epitomized the work of the congress, and as one listened to Dr. Eliot, the memory of far-gone days returned,— memories of the mental rebellions against the existing order of things, repressed because of a desire to be law-abiding,— and no doubt the doctor would have received loud applause from the schoolchildren of that generation, as he doubtless would from the children of this generation, for the sentiments which he expressed.

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Teaching Sex Hygiene

ONE of the most important sessions of the congress related to sex hygiene, or rather the teaching of sex hygiene in the schools. There seemed to be no doubt in the mind of the speakers that the time has come for a change in the attitude of the schools to this subject, and that the policy of silence cannot be longer continued without danger to the morals and the health of the rising generation. Dr. Eliot in the opening address of the session on sex hygiene said: —

"A remarkable change in public opinion has taken place in regard to sex hygiene, using the term in its broadest sense. The policy of silence has been almost universal. Medical discoveries have contributed to the shift in public opinion, which has also been moved by the many signs of physical deterioration consequent upon the rush to city life. Fathers and mothers feel a new duty toward their children. Churches take a new interest. The most important question for us to consider is, What force can now be put into play against the formidable evils which gravely threaten

the very life of the race? No one force or agency can be completely relied upon."

Dr. Eliot said that the attack must be made against the three principal causes of the present evil conditions,— lust in men, mental deficiency in the women who supply the demands of the men, and the greed of the wretches who commercialize the traffic. Continuing, the doctor said: —

"Defensive agencies against lust include full occupation of mind and body, manly sports, ambition and energy in the earning of a livelihood, timely knowledge, temperance in food and drink, and delivery from mischievous transmitted belief. The best source of information is the parent, but schools, churches, and other agencies must be utilized. The public press must aid. It must be made impossible for either young men or young women to plead ignorance as an excuse. It is not likely that any short or easy road can be found to the redemption from licentiousness of males. There is, therefore, all the more reason for entering at once on the best roads that can be found that lead in the desired direction.

"Commercialized vice should be attacked in all its forms by all the powers of law. The ancient policies of toleration and licensed segregation and regulation must be uprooted. Segregation nowhere has been successful, even in Japan, where it has existed for centuries."

"Public progress in regard to sex hygiene and eugenics is to be procured chiefly through educational methods. The work must be done delicately, without morbid suggestion, without interference with parental rights or religious convictions, and in general, in a pure, high-minded, disinterested way."

Mrs. Ella Flagg Young, superintendent of Chicago schools, said that the board of education of Chicago had spent ten thousand dollars in educating adults in sex hygiene, and that this fall they are ready to begin in the high schools, under the direction of physicians selected because of their training as physicians and the high moral tone that would pervade their presentations on the subject.

Dr. Hugh Cabot, of Boston, believes that the sound majority of the people is against those who oppose the discussion of this question. He said, in part: —

"The dangers arising from the mismanagement of the sex instinct are increasing. The sex instinct should be a potent force in the determination of character, but our system of ignorance and denial has tended to break down rather than build up."

"To secure comprehension, instruction must be given early in life and be continuous and progressive, and must teach the true nature and effect of the sex instinct. It must be given by men and women of breadth and strength of character, and must not be isolated in form."

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Alternating Rest With Study

Professor Burnham (pedagogy and school hygiene), of Clark University, gave a plausible explanation of why a person sometimes loses completely the memory of events not only at the time of an accident, but for some time before. According to his explanation, it takes some time for a memory to be perfected; and in case of a sudden shock, the memories not yet completely formed are wiped out, as it were. This theory seems to be borne out by experiment in the psychological laboratory. For instance, the memory of some fact brought to the mind can be completely obliterated by calling attention immediately to some other object, whereas, if a period of rest is allowed between the acquisition of the first fact and directing the attention to some other object, the memory of the first will be retained.

The practical bearing of this is, according to Professor Burnham, that hasty skipping from one subject to another, in order to economize time, defeats itself. He believes that poor teachers, by affording pupils periods of inattention, act as a safety-valve, a means of salvation for the pupils from the ambition of over-zealous teachers, or, as he puts it: "Inattention of pupils is their salvation, and uninteresting teachers are a necessity in order to give pupils a rest."

This would not, of course, be the case if all teachers realized the value of frequent periods of rest and relaxation in teaching. The pupil who whispers and laughs over his lesson, thereby getting an occasional relaxation, will conserve his health better than the plodding grind, and will in the end know more of the subject.

The feverish rush-habit, started in the class-room and fostered by modern curriculums, shows its pernicious effect in

later life. Many of our most cultured people never have time to rest. As Burnham says: "Vacation is a state of mind, not a situation," and only a radical change in the attitude of mind would make a vacation an efficient rest for such persons.

We need more time for recess, and better distribution of the time of recess; and teachers should pause after giving some important fact; and during the relaxation the pupils will more firmly fix the fact than if their minds were immediately called to some other topic.

The writer, from his experience both as a pupil and as a teacher, feels confident that Professor Burnham has stated a very important pedagogic law, on the observance of which depend both the mental and the physical health of pupils.

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Has Not Quite Found Itself

EARL W. MAYO, a competent writer on disease prevention from the social side, has given in the *Outlook* of September 6 a characterization of the School Hygiene Congress which is well worth reproducing. He says: —

"Most of the delegates to the congress were medical men or educators, yet the congress was unlike either a convocation of physicians or a pedagogical convention. It suggested rather an assemblage of men and women representing a new profession, a profession that has not quite found itself. There was the keenest interest in the comparison of ideas that have been evolved from practical experience in different countries. It was evident that the practise of school hygiene has not yet become fully standardized. Different communities have taken up different divisions of the main problem. In some cities special attention has been given to medical inspection, in others to the provision of sanitary school buildings, and in others to the instruction of mentally exceptional children, while in all there are important and impressive problems that have received little or no attention."

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Flies and Infantile Paralysis

AT the time of the International Hygiene Congress in Washington, data seemed to be accumulating pointing to the view that the stable-fly might be an important factor in the transmission of infantile paralysis. More recently experimental work has raised a question as to the possible agency of the stable-fly in this disease.

At Buffalo, in connection with the School Hygiene Congress, Dr. Rowland O. Meisenbach exhibited a number of animals in various stages of paralysis, and some dead, as a result of feeding them with grubs or maggots which had fed on the carcasses of chickens dead of limberneck. The animals still alive had symptoms akin to the human disease infantile paralysis, and those that died, died of paralysis of respiration.

It seems that Dr. Saunders, of St. Louis, first advanced the theory that the larvæ of flies cause infantile paralysis. In Arkansas there was an epidemic of infantile paralysis, and a concurrent epizootic of limberneck in the fowls, a disease manifested by paralysis of the neck muscles. Dr. Saunders discovered that the larvæ of flies had something to do with both epidemics; and by feeding some of the larvæ to animals, he succeeded in producing paralysis. He asserts that in his belief it is not the larvæ of the common house-fly that transmit the disease, but of a fly that lives largely on dead flesh, and that is often attracted to the kitchen by the cooking of cabbage.

This experimental work is only suggestive, and opens up the field for further investigation. It is some years since it was first noticed that infantile paralysis is often accompanied by paralysis among the lower animals. It is possible that it may yet prove to be primarily an animal disease, transmitted only occasionally to human beings, as is the case with bubonic plague.

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Work and Long Life

THE *Outlook*, August 2, commenting on the apparent fact that men now work ten years longer than did their grandfathers, gives, it seems to us, one reason for the increased longevity of certain classes, which, though not new, is apt to be forgotten: —

"Work, and the interest which goes with it, is undoubtedly a determining element in longevity. The living brain keeps the body

alive, which is probably the reason why intellectual men have the greatest chance of long life. The elderly man of active habits who retires not only from business but from all kinds of work, invites rapid decline of vitality."

This does not, however, mean that the harder one works the longer he will live, for —

"there must be a moderation in work; an old man cannot drive his faculties with impunity."

Cheerfulness is given as another element of longevity, but it is stated that the veterans who decline to be placed on the retired list, though differing in their habits, all agree in emphasizing work as the best conservator of youth.

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Country Slums?

I HAVE recently received a letter from a friend, a nurse who has been compelled to witness in her ministrations in the country some unspeakable things, against which she hopes LIFE AND HEALTH will continue to raise a voice. Every one of these practises which she mentions is an invitation to disease, a destroyer of efficiency, and an agency in hastening the advent of the undertaker. Here are some of them: —

"Fowls are permitted to leave discharges on the loose boards over the well, to be washed down with the first rain; toilets without vaults, mere shacks set on the ground, with an opening left for the chickens, which keep them regularly cleaned out [choice farm eggs!]; foods cooked Saturdays for the entire week, and heated up from time to time; foods put in the refrigerator and left there indefinitely."

And she pleads: —

"Please don't stop telling that dirty milk is as bad as dirty water [Worse!—ED.]. Simply because it is strained after it comes from the barnyard does not remove the filth from dirty hands nor manure dropped from the cow. . . . Almost everywhere I go, I see something that needs correcting."

She requests also an article on "How to Make *Clean* Butter." I hope to devote a number quite largely to butter in the spring, and will give this question due attention.

This letter only illustrates the fact that is becoming apparent, that the worst conditions are not all confined to the city slums. There are conditions in the country, where we have been taught that conditions are ideal, that beggar description. Surely the visiting nurse has a splendid opportunity to do health missionary work of a most valuable kind.

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Sensible Athletics

PHYSICAL educators have long realized that present athletic methods, while giving splendid training to specialists, who do not need the training in order to make them efficient, neglect the training of the ordinary boy, who most needs physical training.

An attempt to overcome this failure of modern athletics is the athletic test for boys, so arranged that any normal boy of twelve ought with a little careful work to be able to win the first badge, boys of thirteen and over the second badge, and high-school boys the third badge.

The general idea underlying the badge test is that every boy should be physically efficient; that specialized athletics, while developing a few splendid athletes, is doing little or nothing for the average boy, who most needs physical culture; that every boy ought to try to reach a certain minimum standard of efficiency; and that the boy who is physically efficient is more likely to be an efficient and clean citizen later. It is said that in some cities the tests have increased the physical efficiency of the boys in a marked manner, as much as thirty per cent.

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Science Not a Creed

HUXLEY is credited with the statement that science commits suicide the moment it adopts a creed. The fact is, science does not and cannot adopt a creed. Creeds are adopted in the name of science, but creeds are crystallizations, and science is fluid. Its generalizations are ever subject to revision. Sects, such as medical sects, adopt creeds, and then they stultify themselves and divorce themselves from science. A creed is static; science is ever on the move. For medical

men to refuse to believe in the possibility of curing disease through adjustment of the vertebræ, would be unscientific. For osteopaths to generalize that chemicals and internal remedies cannot under any circumstances cure disease, is likewise dogma, and is suicidal.

The originator of osteopathy evidently has a keen mind, and certainly is more than an ordinary personality; and some of the things he has brought forth will probably stand fast against all opposition; but in his uncompromising attitude toward the learning of centuries and the newer pathology, Dr. Still, in my opinion, has set up a dogma which is in danger of stultifying his work and placing a bar against further progress. Fortunately, many of his followers seem to have a more open mind. Many of the "old doctor's" statements, in his last book, indicate a rather crude knowledge of pathology, and a contempt for all those later contributions of science to the art of healing which have been added since he left school many years ago.

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Beriberi in Fowls

In a paper read before the Southern Medical Association, Creighton Wellman, M. D., gives an account of experiments in which beriberi was produced in fowls by various methods. He says that not only milled rice will produce beriberi, but a diet of other single carbohydrates will produce the same result. He was able to produce the result more rapidly and more completely with cane-sugar than with milled rice, and with pure corn-starch, more slowly, but as completely as with milled rice; and with a mixed diet plus oxalic acid, he produced a condition indistinguishable from that caused by milled rice. He had the same result from semistarvation. He states his belief that the question of the cause of beriberi is far from being settled. He continues: —

"I, years ago, made the statement that in West Africa and its adjacent islands, the geographical distribution of beriberi and rice eating did not coincide. The same statement is true in the American tropics. In view of my observations it is entirely possible that the excessive use of cassava starch in Brazil, and the inordinate drinking of cane-juice by the Negroes in the Antilles during the sugar season, may have something to do with the outbreaks of beriberi which are reported from these countries."

We have recently published articles showing that man is essentially a fuel-burning engine, and that this fuel, whatever its original form in the food, all becomes sugar in its course through the body. But this does not mean, and I tried to make it plain at the time, that one can live on an exclusive carbohydrate diet. One would die much quicker on a ration of sugar and water, or starch and water, perhaps, than on water alone. The mechanism of the body requires other substances, some of them in very minute quantity, it is true; but if they are missing, there is disaster.

The following from an editorial in the *Journal A. M. A.*, of June 28, 1913, is also to the point: —

"On several occasions we have discussed some of the accessory factors of diet, drawing illustrations from recent work on beriberi and on growth and other processes. The researches on these and other subjects have shown that there are present in foods unknown substances, which, often in minute amounts, have pronounced effects on growth and other metabolic processes out of all proportion to the dynamic value. These results also show the fallacy of measuring food values solely by calories.

"No less striking are the effects of unknown constituents of foods on the resistance of animals (and doubtless of man) to certain poisons. Thus Hunt found (Bulletin 69, Hygiene Laboratory) that in some cases mice fed on certain diets recovered from forty times the dose of certain poisons fatal to mice fed on other diets. He found it possible to alter at will the resistance of these animals, and to overcome the effect of one diet by combining it with others."

ECHOES FROM THE SCHOOL HYGIENE CONGRESS

Indirect Versus Direct Light

INDIRECT light (such as that furnished by a hidden source of light reflected to the ceiling) is much less tiring to the eye than direct light. The writer, when in a back room in Larkin's establishment, lighted by the indirect method, said, "How much this seems like daylight!" Returning to his home, he took one of the electric bulbs hanging by a chain in his dining-room, and put it above the disk so that it was hidden, and was pleased to note how much more agreeable was the light than from the ordinary visible bulb. Doubtless this principle could be used with gas, and even oil, as well as with electricity.

If Light Is Well Diffused, Less Is Necessary

If light is well diffused, the ability to see, read, etc., within the limits is independent of intensity. In other words, if the light is well diffused, as daylight, or light from an indirect source, it is so even that one can see with much less illumination than if there is a broad source of light, as a lamp, in the range of vision. One who has not tried the indirect light will be surprised at the softening effect upon the eye.

Color of Light

The whiter the light, the easier it is on the eye. Tungsten [or Mazda] lamps are easier than carbon lamps. Oil lamps are supposed to be easier on the eyes than white lights like the electric light. This seeming softness is probably because of a lower brilliancy.

Position of Source of Light

If the source of light is in the field of vision, it is least tiring if on the level with the eye. Lights at the ceiling which are so situated that their rays strike the retina, are extremely trying because of the reflex attempts of the iris muscles to adjust for the unequal light.

Conservation of Eyesight

Our problem now is not how to see better, but how to see with more comfort and with less damage to the eyes.

White Blackboards

In Austria they are now using white "blackboards," made by placing ground glass in front of a white surface. A black crayon is used, and moisture is needed in order to clean the board effectually. There are two objections to the common blackboards. They are great absorbers of light, reducing the light of the desks in their vicinity, and they almost always have a glare which is very trying to the eyes.

Seeing and Thinking

Lessened ability to see causes diminished ability to think [the same is true of hearing.—ED.]. Many an apparently stupid child needs not more brains, but opportunity to see better either through properly fitted glasses or by change of position in the schoolroom. If the lighting of a defectively lighted room cannot be changed, an improvement may be made by changing the tint of the walls.

Nourishment and Deficiency

Many children go to school undernourished. They are anemic, listless, and apparently careless. Often a remarkable change can be brought about physically and mentally, and perhaps even morally, in these children by proper feeding. There are many who believe that the school will not reach its highest efficiency and will not do its full duty to the children until it has adopted a rational system of school feeding.

Food and Feeble-Mindedness

While it is conceded that it is impossible to have physical or mental efficiency with poor nutrition, it also must be recognized that nutrition will not change a bad heredity. If a child mentally defective from bad heredity is poorly nourished, it is worse off physically and mentally than it would be if it were well nourished. But we cannot hope, by nourishment or by any other method, to give a full measure of brains to the child who has not inherited them.

Minerals Needed

The body needs minerals. Without a full complement in the food of the mineral constituents of the body, children cannot thrive. The fine cereals put up in cartons, such as a certain much-advertised wheat product, contain starch without minerals or glutens. Such foods do not adequately nourish. It is possible for a person to be well fed so far as bulk is concerned and yet be starving for some ingredient. The whole-grain preparations, such as whole wheat, are not only much cheaper, but much more wholesome than the proprietary foods.

Clean Foods

We hear much nowadays about adulteration, but little or nothing about clean foods, at least in our laws; nothing about handling bread. We do not know whether the loaf of bread we purchase has been handled by a syphilitic or a tuberculous patient. We ought to have, in addition to a pure food law, a clean food law, said one member; but to this Dr. Ira S. Wile replied that the number of inspectors required to insure clean food would add so much to the cost of the food that there would be many more than at present dying of starvation.

Clothing

One speaker, a man, regretted the fact that clothing had been ignored in this congress. He believed that inadequate clothing, wet clothing, etc., may be the cause of anemia and other troubles. Another speaker, a woman, believed more attention should be given to the clothing of girls, their high-heeled shoes, tight lacing, etc.

Philadelphia School Lunches

In a Philadelphia high school, lunches furnished at cost are very popular, and the children are learning to appreciate the substantial foods, and to discard ice-cream, sweets, and the like. It had been predicted that the children would never give up their sweets and adopt a rational diet. For ten cents a well-balanced meal furnishing about seven hundred calories (or one third of a full day's ration for a child) may be obtained.

Dirty Hands

At a certain technical high school there is a sign, "Boys who are afraid of dirty hands have no place here." In the basement a lunch is served to the boys, at which a number of the boys do the serving, and they do it without washing their hands. There is no sign about clean hands. Rather a poor example of refinement and school hygiene. The boy ought to be afraid of dirty hands when he is serving food.

Tobacco Not Mentioned

Notwithstanding the fact that railway companies and other large commercial institutions are discriminating against boys who use the cigarette, on account of their lessened efficiency; and that insurance companies are noting the effect of tobacco and warning their policy-holders; and that penal institutions, like reform schools, recognize that tobacco injures the boys physically, mentally, and morally; and that many high-school principals and teachers recognize that tobacco is injurious to the boys, the writer failed to hear one protest against tobacco at the School Hygiene Congress. Prof. Wm. A. McKeever was scheduled for a paper on this subject, but it seems he did not read it.

Short Periods of Work

Specialists have come to believe that children would be much better off physically and would learn more, if after every period of close attention, either in recitation or in study, they were given a period of relaxation,—a recess. In Germany this has been carried out to the extent that the law prescribes that in every sixty-minute period, fifteen minutes shall be devoted to recess. The brief periods of intense mental activity are far more conducive to mental growth than long periods of semiinattention.

Overemphasis of the Physical

Joseph Lee, president of the Playground and Recreation Association of America, and an enthusiastic believer in play and recreation, asserted that the physical has been overemphasized in the schools. He says: "Better a stuffy school with zealous work than fresh air and muscular development with mental flabbiness." Possibly some, not understanding Mr. Lee's position, misconstrued him, and thought he was going to the other extreme. He certainly does not wish to discourage proper physical culture, but rather, the excess of physical work that is at the expense of the mental; for, after all, the mental, the part that thinks and wills, is the real person.

Importance of Medical Inspection

Fifty per cent of the illness among schoolchildren may be averted by more thorough medical inspection in the schools, if we are to believe the medical inspectors who spoke at the School Hygiene Congress.

Schoolroom and Infection

The schoolroom is not an important factor in the spread of contagion, according to some of the speakers. "Because scarlet fever and diphtheria are much less prevalent in summer and increase during the autumn, it is argued that the increase must be due to school attendance. It is, however, clearly shown by figures, derived from various cities, that the correlation is between these diseases and seasonal temperature, and not school attendance. Detailed study of cases also shows that very few cases of scarlet fever and diphtheria are contracted in school. It is otherwise with measles and whooping-cough, the spread of which seems to be greatly facilitated by school attendance."

Importance of the Teeth

That the teeth are not without importance to the intelligence of the child, was shown by Miss Cordelia L. O'Neill, principal of the Marion school of Cleveland, who exhibited six of a class of forty children who had made remarkable progress physically, mentally, and morally as the result of improved teeth and clean mouths; and by Miss Lillian Murney, principal of the Murray Hill school in Cleveland, who told of a girl of thirteen so backward in her studies that she was in a special class. Bad teeth conditions were found and corrected, the last operation being on Saturday. On the following Monday she appeared at school without her eye-glasses, and her eyes, which before had been badly crossed, were perfectly straight. Before, she was irritable and always in trouble; after the dental work, there was a great improvement in her work, in her disposition, and in the expression of her face. Within six months the impacted teeth came through, and she was promoted at once to the regular classes, and at sixteen was as attractive a girl as one is likely to see in a day's journey.

Importance of Good Mouth Conditions

The mouth is the gateway of the body. Through it passes the nourishment to support the physical being. In the past it has been neglected. Through it has passed not only food and drink, but disease germs. The National Mouth Hygiene Association has undertaken to arouse the people to a sense of the importance of a well-kept mouth.

Teeth and Morality

A boy who up to fourteen had been normal became suddenly disobedient, untruthful, and thieving. Though he had no pain in the mouth, the dentist to whom he was referred found four impacted molar teeth, the removal of which made the boy perfectly normal for about four years, at which time he stole eight hundred dollars. Another visit to the dentist resulted in the removal of two wisdom teeth, after which the boy was normal.

Diseases From Irritation of the Dental Nerve

Irritation of the nerve which supplies the teeth may and does cause blindness, deafness, insanity, paralysis, and many other diseases of the body. Pain from one tooth is often reflected to another tooth, or may be reflected to other parts of the body. Temporary blindness has been caused by irritation from a tooth, passing to the optic nerve. Paralysis has been relieved by proper treatment of the teeth. Another trouble caused by bad teeth is spasmodic contraction of the throat. In many cases there is no pain in the tooth originating the reflex trouble.

Mouth and Rheumatism

Many cases of rheumatism are the result of infection through the mouth. According to Murphy, of Chicago, and Mayo, bad mouth conditions are among the most prevalent causes of rheumatism. If one is beginning to have rheumatism, he would better consult a good dentist, have thorough work done, and then get the dentist's advice as to the home care of his mouth.

Preventive Cleansing

Most infectious diseases enter the body through the nose or mouth. If one forms a habit of thoroughly washing the mouth and spraying the nose with an antiseptic solution after exposure to infection, or at intervals during the prevalence of an epidemic, even "of cold" or tonsillitis or sore throat, much illness will be prevented.

Posture in School

Miss Jessie H. Bancroft, assistant director of physical training of public schools, New York City, who has given much study to the matter of posture in schools and out, believes that no school seats are ideal; even the adjustable seats are inefficient and are little better than torture instruments for the little bodies. One minute out of every ten should be allowed for lounging and relaxation. Moreover, she believes, with many modern doctors, that home study causes nervous breakdown.

Near-Sightedness Cured With the Strap

Dr. Howe asserts that near-sightedness, a formidable disease, may be effectually prevented by means of a ten-cent strap applied over the back, but not in the way it is often done. Dr. Howe feels positive as to this, because they have learned in Germany how to prevent near-sightedness. Formerly they had much of this trouble in the schools. Since they adopted the use of shoulder-braces, and knapsacks to the shoulder for carrying books, which hold the pupils erect, there has been a marked diminution in the amount of near-sightedness. His explanation is that in the stooping posture more blood enters the eyeball than can easily get out, causing increased pressure. This causes the two outer coats of the eye, which are somewhat elastic, to stretch; but the inner coat, the retina, being inelastic, a space is formed between this coat and the two outer coats, and in consequence, a displacement of the end of the optic nerve; and according to Dr. Howe, it is this that causes near-sightedness.

To Prevent Colds

Ellen Wallace prefers a room temperature of 65°, and advises teachers to insist on dry clothes on the pupils. If any child comes to school with a cold, send him home with the suggestion to parents to keep him out of doors as much as possible. In case colds are epidemic, it is an advantage to disinfect the school floor with formaldehyde.

Battle-Ships for Tuberculosis

The congress petitioned the United States government to place at the disposal of the various States of the Union as many of the discarded battle-ships and cruisers as possible, to be utilized for open-air schools, sanitarium schools for children, and hospital sanatoriums for adults. It is the opinion of some that the government will not accede to this, as they generally have use for their old battle-ships.

The Section Meetings

The sections of the School Hygiene Congress met in various rooms of the city hall. It was an advantage over some congresses to have all the sessions in one building, but at times at the city hall, and also at Elmwood Music Hall, where the large public meetings were held, the noise from without was so deafening that the speakers could not be heard. Buffalo needs a convention building.

School Hygiene Exhibits

The principal scientific exhibits in connection with the School Hygiene Congress were those relating to sex hygiene, oral (mouth) hygiene, and mental hygiene. There were exhibits also of school desks, and other things pertaining to school hygiene, and there were a goodly number of commercial exhibits relating to the hygiene of schools. Illustrated lectures on various topics were given daily.

Life and Health Movement

"A great movement is sweeping over the country, a social movement for the conservation of the life and health of the people. The solution of this problem of conservation is education, teaching the people how to live, and how to take care of the body."

Brussels Next

The Fifth International Congress on School Hygiene will be held in 1915 in Brussels.

CARE OF THE SICK

THE USE OF LEMONS AS A CURE FOR CONSUMPTION

Mrs. Alice Wilson

[The following article, containing quotations said to have been clipped from an Oregon paper (name not given), has been sent to us with the request that it be published. We cannot vouch for the efficiency of the remedy, but it has the merit of being simple and seemingly harmless, and is at least worth trying. It may be said in this connection that Russell's proposed cure for consumption, based on the theory of lime starvation, makes use of hydrochloric acid in connection with milk, the acid being to facilitate the assimilation of lime. We should like to have reports from those who try the lemon treatment. In any case, it would seem important to keep up the nutrition of the patient, and this can best be done by the liberal use of milk and eggs.— ED.]

PUT a dozen whole lemons into cold water and boil until soft (not too soft), roll and squeeze until all the juice is extracted, sweeten the juice enough to be palatable, and drink. Use as many as a dozen a day. Should they cause pain or looseness of the bowels, lessen the quantity, using five or six a day until better; then use a dozen again. By the time you have used five or six dozen, you will begin to gain strength and have an appetite. Of course, as you get better you need not use so many.

"Follow these directions, and we know you will never regret it if there is any help for you. *Only keep it up faithfully.*

"We know of two cases where the patients were given up by physicians, and were in the last stages of consumption, yet both were cured by using lemons according to the above directions. One lady, in particular, was bedridden and very low; she had tried everything money could procure, but all in vain. In February, to please a friend, she was persuaded to use lemons, and in April she weighed one hundred and forty pounds. She is a strong woman today, and likely to live as long as any of us.

"When people feel the need of an acid, if they would let vinegar alone and use lemons or sour apples, they would feel just as well satisfied and receive no injury."

A suggestion may not be amiss as to a good plan. When lemons are cheap, purchase several dozen, and in the following manner prepare them for use in the warm days of spring and summer, when the acids of lemons and other ripe fruits are so grateful and useful: Press your hand on the lemon and roll it back and forth briskly on the table, to make it squeeze more readily; then press the juice into a bowl or tumbler (never into tin); strain out all the seeds, as they give a bad taste.

The following from another source is worthy of a trial:—

"Lemons have been so expensive this summer that we have learned how to use every one that was bought. If any show signs of molding or drying up before we are ready to use them, we squeeze out the juice and put it into a dry jelly-glass, then pour over it a teaspoonful of olive-oil. A small piece of clean cotton cloth absorbs the oil when the juice is required, leaving the latter as fresh and

nice as when taken from the lemon. A dried lemon can be made better by a three-quarter-hour bath in fresh cold water."

Help or Cure for Catarrh

Diluted lemon-juice used to snuff up the nose is very good. Dilute several drops of lemon-juice with twice or three times as much warm water, snuff it up one nostril, with the finger closing the other nostril; then close both nostrils, retaining the liquid several minutes, holding the head either tipped backward a little or lowered very low; gently blow out the liquid and repeat the treatment to the other nostril. Gradually increase the amount of lemon-juice and decrease the amount of water, until, if possible, the pure lemon-juice is used. It is hard to do, but the results are fine. Such heroic treatment three times a day for three weeks, or in more serious cases for three months, I have been told, has cured very bad cases of catarrh. By the use of the above, nose and lips that were red and much swollen soon became normal, and the sense of smell that had almost disappeared returned.

HOW DOES THE NEGLECTED COLD LEAD TO CONSUMPTION?

[This selection from an article by John B. Huber, A. M., M. D., which appeared recently in the *New York Medical Journal*, is worthy of careful attention, for tuberculosis is an infection, and it is no exaggeration to say that every case of tuberculosis might be avoided, were reasonable care used to avoid infection.— ED.]

A YOUNG girl caught cold. You all know the symptoms. They begin with the nose and go down until the cold "settles on the chest." Sneezing, nasal obstruction, headache, coryza, at first dryness in the throat, with difficulty in swallowing and in speaking, cough, chills, and feverish sensations, pains in the chest and in the bones and joints (from the infection or toxemia in the blood).

Now this poor girl paid little attention to these symptoms; she considered that she could not afford to, because she had to work for her living. She would not, or she could not, in the cruel economic conditions which environed her, stay at home and nurse her cold until her health could be fully restored. She neglected this really serious condition, until its seriousness became converted into a tragic phase.

Instead of resting at home, she kept on working in a shop where she was employed, next to another girl suffering from consumption. Now, this other girl, who was ignorant or untrained in the prevention of consumption, coughed into the air about her working place, and was careless as to the disposition of her sputum. The germ of her disease (the bacillus of tuberculosis) became thus disseminated, so that any predisposed person working near by her, day after day, would certainly become subject to the tuberculous infection. And this pitiable result is precisely what came to pass. The poor young woman first referred to had become run down (or predisposed, as the doctors say) by reason of her neglected cold; and her tissues now provided an ideal soil for the implantation of the tubercle bacilli.

So then, her lassitude increased day by day; she felt none of her former eagerness for work; she had none of her former ability to concentrate her energies upon her task, for in truth she had but little energy left in reserve; she was easily becoming exhausted; she was losing flesh, and was becoming pale except for an unwonted pink flush; she felt her heart beat rapidly, and was beginning to breathe with difficulty on exertion. Chills became very marked, also fever; she perspired all too easily, and her cough, which she with pathetic optimism called a stomach cough and attributed to indigestion, was becoming so persistent that she got no rest by reason of it, despite

the sirups and patent medicines she was using. Finally, she noted a streak of blood in her sputum, and then in a dreadful fright she did what she should have done months before,— she sought a physician who had then, all too late, to tell her the truth.

Now this poor girl was of a family of six. She died. Her father was a drunkard, which habit easily predisposed him; he contracted consumption from his daughter, and died. The mother also succumbed, and died. And a son of eighteen years suffered the same fate — death from consumption. There was finally left in that family a little boy of six, who had a tuberculous knee-joint, from which he fortunately recovered.

Such is the history of a neglected cold, and it is one the like of which every doctor comes upon with really appalling frequency.

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Neuralgia

CASES of very severe neuralgia have been relieved repeatedly by applying a cold compress, a towel wrung out of very cold water, the full length of the spine, beginning at the base of the brain. This has brought speedy relief when other methods have failed.

Corns

THE following application made morning and evening for several days may cause the offending corn to separate so that when the foot is soaked for a while in warm water it will peel out: —

Salicylic acid, three grains; extract Indian hemp, one grain; and collodion, twenty-four minims.

This same preparation will also remove warts.

Headache

WHEN this is accompanied by rush of blood to the head, as shown by throbbing temples, flushed face, etc., give the patient a hot foot- or leg-bath, to which mustard may be added if desired to increase the counter-irritation; but, in case mustard is used, if the water is too hot it will destroy the effect of the mustard.

Apply around the neck a towel wrung out of cold water, and place a cold compress to the forehead and temples.

A remedy formerly in much vogue in case of congestive headache was bleeding. The use of leeches also afforded much relief. These remedies have now been replaced by others less heroic.

In case the headache is due to eye strain or to indigestion (frequently the case) the remedy is obvious. Under no circumstances is it wise to take the short-cut method of aborting a headache by means of a bromid or other sedative. This is equivalent to putting out the danger-signal without repairing the damaged bridge, and will sooner or later lead to disaster. Avoid all headache remedies, powders, effervescent drinks, and the like. If you cannot be certain as to the cause of your headache, consult a reliable physician and give him the opportunity to find what is the matter. It will pay in the long run.

Poison-Oak

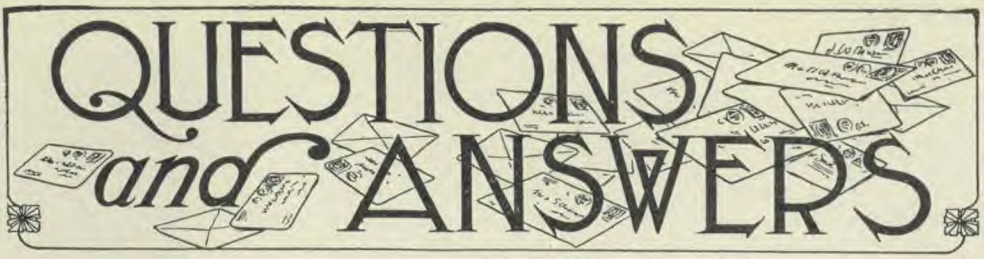
EDWARD VON ADELUNG, of Oakland, Cal., as a result of careful experiment with this poison, arrives at the following conclusion, as given in the *Interstate Medical Journal*, February, 1913: —

"The toxin of *Rhus diversiloba*, in contact with the skin of susceptible persons, causes a non-contagious dermatitis, strictly localized to the areas of contact, and not distributed by the blood or lymphatic streams. The toxin is not destroyed by 100° C. for one hour, is not volatile, and poisons 'at a distance' only through mechanical carriers. The most valuable remedy yet known is potassium permanganate, which is most effective when applied hot."

He advises as treatment: "Bearing in mind that the disorder is caused by a poison on the skin, the first thing to do in treating the dermatitis is to forestall the appearance of new patches by removing all poison from the surface. This is easily accomplished by a soap-and-hot-water bath of the whole body, especially the hair. After the bath, fresh clothing should be put on, not even wearing the shoes that were near the plants. The itching is relieved by water as hot as can be borne, which often furnishes a pleasant treatment. Remedies, palliative or curative, may then be applied. When the vesicles become infected with bacteria, the dermatitis is quite different, and will call for antiseptic or bactericidal treatment. Potassium permanganate will then be found of small value, and hot bichlorid packs of much value."

He says: "Potassium permanganate is therefore curative. It acts probably by combining chemically with the toxin, and is, therefore, more effective early and when the papulæ and vesicles are opened by vigorous rubbing with the remedy."

He states two objections to the use of permanganate: First, the brown discoloration, which, as he says, can be removed by a one-per-cent solution of oxalic acid, a violent poison which should be used with great caution. I should prefer a solution of sodium hyposulphite, which is as efficient as oxalic acid as a remover of the stain, and is not toxic. His second objection is that after the use of permanganate and oxalic acid the skin cracks, for which he uses soothing ointments and oils.



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.

Not Answered.—"My mother, about sixty years of age, has been troubled with nervousness for about seven months, and is very weak; cannot work. Would like to know if you know of some good remedy, or what to do for it. Just give me details. Let me know by return mail. Rush, please."

The above is a sample of some queries that come to this department. This one was written on a postal, and, of course, was not accompanied by return postage. It does not indicate whether the writer is a subscriber. It asks for some information I cannot give. We cannot diagnose and treat cases by mail.

One might as well write to an automobile factory and say, "My automobile won't run; please send full directions what to do with it." If the factory people wrote anything in reply, they would probably say: "Have an experienced machinist look over your machine and see what the matter is, and he can then repair it." The human machine is vastly more complex than an automobile. It cannot safely be mended by mail.

Another type of letter is represented by one which came in inquiring about corsets, but the writer did not sign her name, so there is no way to reach her by mail. This department is a *mail course*, to persons who give their names and addresses. Only incidentally, and as we may feel that it is of interest to the public, do we print the questions and answers.

Chronic Stomach Trouble.—"For six or seven years I have been troubled with gas and nervousness, and did not know till recently that these were due to acidity. Have gone to a number of physicians, of different schools, and have been tormented with medicines, diets, and mustard plasters. One doctor gave me five different kinds of medicine to be taken within the twenty-four hours — until the foolishness of it all appealed to me and I never went to him again. Later I went to another doctor, had a test meal, and found the trouble to be acid secreted with the digestive fluid. The digestion was excellent and there was no fermentation. On his advice I took five or six pints of milk daily and plenty of butter and avoided acid fruits, and was helped. I gained in weight, but after a year still suffered from the acid greatly. Then the doctor advised saline laxative. Though I obtained some help, I am still miserable after six months."

I trust that I shall not earn your ill will if I suggest to you that your trouble is partly your mind. I do not pretend to make a diagnosis at this distance, but from what you write and from what I know of similar cases, that would be my opinion.

Not that you do not have some stomach trouble, but there are hundreds of people who have stomach trouble, perhaps worse than you, and yet when asked about their health, they say they are perfectly healthy. If one questions them very closely, they say, O yes, they have a little gas on their stomach, or their stomach is sour once in a while, and they belch up a little, etc.; but they do not think of that.

Now your determination to be entirely convenienced and without any of these symptoms, may keep you observing them to your own detriment. It is cases similar to yours that are much benefited by Christian Science, for Christian Science is merely the means of teaching a person what Christianity ought always to teach, and that is, "Be content with such things as ye have."

I do not mean that a person should not strive for the highest physical attainment, but that is not obtained either by worrying or by drugging, but is obtained very largely by realizing that the blessings one does have in health more than balance the things one does not have, and by a determination to be cheerful and optimistic every day.

Fast Cure.—"My wife's youngest son, a man of about thirty-one, coming here in about a month, wishes to take the 'fast cure' for stomach trouble. His mother is a first-class nurse, but does not know how to handle a 'fast' case. Will you be so

kind as to tell us by return mail how to proceed?"

This is something that I am not very much acquainted with, and in which I have very little confidence. In my opinion it is rather a fad.

There is no question that, where one has overeaten and where the principal digestive disturbance is due to excess of nutrition, fasting is a good thing, but I think often what one needs is not a fast but a right choice of food. My advice would be to not overdo the fast cure, especially if this young man is not well nourished.

Is It Tuberculosis?—"I have had liver trouble for many years. Lately I raise a lot of phlegm at times, also feel sore under the right ribs. I have yellow complexion and eyes."

I fear you may have tuberculosis. You ought to have a careful examination by some physician who can find out what is the matter with you. I cannot do that by mail.

Psychasthenia, Possibly With a Sexual Basis.—"I am ambitious, but either too tired to make an effort, or find my mind a blank. At times it is entirely devoid of thought. I have been troubled with constipation to such an extent that even cathartics are ineffectual."

You need treatment and rest. So-called "tonics" are only a temporary benefit, and likely to leave you worse off than before. Consult a physician who can give you or prescribe for you hydrotherapy and other physiological measures, both for your constipation and for your general condition, or go to a well-appointed sanitarium. It is possible that the constipation, by causing autointoxication, may be the cause of your trouble. But cathartics will only increase your trouble. For the constipation, drink more freely of water. Before breakfast, take a tablespoonful of clean bran in the water. Avoid white bread. Eat Graham bread, or whole-wheat, and use largely of dates, figs, and stewed prunes. There are exercises which will strengthen the abdominal muscles, such as deep abdominal breathing practised at least twice a day without corsets. You are better off without corsets, by the way. Another excellent exercise is that of scrubbing the floor, or going through the motions, with no corset on. Another is walking around the room on all fours. Such exercises, if persisted in, will develop the weak abdominal muscles, so that they will do their work in preventing constipation.

When the Doctors Disagree.—"I have constant pressure at base of brain. Operation did not relieve it. Various doctors have called it "female trouble," "neurasthenia," "eye trouble," etc., and an osteopath says that a bone has slipped. Have worn five pairs of glasses. One doctor gave me oxygen, which he took out of the air with a pump. If I try to read or sew, that dreadful pressure is right there. I am constipated very badly. What do you think is the main cause of my trouble? Is cascara sagrada good for constipation? Can one have female troubles without symptoms in the abdomen? I am doing nothing but taking a cathartic and a patent female medicine."

When a dozen doctors who have seen you cannot agree as to what your trouble is, it would take a magician to tell at this distance what is the matter. The first thing a physician must do is to make an examination of his patient, and probably the reason these doctors differ so much is because they have not made a thorough examination, or else do not know how. It is impossible from the recital of a few symptoms to give any intelligent opinion as to what the difficulty may be. I have no doubt that there may be a number of things which contribute to your trouble,—the eye, the pelvic organs, etc.

Cascara is good for constipation, but I do not think it is well for a person to become accustomed to anything of that kind. Agar has the advantage that it is not a drug.

As a rule, patients with female trouble have some symptoms in the abdomen. I do not know that such symptoms are always necessarily present. You spend your money for nothing when you buy patent female medicine; it may not do you any harm, but certainly it will not do you any permanent good.

The description you have given of that oxygen doctor sounds to me very quackish. Possibly you have not represented him rightly, but I could hardly think a regular physician with a good education would tell you what you say he did.

Tooth-Wash.—"Is peroxid of hydrogen good for a daily tooth-wash?"

Yes, provided it does not eat the metal in the fillings of the teeth. You know peroxid of hydrogen will corrode metal, and you may find this objection to it. Otherwise I see no reason why it should not be used, properly diluted, as a tooth-wash.

Neurasthenia and Female Weakness.—"What is the best remedy for neurasthenia and female weakness?"

I doubt that there is any "best" remedy, unless it is rest from the conditions which cause the trouble, whether overwork, too much standing, worry, too much child-bearing, or what not.

Stimulants.—"Is drinking coffee as a stimulant as harmful as taking medicines for stimulants?"

I do not know that there is any particular difference in stimulants. When one attempts to do his work on stimulants, he is on dangerous ground, and will sooner or later find himself bankrupt physically.

Neurasthenia Without Organic Trouble.—"Can one have neurasthenia without any organic trouble? Can it cause pressure at the base of the brain?"

Yes; one can have neurasthenia without any *observable* organic trouble to cause it, that is, our present methods of diagnosis are not

sufficiently refined to detect organic trouble in many nervous conditions. However, it would be impossible to say in any case that there is no organic trouble present. It may be simply our crudeness of method that causes our failure to observe it.

Neurasthenia can cause a sensation of pressure at the base of the brain, and very often does.

Articular Rheumatism.—"We wish a suggestive diet and course of treatment for acute articular rheumatism in a little girl eleven years of age who has tendency to abnormal looseness of bowels."

A person with articular rheumatism ought to be under the personal care of a physician who can watch the heart and prescribe from day to day.

The patient should be kept quiet in bed when there is any acute inflammation, and should not be allowed to take any exercise that will strain the heart until compensation has been effected, and this must be decided by a physician. She ought to be examined for the presence of some infectious agent causing the bowel looseness.

The dietary should consist of such foods as are digestible and nutritious. A child of this age needs a good, nourishing diet. She should have abundance of food that will make flesh and blood,—milk and eggs in abundance, with bread, grains, vegetables, fruits, etc.

Water at Meals.—"I have recently seen a statement that troubles me some, for it is so different from what we have been taught. The statement is this: 'The human body is sixty-eight per cent water, and water, in order to enter the blood, must pass into the circulation with the blood, and the food in order to be normal must carry sixty-eight per cent of water.' Now is it really true that water can enter the blood only through the food? if that is so, why are we taught not to drink at meals and to wait for two hours after a meal before drinking?"

The proportion of water in the body has no necessary relation to the proportion of water necessary in the food. Quite a large proportion of the water that the body uses is produced from the food, for all the sugar and starch taken into the body are turned into carbon dioxid and water. But the body does need a large quantity of water, because water is the common carrier of the body, and it is required in all the nutritive and eliminative processes.

It is not necessary that the water should enter with the food; but recent experiments seem to indicate that digestion is better when a certain proportion of water is used with the meal than when the food is eaten dry.

Surgical Operations.—"A friend has been advised to have a surgical operation for uterine prolapse, but God says 'Ye shall not make any cuttings in your flesh.' Is there no other remedy?"

That text that there shall be no cuttings in the flesh is certainly not to be applied to surgery, but applied to the practise that the ancients had of cutting themselves before their idols, as in the case when Elijah was before the prophets of Baal, and these prophets cut themselves in order to bring fire down from heaven. This was a form of idol-worship; the prohibition in the Bible refers to this, and not at all to surgical operations.

It is impossible, in a case of this kind, for me to know whether or not an operation is necessary; this must be decided by some one who can see the patient and make a personal examination.

Beginning Tuberculosis.—"My daughter is a church-school teacher. When she comes home she is so tired that she feels as if she must go to bed at once, and it seems as if she never gets rested. Can you tell me the reason for such a worn feeling?"

I suspect that your daughter has beginning tuberculosis. Have her examined by the best talent that you can command. Do not be guided by any such consideration as that she does not cough nor expectorate. Tuberculosis in its incipient stage may not be accompanied by a cough.

Cause of Diabetes.—"Kindly tell me the cause of diabetes and anything else of interest concerning the disease."

Diabetes usually depends on the disarrangement of a function of the pancreas, namely, the secretion of a substance which governs the metabolism of sugar in the body. With the absence of this secretion, the sugar remains unburned and is secreted through the kidneys, and the nutrition of the body suffers.

Aged people may sometimes have diabetes for years and not be very much the worse for it. In young persons diabetes is usually a grave condition.

One having diabetes should be under the care of a physician who can give careful attention to the diet according to the indications of the uranalysis. It is not enough to tell the patient to do without starch and sugar, for an absolutely starchless diet may eventually cause acidosis and diabetic coma. The patient must have a certain proportion of carbohydrate, and this can be determined only by the physician who is carefully observing the case.

Insect-Borne Diseases.— More than ten diseases are communicated by mosquitoes and gnats, among them being leprosy, yellow fever, breakbone fever, and a number of others, including malaria.

To Distinguish German Measles.— A physician of long experience says that in German measles there is free perspiration throughout the disease, and that the skin is dry and hot in ordinary measles and scarlatina.

Dogs May Contract Tuberculosis.—Professor Cadiot, of a French veterinary school, asserts that dogs may contract tuberculosis and transmit the disease to human beings, but that cases of dog tuberculosis are uncommon.

Bacterial Treatment of Pellagra.— William Lamar Law, M. D., of Montgomery, Ala., reports in the *Journal A. M. A.*, of July 5, 1913, that he has used Bulgarian bacillus in tablet form in several cases of pellagra with good results.

Dry for Four Hours.— August 11 San Francisco was dry for four hours, probably the first time since Mayor Schmidt, after the earthquake and fire, prohibited the sale of liquor, as an emergency measure. According to the new State law, it is forbidden to sell liquor, give or deliver liquor, between two and six o'clock in the morning.

Modern Treatment of Diabetes.— The *Journal A. M. A.*, commenting editorially on the changing theories respecting diabetes, agrees with Minkowski "that the most desirable treatment consists, first, in a reduction of the carbohydrate; second, in a compensatory increase in the fat ration; third, in a moderate protein intake; and fourth, in caution against muscular overexertion."

Hygiene and Decency.— The notice in Italian railway coaches which is rendered in English, "For the sake of hygiene and decency do not spit," should be a hint to us when there is a tendency to use the public drinking-cup, the public towel, etc. "For hygiene and decency,"—not every infraction of such rules brings ill health, but every such infraction is a violation of the rules of common decency.

Pellagra.— Harlan Shoemaker, A. B., M. D., surgeon of the Shelby (N. C.) hospital, read an able paper on pellagra before the North Carolina State Medical Society, in June, in which he stated the following to be unfavorable to the recovery of pellagra patients: Alcohol and morphin addiction; extensive consumption of corn products; low protein diet; direct sunlight. He says also, "It certainly should be the duty of the physician to advise the female pellagrin against pregnancy."

"Dry" Dinner by Member of Parliament. — Sir Thomas Whittaker, M. P., a strong advocate of temperance, recently gave a dinner in celebration of his twenty-first anniversary as a parliamentarian, at which nothing stronger than mineral water was served. Bryan's daring innovation has found a copier even in the tight little isle. It is said that at every session less alcoholic beverage is used at parliamentary gatherings, but a meal at which only mineral water is served is unique.

Ohio Liquor League Getting Virtuous.— The Ohio Liquor League has set itself up as in opposition to the custom of women drinking in public places, and they are doing what they can to stop it. They think that by this means, they will disarm some of the sentiment against the saloon, and possibly do something to stop the onrush of the prohibition wave which they see sweeping down upon them. Their program includes the abolition of the grill-room, beer-garden, and road house. Too late, my friends!

Antityphoid Vaccination.— The French secretary of the navy has issued a circular stating that since the authorization of antitoxic vaccine by the French navy, 3,652 men have been vaccinated, that no bad results have followed in a single case, and that not one of the vaccinated persons has had typhoid fever. It would have been more convincing had he told us what percentage of unvaccinated persons under the same circumstances had fever. For aught we know, there may have been no fever in the navy.

A Great Hygienic Congress.— Dr. W. G. Ebersole, secretary of the National Oral Hygiene Association, says of the International Congress of School Hygiene that it is the most important health congress ever held in this country; for the reason that "when the individual has attained adult years, he has reached an age when health education has to be forced upon him, while in infant life he is too young to receive a deep impression. It is with the schoolchildren that the most effective work can be accomplished."

England Dealing With the Nostrum Evil. — The following are not permitted unless a satisfactory proof of good faith is furnished: Claims that remedy is unique; that maker is the "discoverer" of the remedy; that the remedy is prepared from "a famous doctor's formula;" remedies claiming to be "lightning cures" or "the only cure." Testimonials of doctors are investigated, and testimonials from druggists are objected to, as are also guaranties of cure. Alcoholic beverages are not permitted to be sold as medicines.

"U. S. Inspected and Passed."— The *Survey* of September 6 has an interesting review of Caroline Bartlett Crane's articles on bad meat, which appeared in *Pearson's Magazine* from April to July, and which we are told none of the other magazines dared publish on account of the influence of the meat slaughtering and packing interests. Any one who desires to know what the American people are eating as meat ought to read these articles or this review of them. A brief review also appeared in the August LIFE AND HEALTH, page 370.

Alcohol in Medicine.— Professor Ewald, of Berlin, has recently taken the position that alcohol no longer occupies a place of usefulness in the treatment of disease, except for certain external conditions. He says that the value of alcohol in infectious diseases has not been proved, and that it actually diminishes natural resistance. In his clinic, alcohol is administered only in severe collapse, or as a means of euthanasia. "It is probable," comments the Boston *Medical and Surgical Journal*, "that the next fifty years will see a gradual increase of this reaction, already rooted in the practise of most progressive physicians, against the indiscriminate use of alcohol."

Low Temperature Pasteurization of Milk. — The Department of Agriculture, as the result of careful experimentation, has reported that when milk is Pasteurized for thirty minutes at 145 degrees, the chemical changes are so slight that the digestibility of the proteins can hardly be effected. Moreover, at this temperature more lactic acid bacilli survive than do other germs, whereas at higher temperatures the surviving bacteria are largely putrefactive varieties. Moreover, it is cheaper to Pasteurize milk at 145 degrees than at 165 degrees, as regards both the amount of fuel required and the amount of ice required to cool the milk afterward. For this reason the department recommends the Pasteurization of milk for thirty minutes at 145 degrees.

Red Cross Seals.— Orders for printing one hundred million red cross seals for use during the holiday season were placed in July. Last

year forty million seals were sold. Distribution of the seals began about September 1, and it is hoped that before Christmas the entire 100,000,000 will be distributed, netting one million dollars for the antituberculosis campaign. The money, we understand, is to be expended locally in the districts where the seals are sold.

Bacterial Sprays for Diphtheria.— Recently it was recommended in cases of diphtheria, to spray the throat with cultures of staphylococcus, or "pus germs." The physician recommending the treatment, in a number of instances caused, by means of such a spray, the disappearance of the diphtheria growth and the convalescence of the patient. More recently a case has been reported in which the use of the staphylococcus spray was followed by tonsillitis. In the same issue of the *Journal A. M. A.* (August 6) another physician recommended a spray of lactic acid bacilli (*Bacillus acidi lactici*) for the removal of diphtheritic membranes. The latter recommendation would seem to be less likely to be followed by bad results.

Result of the Friedmann Treatment.— Recently an American with tuberculosis died in Berlin and was autopsied. According to the report of the companion of the deceased, who was a physician, the patient three weeks before had received an injection of Friedmann's serum, and felt apparently well. The post-mortem examination showed numerous tuberculous centers. Especially interesting was the fact that in the muscles of the gluteal region where the injection had been made, there was marked tuberculosis manifestation,— tubercules, giant cells, and bacilli, shorter and thicker than the human tubercle bacilli. As tuberculosis of the muscles is extremely rare, the query was naturally raised whether this tubercular focus in the muscles was not a direct result of the inoculation. It is to be remembered in this connection that a guinea-pig — injected, it is said, by Friedmann himself — showed tuberculosis lesions at the site of the inoculation. No wonder this much-heralded "cure" has come to be called the "Friedmann fiasco."

Deaths From Children's Diseases.— In the registration area of the United States (twenty-three States and some cities, containing something over sixty per cent of the entire population of the country) there were in 1911, 5,922 deaths from measles, 5,243 deaths from scarlet fever, and 6,682 deaths from whooping-cough. The deaths from smallpox were so few as to be almost negligible, and yet when there is smallpox in the neighborhood there is a scare. On the other hand, some are anxious for their children to have the measles while they are young. As has been well said, a child dead of the measles is just as dead as if it had died of smallpox. If proper care is observed, there is no need for epidemics of these children's diseases. One of the first and most important precautions is to see that children who have colds or sore throats do not expose others. They should not be allowed to attend school or other places where children congregate, until it is known that they do not have something infectious. A sore throat may be the beginning of scarlet fever or diphtheria or measles, though measles may begin in the nose; and a cough may be the beginning of whooping-cough. And it is in the early stage, before it is known just what the disease is, that it is most infectious.

Stomach Disorder Secondary to Intestinal Disorder.— A series of carefully conducted animal experiments has shown that disturbances of intestinal digestion quickly cause disturbances of stomach digestion. Animals were prepared with a number of fistulas, or doors opening into various parts of the digestive tract. When normal products of digestion were introduced into the intestine, there was a normal secretion of gastric juice, and normal discharge of the stomach contents; but when partly fermented or putrid foods were introduced into the small intestine, stomach digestion was delayed, and the secretions were decidedly altered.

The Feeding of Children.— Those were notable words by Dr. Schaleck at the recent Minneapolis meeting of the American Medical Association: "The diet of older children always needs careful supervision. The mistake of allowing them to partake indiscriminately of whatever food is served to adults is commonly made. When it is considered how often they are fed on sausage, cheese, pickles, sweets, and other indigestible food up to the limit, it seems remarkable that no more harm is done. The control over the eating is still more important when the children are affected with skin diseases, and at times a plain-milk diet becomes imperative."

Diet and Infantile Eczema.— Dr. Alfred Schaleck, professor of diseases of the skin, University of Nebraska, said at the Minneapolis meeting of the American Medical Association that most of the breast-fed infants affected with eczema suffer from some dietary error. The feeding may be insufficient, excessive, or irregular. The mother's milk may be lacking in the necessary proportion of protein and fat. This is especially the case with anemic women, in which case there may be an excess of sugar at the expense of the other constituents. Sometimes the milk is too rich, or the child is fed too often. Frequently, especially in breast feeding, there is neglect to give the child sufficient water to assist digestion. In some cases, the doctor thinks, it may be necessary to wean the child, and give a properly selected artificial food.

Hard Water and Old Age.— The London *Lancet* ridicules the idea that the use of lime-water by hardening the arteries causes old age. As this journal points out, even when water is very hard and one uses five tumblers a day, he gets barely ten grains of lime, an amount present in one pint of milk, and there are many other foods rich in lime, so that the amount taken in hard water is practically negligible. "It is probable," says the *Lancet*, "that the amount of lime taken in the food easily exceeds the quantity present in gallons of hard water." Moreover, according to this authority, the drinking of distilled water "is opposed to physiological principles and may result in injury to the organism." This is because of the difference in osmotic pressure between distilled water and the fluids of the body, which difference may cause injury to the membrane of the stomach.

Protein Immediately Eliminated.—Drs. Cathcart and Green, of Glasgow University, have recently presented additional evidence (*Biochemical Journal*, 1913, VII, 1) that the increased output of nitrogen after a protein meal is due to the breaking down of the food eaten rather than of the body tissues. The proportion of sulphur to nitrogen in the urine during starvation is 1:15. After eating albumen in which the ratio is 1:8, the ratio in the urine drops to 1:9.8, which would hardly be the case if it were coming from the tissues as during starvation. Again we face the proposition that the quantity of protein needed by the body is much smaller than has formerly been supposed.

End of "Conspiracy of Silence."— Not only in this country, where such men as Drs. Eliot and Cabot, and such women as Jane Addams, are protesting against the ostrich-head-in-sand method of dealing with sex hygiene and the venereal peril, is a more sensible attitude developing, but even in England, where a short time ago to print in a newspaper the word syphilis was a grave breach of decorum, a resolution was passed in the Seventeenth International Medical Congress regarding this subject, which has been widely disseminated and generally approved. The resolution calls attention to the ravages of syphilis, and urges the governments represented at the congress to institute efficient notification of syphilis to a sanitary authority, and to make systematic provision for the diagnosis and treatment of all cases of the disease not otherwise provided for.

Bedbugs and Typhoid Fever.— Passed Assistant Surgeon Rigs, U. S. N., has furnished evidence showing that bedbugs, in some cases at least, are responsible for the transmission of typhoid fever. At a certain post where the doctor was stationed, and where the water, food, and other conditions were under control, and there had been no cases of typhoid, there was a sudden outbreak of the disease which was so rapid in its spread that it seemed the entire post would come down with it. After every other cause had been excluded, it was learned that the disease originated with a prisoner who had come from a locality where typhoid was epidemic. He was kept in the "brig." Others who occupied adjoining cells came down with the disease. Careful investigation revealed nothing that might be the cause of transmission except bedbugs. Fumigation of the bedding and destruction of the bedbugs put a stop to the further spread of the disease. Dr. Rigs cites two other cases in his private practise where bedbugs were undoubtedly the means of transmission. He believes that "household epidemics," where one case after another in a household occurs in a community free from the usual sources of infection, are, in the majority of instances, due to the activity of the bedbug. In the language of the Italian railway spitting signs, we might say to those who harbor the disgusting little pests, "For the sake of hygiene and decency" get rid of the bedbugs.

Open-Air Schools.— For three months Boston is to have a series of lectures on open-air schools. The Boston Association for the Relief and Control of Tuberculosis, having collected photographs from all over the United States, has had colored slides made, and has secured a professional lecturer who will give his entire time to public lectures on the subject of open-air schools and their benefit upon healthy as well as ailing schoolchildren.

Typical Vaccination Scars Rare in Smallpox Patients.— Dr. C. A. Harper, of Madison, Wis., as a result of studying some eight hundred cases of smallpox, says that of this number only two had typical vaccination scars. The others were either unvaccinated, or else had scars indicating infection. He believes that it is extremely rare for a person who has been successfully vaccinated, that is, who has a typical vaccination scar, to contract smallpox.

Indian Suits Dangerous.— The coroner's physician in Brooklyn, N. Y., calls attention to the danger of children's wearing the Indian-cowboy suits which have become so popular. The fringes of these suits are very inflammable, and not a few deaths by burning have resulted because children wearing such suits came near an open flame. This physician says he knows of eleven such cases. The last one reported was a five-year-old girl, who died in the Long Island Hospital from burns received when she was playing in one of these suits around a bonfire.

Vaccination Does Protect.— Dr. P. M. Hall, of Minneapolis, in his experience of about twelve years has seen about five thousand cases of smallpox, and some very virulent epidemics, but he never saw, so he says, a death from smallpox in a person who had been vaccinated.

Favors Health Marriage.— Dr. Rupert Blue, surgeon-general of the Public Health Service, believing that more social problems will be solved by putting marriage on a health basis than in any other way, recommends that States adopt laws making necessary the presentation of health certificates before marriage licenses are issued.

Baby Eats Free Pills.— Recently a Buffalo baby picked up a package of free pills which had been thrown into a yard by some traveling agent, and died in agony. The dispensing of free samples in this way is prohibited by law in many places. Persons caught dispensing drug samples in this way should be severely punished.

Vaccination and Smallpox.— Dr. C. N. Hensel, of St. Paul, Minn., says that he has examined about one thousand cases of smallpox, and of this number only four had been successfully vaccinated, and these four had not been vaccinated for periods varying from twenty to twenty-seven years. Such testimony as this is significant in view of the claim so often screeched from the housetops that "vaccination does not afford protection against smallpox."

Advises Vaccination for Vacationists.— Dr. Lederle, commissioner of health of New York City, has advised all persons going on a vacation to submit to antityphoid vaccination, which is administered free of charge by the health department.

Eminent Temperance Advocates.— William Jennings Bryan, Theodore Roosevelt, and Emperor William of Germany, in order to set a good example, abstain from all alcoholic stimulants, even at state occasions.

United States Congress Sends Delegates to Alcohol Congress.— Despite the protest of liquor dealers, Congress has passed a bill appropriating $6,250 to defray the expenses of delegates to the International Congress on Alcoholism.

Tramp-Cure for Consumption.— H. H. Hoover has recently completed a walk from New York to San Francisco and back, making the trip in 322 days, winning a bet of one thousand dollars, and regaining his health. When he started on the trip, he was threatened with consumption, and now he is in rugged health. It was largely on account of his health that he took the trip.

New Cure for Rabies.— A patient in the St. Louis city hospital was cured of rabies by subcutaneous injections of quinin. When he arrived at the hospital, he seemed to be in the last stages of the disease, and on the verge of convulsions. Favorable symptoms followed the first injection of fifteen grains, after which he was given two injections a day. Favorable results had already been obtained from injecting quinin into animals sick with rabies.

New York City Turns Iceman.— The city of New York proposes to add to its business activities the establishment of an ice plant. That's government ownership with a vengeance. It has been estimated that the city can make ice at a cost of $2.50 a ton, to be sold to the tenement dwellers, who now have to pay nine or ten dollars a ton. By bringing ice within the means of the tenement dwellers during the heated season, a saving of baby life will doubtless be effected, as well as an increase in the general health.

Low Mortality in Garden City.— According to vital statistics for 1912 published in *Garden Cities and Town Planning* (London), the garden city Letchworth had the remarkable low death-rate of 50.6 per thousand births. The next lowest was Hampstead, a garden suburb, with 62, and from this the rates run to 145, most of the cities and towns being more than 100. The death-rate per one thousand was 6.1 in Letchworth, 9.8 in Hampstead, and from that up to 18.8. The medical health officer for the district, in his annual report, says: "Numbers of the children coming from large, populous towns are anemic, poor in physique, and large numbers were suffering from adenoid growths and throat affections. This state of things is fast disappearing with the new conditions under which they live."

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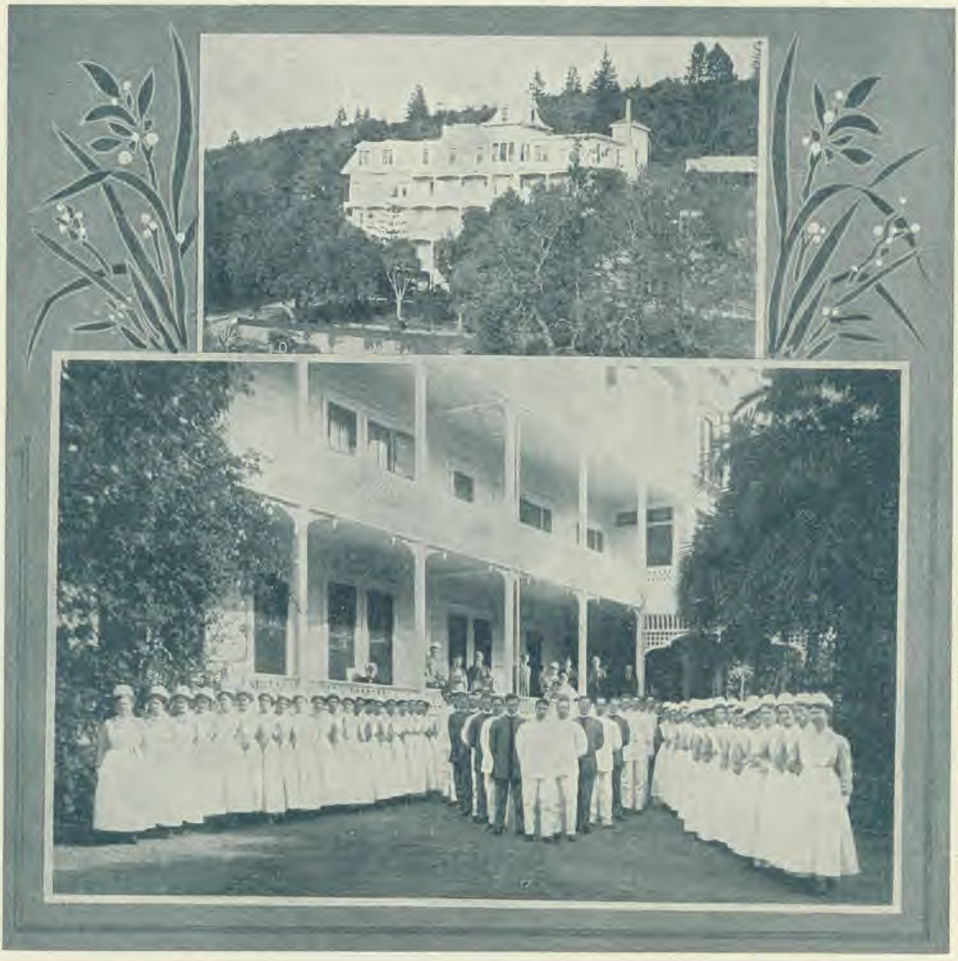

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