Life & Health

"As a man eateth, so is he."
PROVERB.

How Did You Stoke Your Furnace Today?

HOW did you eat today? Did you select your food with care? Or—did you, as a matter of course, eat what was placed before you? How you eat—what you eat—when you eat—has everything in the world to do with your health and efficiency.

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Again—you do not miss the things that are banned because there are so many other things to take their places. Dieting is made a delight.

The diet system in use at these institutions is the result of almost half a century of thoroughgoing research. It is not based on fads, guesswork or unproven theories.

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Life & Health

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CONTENTS OF THIS ISSUE

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A Little French Refugee

Photo, Courtesy American Red Cross

Life & Health

HOW TO LIVE

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Health Food for Children—No. 2

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

Diet from Four to Fourteen

WHEN a child has obtained his full set of milk teeth he will be ready to take almost any wholesome, digestible food in moderation. There is no stage in the development and growth of the child that is more important than that which is included in the age from four to fourteen. During this period of development the child is laying the foundation of its future health. The diet must include all the elements necessary to build a sound, strong body, a steady and well-balanced nervous system, and a keen intellect.

The health diet must include building foods consisting of various proteins and albumins, which provide for both growth and repair; fuel foods, such as starches, sugars, and fats, which furnish energy and vitality; various salts and acids, that is, mineral matter, which, combined with the food, are capable of giving the necessary strength to the bones; and certain accessory bodies of which little is known except that they are of vital necessity to life and have therefore been called *vitamines*.

Proteins, albumins, and other building foods are found in varying proportion in practically all forms of natural food substances. Even fruit and fresh salads such as lettuce and celery contain a trace of protein. Most of the grains contain a fair amount of building material, and quite sufficient for the requirements of the body, but there are certain foods, such as eggs, milk, pulses, and nuts, which contain a larger percentage of protein and may properly be described as pre-eminently building foods. Under pulses we have to note the common haricot bean, which is one of the cheapest sources of nitrogenous food, butter beans, kidney beans, lima beans, brown beans, the soy bean, and a dozen or more other varieties. Then there are lentils, such as brown lentils, Egyptian or red lentils, and a large variety of Indian lentils. Dried peas, including marrowfats, yellow peas, split peas, etc., also belong to the pulse family.

There is every reason to believe that nuts are the original meat of the human race, for in them we have a rich combina-

tion of protein matter and fat or oil, together with a certain amount of sugar, and a varying percentage of starch, as well as mineral salts and vitamines. Children are fond of nuts, and should be encouraged to eat them as soon as they get their first set of teeth. Well masticated nuts always make a wholesome food providing they are taken at the proper mealtimes and not haphazard between meals.

Eggs and milk, including butter and cheese, must be classed with the building foods, although both include a certain amount of fat, while milk is rich in sugar. During the early years of childhood a certain amount of good, pure fresh milk is necessary in selecting a health diet for children. But as they get older they can do with less and less milk by taking various other foods in its place.

All the food substances that we have so far mentioned include a varying percentage of starch and fat, both of which are emphatically fuel foods. It is well to bear in mind that there are but few foods, such as butter, oil, and sugar, which consist of a single food element. On the other hand, most of the food articles contain more or less of all the food substances required by the body. Still, in a general way, we look upon grains and cereals as fuel foods because of the large percentage of starch which they contain. This statement is particularly true of maize, including corn flour, rice, sago, tapioca, arrowroot, and similar preparations, which are so frequently used for making milk puddings. These articles are rich in starch and poor in both protein and fat. With the grains we must place the dried fruits, such as dates, figs, prunes, raisins, sultanas, English currants, apples, pears, and apricots. As one would anticipate, the dried fruits are especially rich in fruit sugar and contain little fat or nitrogenous matter. They are, one and all, like the grains, emphatically energy-producing foods, and make perhaps the best, as well as the most appetizing fuel food. To these we may add edible chestnuts, potatoes, including both the common potato and the sweet potato, bananas, and perhaps sweet grapes. Although these latter foods are not nearly so concentrated as the grains and dried fruits, they contain something like twenty per cent or even more of nutrition, the bulk of which consists of starch and sugar. In a lesser degree we may look upon other vegetables, such as parsnips, carrots, turnips, swedes, artichokes, onions, and other tubers, roots, and stalks, etc., and most fresh fruits, as fuel foods, although the percentage of nutrition which they contain is not large.

Some of our Engl

But most fruits, together with greens and fresh salads, are more valuable for the salts, acids, and vitamines that they contain than as sources of energy. Apples, pears, quinces, peaches, nectarines, apricots, greengages and other plums of all kinds, cherries, and small fruit such as strawberries, raspberries, blackberries, loganberries, blueberries, cranberries, etc., are most useful as sources of medicinal salts and acids, which help to regulate the liver, stomach, and bowels. Still, they do contain an appreciable although varying quantity of the most pure and delicious fruit sugar, which is practically a predigested food and therefore, requiring little digestion, is quickly assimilated into the blood, where it at once becomes a source of heat and activity. Fruits too are particularly rich in vitamines, food elements which are most essential to the welfare of the body.

sins Before the War

And last, but not least, we must mention fresh salads and tender greens of various kinds, all of which are second only in importance to fresh fruit in the feeding of children. The greens include several varieties of cabbage, savoys, cauliflowers, Brussels sprouts, leeks, chicory, sea kale, spinach, turnip tops, nettles, dandelion greens, and a long list of similar articles. Many can be taken uncooked when properly cleaned and prepared for the table, but most of them are more safe as a food when steamed or conservatively boiled. A fresh salad, plain or served with some simple sauce, makes a most refreshing and welcome article of diet. Like the greens and a good many of the fruits, these fresh salads are more valuable for the salts they contain, including iron, and for vitamines than for anything else. They also serve to give bulk to the food and in this way act as a mild and gentle laxative and help to regulate the bowels. A few of the fresh salads are celery, lettuce, cress, watercress, cucumber, radishes, spring onions. Turnips, swedes, carrots, artichokes, and similar roots may be served as a fresh salad when properly grated or shredded. The heart of a crisp, fresh cabbage makes an excellent salad, called slaw when minced or chopped into fine particles and served with a little lemon juice and a trace of either sugar or salt. Children are uniformly fond of nuts of all kinds, fruit, whether fresh, dried, or bottled, and salads, and they should not fail to receive a generous portion of these articles of diet at least once or twice a day.

Here we have presented before us a generous variety of pure, clean, wholesome, and nutritious food articles which furnish ample sustenance for the body and are entirely capable of maintaining health and strength of both body and mind. Those who adhere to a wisely selected and simply but judiciously prepared fruitarian diet are rarely if ever liable to an attack of ptomaine poisoning, which is not at all uncommon amongst flesh eaters. There is reason to believe that fruitarians are less liable not only to cancer but also to appendicitis and many other nutritional diseases. No other diet gives the same amount of physical well-being, vitality, and endurance.

OBJECTIONS TO ANIMAL FLESH

But some one may ask: "Why not add a little beef, mutton, pork, fowl, or fish, and thus still further increase the selection of food?" In answer to this question let me say that there is no evidence forthcoming to show that the flesh of animals is in any degree necessary to the normal growth and sound health of a child; but rather the contrary. It is a well-known fact that disease of one kind or another is very common to the domesticated animals that are used for food. Cattle are particularly prone to tubercular disease, and in some herds anywhere from fifty to ninety per cent of the cattle have been found to be victims of tuberculosis. The same is true to a large extent of pigs and fowls, and sheep too are not immune from tuberculosis. But this is only one of the diseases that afflict the animals which man butchers for his table. Indeed, we believe it is true that if a strict examination were made on every carcass before it is sold to the public, and if all those subject to disease in any form were rejected, we should have less than half the usual supply of animal flesh.

"On rising in the morning the child should be given a copious drink of fresh water."

But even in the case of animals that are fairly healthy we have to remember that their flesh invariably contains a certain amount of waste matter which is more or less poisonous and which, sooner or later, is liable to give rise to nutritional or parasitic diseases, including gout and rheumatism. Again, the flesh of a dead animal is always in a state of more or less advanced putrefaction and is really not a fit food for a clean liver.

There is a further matter of very great importance to remember, and that is the desirability, nay, duty, of inculcating humane principles in our children, and it is difficult to do this so long as we butcher animals for the sake of eating them. I consider it of vital importance to teach our children to save life and not to destroy it. We should teach them to have consideration for the lower animals and to treat them with gentleness and kindness. Furthermore, children should be taught never to give pain to any sentient being. It seems to me that it must be acknowledged by those who give the matter careful thought that the teaching of the principles of humaneness to children is quite inconsistent with feeding them the flesh of slaughtered animals.

There are certain other articles in addition to animal flesh which should never be placed before children, and these include tea, coffee, all condiments, such as pepper, mustard, curries, etc., and also pickles of various kinds. Tea and coffee are narcotic stimulants and drugs, and there is no occasion whatever to give them to children. Condiments are supposed to be added to food to make it more appetizing for the jaded palate, but healthy children do not suffer in this way, and it is unwise to tempt them to eat. Even salt should be used very sparingly or, better still, not at all. Children rarely call for it until they have acquired the habit of taking it. Mustard, pepper, spices, and condiments generally, are one and all irritants, and they rarely fail to injure the digestive organs in one way or another and help to encourage dyspepsia, gastric colic, and various abdominal aches and pains, as well as headaches.

Pickles are also supposed to tickle the appetite of the epicurean and induce him to take more food than is good for him. Let it be well understood that the pickling process renders the food, whatever it may be, more and more indigestible, so that it is bound to make mischief in the stomach and interfere with the processes of digestion. Surely there is no occasion for giving pickles to children.

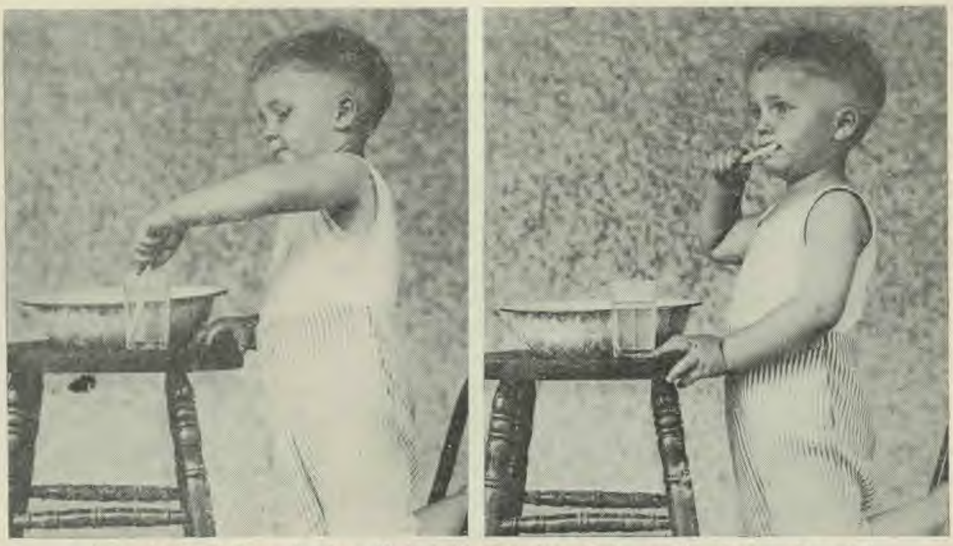
Children readily learn to take sweets, candies, cakes, and pastries of one kind or another, but all these articles should either be totally taboo or used in the most careful and sparing way.

BREAKFAST

In conclusion, let me offer a few suggestions with regard to the three meals of the day. On rising in the morning the child should be given a copious drink of fresh water, and then about half an hour or an hour later breakfast may be served. A good breakfast for a child in ordinary health would consist of a

dish of oatmeal porridge served with a little cream or milk and eaten with crisp zwieback, or toasted bread, or some plain oatmeal, barley, or wheatmeal biscuits; a dish of four to six stewed prunes, or stewed apples, or one or two baked apples, or a fresh apple, pear, or banana; and a few nuts. Dairy butter or nut margarine should be taken with the bread or zwieback. Relatively, children require more fat than adults, and I am glad to note that the official food ration provides for the same quantity of butter or margarine for all alike, young and old. It is a mistake to stint children in the use of these fats. It is also well to provide them with olive oil for their salads. Drinking at mealtime is not necessary and should be discouraged. If the child is thin or weak a little extract of barley malt or honey or homemade jam may be taken with the bread. Barley, maize, rice, or gluten porridge may be used in place of oatmeal if desired.

There should be an interval of not less than four and a half hours between breakfast and dinner, and the child should be encouraged to drink a glass of water about an hour before each meal. There is no need of making the dinner a heavier or more nutritious meal than breakfast. However, if plain food is served, there is as a rule little danger of overeating, providing the child learns to masticate the food properly. There is no objection to a little plain soup or vegetable purée if eaten with a crust of bread or piece of zwieback. The entrée may consist of some egg preparation, such as an omelet or a poached egg; or some nut preparation, like walnut roast; or some nut food, such as protose; or macaroni, with or without the addition of a little cheese or egg; or a few plain nuts. A mealy baked potato is a very wholesome food for growing children, and there is every reason for encouraging them to make potatoes an important part of the noonday meal. Some tender green, such as spinach, sprouts, or some fresh salad, will finish the meal for most children. Still, in many cases there is no objection to a plain milk pudding, such as rice or sago, but it is not wise to oversweeten the pudding. It would be well for the child to eat a few nuts or a piece of stale bread with the pudding in order to insure efficient chewing. No



"Teach the children to clean their teeth and rinse their mouths after each meal."

drink should be taken with the meal.

The supper, which should be served about four and one-half hours after dinner, should be a comparatively light meal, and may include a little zwieback or stale bread and butter, some fruit dish such as suggested for breakfast, a fresh salad and a few dates or figs, or a little honey or other wholesome sweet to be taken with the bread. Sweets, candies, and chocolates should always be taken with the meals and never between meals, and in any case in sparing quantities. If a hot dish is required, some plain boiled rice, or a rice or other milk pudding, or a baked or boiled custard, may be added.

Teach the children to clean their teeth and rinse their mouths after each meal. It is good health insurance.

Insomnia—Sleeplessness

G. H. Heald, M. D.

TILL physiologists know more as to the cause and mechanism of sleep, we are necessarily in the dark regarding the true or ultimate cause of insomnia. Is it the result of some abnormal brain stimulant thrown into the blood stream, or does the blood of sleepless persons lack some hypnotic substance which in health is elaborated during the day, accumulating until it is sufficiently concentrated to produce sleep? No one knows.

Associated with loss of sleep there are, however, certain other faulty conditions which may suggest something as to the cause of insomnia. The most prominent of these conditions follow:

Excessive brain activity; worry.

A sedentary life, with too little physical exercise.

Indigestion, especially intestinal indigestion.

Late suppers, particularly indigestible suppers.

Autointoxication of intestinal origin.

Irregular habits of retiring.

Neurasthenia and psychasthenia.

Mental disorder.

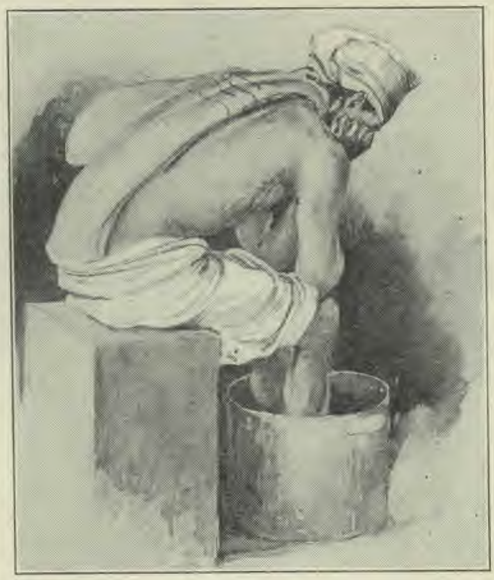
In every case of insomnia, one or more of these conditions are present. Whether these cause congestion of the brain tissue, or favor the elaboration of some brain stimulant, or inhibit the formation of a normal hypnotic, we must leave for the physiologists to determine, and content ourselves with giving what is known regarding the best preventives of sleeplessness.

One important measure in the prevention of insomnia is the abandonment of the evening meal. Often the physiological (or pathological) processes which accompany digestion of this meal are sufficient to induce wakefulness in light sleepers. The two-meal system, with the last meal at three, or not later than four o'clock in the afternoon, will remedy this type of sleeplessness, provided the patient does not attempt to crowd two meals into this one. Some persons, however, sleep better if there is a little food in the stomach. In some cases, especially of excessive acidity, when the patient awakes in the night, a little simple food — perhaps a glass of milk — will favor sleep.

When the insomnia seems to be the direct result of indigestion, attention must be paid to the diet. If wakefulness is occasional and is accompanied by distention of the bowel with gas, effort should be made to learn what foods produce the gas. Some persons find that fruits produce gas; others must avoid all sweets; others have trouble with such vegetables as the legumes or cabbage. The wise procedure is to avoid any food, at least in the afternoon, that might produce gas.

Intestinal autointoxication may result from the free use of animal foods. Even

milk, which normally favors sleep, seems in some cases to be broken up into substances which prevent sleep. One who suffers from sleeplessness should reduce his consumption of food, especially of protein, to what the body actually requires. Many persons habitually eat too much. The two-meal system will enable one to reduce the food intake. Care must be exercised to avoid a heavy meal in the afternoon. Sleeplessness is often associated with high blood pressure, and hypertension is favored or made worse by overeating, especially of protein foods. One who uses flesh foods is almost certain to take into the system too much protein.



"The hot foot bath, or hot leg bath, or fomentations to the spine, by draining the blood away from the head, favors sleep."

The sedentary person, whose principal occupation is to hold down an office chair, will be benefited in sleep by taking regularly sufficient exercise to produce muscular tire but not muscular exhaustion. The business man would do better to walk a moderate distance than to take a car or taxi, or his private car. It may consume a few more minutes, but the time thus spent is a real investment in health, and it would be better to economize time in some other matter than in neglecting physical exercise. It is occasionally better to go personally across the establishment than to use the desk phone. The exercise will increase efficiency and more than pay for the loss of time. It is good practice, when possible, to use the stairways instead of the elevators.

Plans should be made for recreation involving the use of the muscles; and a few minutes before retiring may be devoted to setting-up exercises such as have been described in past issues. Even when one's daily routine provides a fairly liberal amount of exercise, it is likely to be confined to a few groups of muscles, and exercise to bring into use other muscular groups is advisable.

Regular habits are conducive to perfect function. If one eats at regular hours, he has better appetite and better digestion than if he eats at irregular times and between meals. If one establishes a regular time for retiring and a regular hours, he has ing, and follows his schedule with as little variation as possible, he will sleep better than if he retires one night at nine, another at eleven, and another at one. Regular sleep is much more likely to be sound sleep than irregular sleep.

When the insomnia is due to digestive disturbance the moist abdominal girdle worn at night may give excellent results. The materials for this treatment are: One thickness of linen or cotton, or three or four thicknesses of gauze, nine inches wide and four feet long, and a flannel girdle twelve inches wide and four feet long. Stretch the dry flannel across the bed and over it the thin cloth, wrung nearly dry out of cold water. The flannel should project an inch and a half or two inches on each side of the thin bandage. The patient now lies across the center of the bandage so that the lower edge comes below the hip bones. Each end of the moist bandage is now drawn tight over the patient and tucked under the opposite side, then the ends of the

One Should Earn His Sleep by Exercise

flannel bandage are drawn over and fastened with safety pins. The moist girdle may be made more efficient by the addition of a layer of oiled silk, applied between the two bandages. In the morning the bandaged part should be sponged in cold water, and wiped thoroughly dry.

In cases where there seems to be a surplus of blood in the brain, the hot foot bath, or hot leg bath, or fomentations to the spine, by draining the blood away from the head, favors sleep. For self-administration, the hot foot bath or leg bath is preferable.

When there is nervous tension the relaxing effect of the neutral full bath (94° to 97° F.) is marvelous. Some persons who find it impossible to obtain sleep in bed sleep well in the bath. The neutral bath inhibits all the little irritating messages which might hinder sleep, and produces such a restful relaxation that sleep comes naturally. Even in some cases where actual sleep does not follow, the after-effects of the bath seem to be as good as sleep.

To take a neutral bath, first have the feet warmed, if they are cold, in a hot foot bath. Begin the neutral bath at, say 97° F., remain in fifteen to twenty minutes, and then reduce to 94°, before leaving the bath. The patient during the bath and while getting into bed should be protected from all draft. Drying should be performed with little friction, as friction is stimulating, and may induce wakefulness.

If the business man is in the habit of taking his business affairs and his worries home with him, to canker his meals and destroy his rest, his remedy is to change this mental habit — to get the mind out of its rut, by seeking some such diversion of interest as music, art, or even a short story, as different from his daily routine as possible. The more difficult this seems to be, the more important that he make earnest effort to effect the change; for the tendency to worry grows, and soon a vicious circle is formed; business mistakes — worry — loss of sleep — more business mistakes — more worry — more loss of sleep: and so around the circle, which grows and sweeps into its vortex poor digestion, nervous breakdown, etc., until the case becomes hopeless. Worry never cured anything. It increases the trouble which brought it on and leaves the sufferer less able to stand the pressure. Mr. Chronic Worrier, you *must* find some diversion, *any* diversion that will cause the mind to act in another di-

Athletic Sports Favor Sleep

rection. Forget your troubles, and sleep.

A sovereign remedy for the worry habit is a real Christian experience in which the patient takes all his troubles and cares to God in prayer, *and leaves them there.* One who engages in a season of prayer and ends with his mind still in a state of worry *has not learned how to pray.* He should have for a physician one of strong sympathies, who has learned to pray and who knows how to lead another into the prayer life.

But the question of prevailing prayer is not quite so simple as this statement might imply. In order that one may come with confidence before God, he must be willing to put away all sharp practices, all efforts to get the best of others in deal, all hatred, malice, and all that ministers solely to self-gratification; but after all that is the natural life, the simple life, the happy life, the efficient life. Why not accept God's way and enjoy peace?

NEWS NOTES

Violation of Food Regulations

More than 800 penalties for violation of rules and regulations governing licensed dealers in foodstuffs have been imposed during the past ten months by the Food Administration. About 150 companies and individuals have been ordered to quit business in licensed commodities for a limited or unlimited period, and over 500 have voluntarily made a money payment, usually to the Red Cross, or have temporarily abstained from doing business, rather than risk calling down more drastic penalties upon their heads. A vast number of other cases have been disposed of by Federal Food Administrators in the various States and Territories under the authority of, but without specific appeal to, headquarters at Washington. In a number of other cases the desired compliance has been secured without penalty.

Honey Uses in the Home

The sweetening qualities of honey as a substitute for sugar in foods is discussed in Farmers' Bulletin 653, issued by the Department of Agriculture. The food value, flavor, wholesomeness, and economical uses of honey are thoroughly discussed. The quantities to be used when honey is to take the place of sugar are practically the same, except that a cupful of honey carries about one fifth water, so that less liquid should be used in honey mixtures than in sugar mixtures. This bulletin also has recipes for bran bread, brown bread, steamed brown bread, honey bread, honey and nut bran muffins, all of which are made without wheat flour. Recipes for a number of honey desserts and candies are given, as well as directions for using honey in preserving.

"When he had thus spoken, he spat on the ground, and made clay of the spittle, and he anointed the eyes of the blind man with the clay, and said unto him, Go, wash in the pool of Siloam, (which is by interpretation, Sent.) He went his way therefore, and washed, and came seeing." John 9: 6, 7.

Causes and Prevention of Blindness

No. 1

Causes of Blindness

B. E. Crawford, M. Sc , M. D.
Chamberlain (S. Dak.) Sanitarium

NEARLY nineteen hundred years ago, as the Great Physician walked from town to town, from city to city, throughout the land of Palestine, healing the sick, comforting the sorrowing, and showing men the way to the better world, he met a man who had never looked upon the beauties of the earth or the heavens, and had never seen the faces of his friends, for he was born blind. The disciples, desiring to understand why the poor man was thus afflicted, inquired: "Master, who did sin, this man, or his parents, that he was born blind?" The Saviour's reply, "Neither hath this man sinned, nor his parents," is worthy of our careful consideration at this present time.

As it was in those days, so it is now, and so it has been through all the ages of the world's history. Thousands of men, women, and children have been deprived of the blessings of sight through no fault of their own, and often through no fault of their parents. If we wish to go back to the original cause of all blindness that exists today, or ever has existed, we must of necessity conclude that it has all resulted from the entrance of sin into the world and the consequent development of such abnormal circumstances and conditions that the delicate organ of sight is frequently taxed beyond its limit of endurance.

While blindness occurs among the people of every race and nation, there are certain countries in which blindness is especially common. In the country of Lud, or Lydda, in the northern part of Africa, it is said that every one is either blind or has but one eye. In the city of Jaffa, thirty-one miles northwest of Jerusalem, one tenth of the population is blind. Defective vision and blindness are very common in Turkey. There the blind are objects of pity, and are likely to be turned out as unproductive, as the people of Turkey consider themselves poor enough without taking care of the blind, the deaf, the crippled, the aged, and the insane. Over in India 600,000 persons are absolutely blind. In every generation 500,000 in India are going blind from preventable causes.

In our own fair country, the United States of America, with its broad fields,

abundance of green grass, trees, and parks, there are more than 57,000 persons totally blind.

A greater number become blind during the first five years of life than during any other five- or even ten-year period. More than one third of these are born blind, about one third became blind during the first year, and one third during the next four years.

During the past few years the Government has made an earnest effort to secure as accurate data as possible concerning the causes of blindness. While much of value has been learned, the results have been far from satisfactory. In nearly one half of the cases of blindness it has been found impossible to obtain accurate information as to the cause.

In many cases the blind person has never had his eyes examined by a physician or eye specialist, and has received no medical treatment, so that frequently he can only guess at the cause of his blindness. When the case has been treated by a general practitioner, or even by an eye specialist, the cause of blindness may not be definitely known, since, even if the patient had been told the exact nature of the disorder affecting his vision, he may have forgotten it. Aside from these considerations, the disorders affecting the eye are sometimes so obscure in their origin that at times even the specialist is completely baffled in his attempts to determine the cause of failing vision.

THE pathos and suffering of blindness are well expressed by Milton, who, in speaking of his own experience, says:

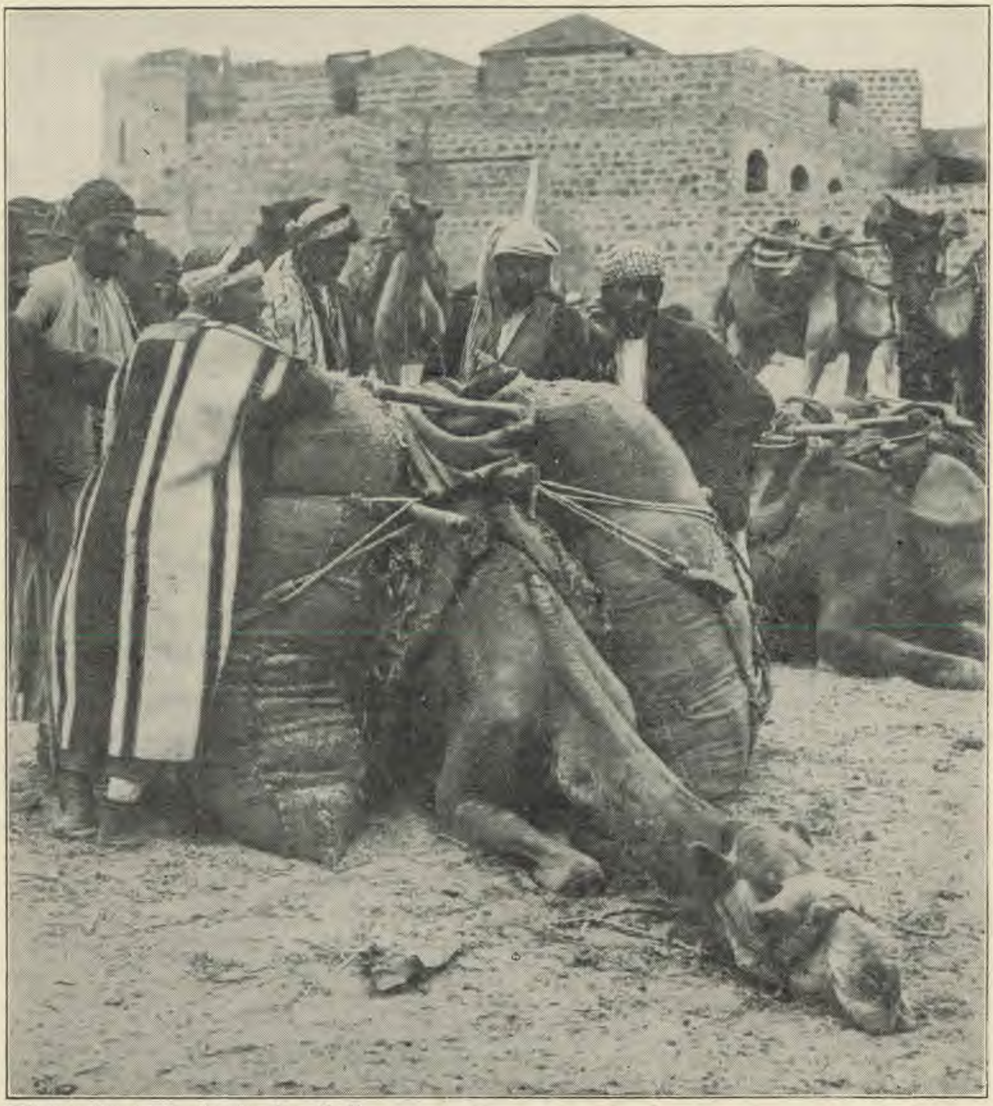
"Thus with the year
Seasons return, but not to me returns
Day, or the sweet approach of even or morn,
Or sight of vernal bloom, or summer's rose,
Or flocks, or herds, or human face divine;
But cloud instead and ever-during dark
Surrounds me, from the cheerful ways of men
Cut off, and, for the book of knowledge fair,
Presented with universal blank
Of nature's works, to me expunged and razed,
And wisdom at one entrance quite shut out.
So much the rather thou, Celestial Light,
Shine inward, and the mind through all her powers
Irradiate; there plant eyes; all mist from thence
Purge and disperse, that I may see and tell
Of things invisible to mortal sight."

As nearly as can be determined, about 13 per cent of all cases of blindness are the result of injuries to the eye. Injuries cause blindness in two ways: either by direct damage, which destroys the visual apparatus or is followed by infection leading to its destruction; or indirectly through intracranial lesions which operate to destroy sight through injury to, or inflammation and atrophy of, the optic nerve. Sight is often destroyed by the careless use of scissors, forks, toy pistols, air rifles, bows and arrows, etc.

From 11 per cent to 15 per cent of all cases of blindness result from cataract. This disease is especially common in India and Turkey, being more prevalent in India than in any other country of the world, a condition due largely to dust, intense sunlight, and great heat. More cataract operations are performed in India than in all the rest of the world taken together.

Six per cent or more of all blindness is said to be due to atrophy of the optic nerve, and this condition in turn results from a variety of causes, and in some cases no cause can be found.

Glaucoma is responsible for about 3.5 per cent of all blindness. Glaucoma is a common disease of the eye characterized by failure of vision and increased intraocular tension; that is, an increased pressure within the eyeball. The exact cause is unknown. Various diseases are predisposing factors. Depressing emotions, worry, lack of sleep, overuse of



Market Scene in Jaffa, Palestine, Where One Tenth of the Population are Blind.

the eyes, indigestion, insufficient food, etc., are believed to act as factors in the production of this disease.

Two per cent or more, perhaps as much as 8 or 10 per cent, of the blindness in the world results from ophthalmia neonatorum, commonly known as babies' sore eyes. The *British Medical Journal* recently reported an alarming increase in ophthalmia neonatorum in the British Isles. The factors believed responsible for this increase are: (1) The greater prevalence of venereal disease, resulting from the laxities of military life; and (2) the depletion of the medical ranks, so that the careful medical attention at the birth of children is less frequent than formerly.

The baby's eyes become infected during birth with the germs that are responsible for this disease, and unless prompt measures are taken to destroy these bacteria they gain a foothold in the delicate structures of the eye, and

it then becomes difficult, and sometimes impossible, to prevent total blindness.

Doubtless a large proportion of the blindness among the people of India results from ophthalmia neonatorum, as 90 per cent of all maternity cases, instead of being attended by physicians, are attended by the native midwives, most of whom are without education, dirty in their habits, and entirely unqualified for the work. Even in the larger towns there are few medical facilities, and because of bad roads the smaller towns are almost cut off from medical assistance.

Trachoma is said to be responsible for 1.5 per cent of all cases of blindness. Trachoma, commonly known as granular conjunctivitis, or granulated lids, is a common disease, occurring at all ages and appearing in a variety of forms, but not easy to recognize in the early stages.

The germ responsible for trachoma is not known, although it is a well-known fact that trachoma is caused by the transfer of the contagious secretion from one eye to another in various ways, often by the fingers, handkerchiefs, towels, wash cloths, sponges, bed clothing, door knobs, street-car straps, books, etc. It is thought that uncleanliness and unhygienic surroundings may be among the causes of the disease. It frequently spreads extensively in schools, factories, and crowded living rooms.

Trachoma is common in Turkey. A missionary to Turkey reported that the disease is so common that a clinic for treating it is needed in every city of the country. The disease is also very common in Egypt.

Trachoma is not a new disease, but was known to the ancient Greeks, Romans, and Egyptians. It has now penetrated every section of the United States. It is especially prevalent in the mountain sections of Kentucky, Virginia, West Virginia, in southern Illinois, in Wisconsin, in the mountains of southern Missouri, and among the Indians on all reservations except in New York State.

In the State of Kentucky there are 33,000 cases, as estimated by the U. S. Public Health Service. In the mountains of Kentucky the homes are mostly log cabins far from the beaten trails, up and down the creeks. Frequently the cabin contains only one room, with no window, and the room is occupied by from five to fifteen persons. From 7 to 24 per cent of these people have trachoma. Swarms of flies infest the mountains, and may have much to do with spreading the disease.

It is stated that 20 per cent of the Indians in the United States have trachoma. In South Dakota 17 per cent of the Indians have the disease. In one Indian school in Oklahoma 88 per cent of the children are infected.

Because of the serious complications that arise in connection with the disease when allowed to run a chronic course without treatment, it is likely to result in blindness. It is only in mild cases, or when treatment is begun early, that a complete cure can be effected.

In addition to the causes already mentioned, there are many other factors which result in blindness in a smaller number of cases. Hereditary syphilis is one of the chief factors in causing blindness in infancy and early childhood; while acquired syphilis is one of the leading causes of blindness in the early and middle years of adult life.

Other diseases sometimes leading to blindness are measles, scarlet fever, smallpox, typhoid fever, influenza, and gonococcus conjunctivitis. These diseases cause weakening, congestion, inflammation, ulcers, and various other diseased conditions of the eye, which, if not promptly and properly treated, may lead to blindness.

Poisoning from wood alcohol, either by taking it internally or by breathing its fumes, is an important cause of blindness.

Progressive myopia, or progressive nearsightedness, sometimes causes complete blindness. It is important that all

(Continued on page 315)

Courtesy American Red Cross

DINING-ROOM IN ROME WHERE THE MOTHE
THEIR FATHERS ARE

S CHILDREN OF SOLDIERS ARE KEPT WHILE
TING AT THE FRONT.

Conservation Menus

For a Week in October

George E. Cornforth

FIRST DAY

BREAKFAST

Golden Grains with Dates
Cream or Milk Scrambled Eggs
Baked Sweet Potatoes
Oatmeal and Barley Muffins

DINNER

Cream Chestnut Soup
Nut Cheese [1] Mashed Potatoes
Beet Greens Unfermented Barley Rolls
Squash Pie

SUPPER

Sliced Fresh Tomatoes with Lemon
Oatmeal Muffins Cottage Cheese
Baked Pears with Top Milk
Grapes

SECOND DAY

BREAKFAST

Nut Cheese à la Crême [1]
Potato Croquettes Rye Gems
Fresh or Canned Pineapple

DINNER

Peanuts Baked like Beans
Boiled Potatoes Creamed Cauliflower
Corn Johnnycake
Hominy Blancmange with Cream [1]

SUPPER

Browned Rice Cream or Milk
Roasted Chestnuts
Rye Gems Baked Apples

THIRD DAY

BREAKFAST

Corn Fritters Browned Potatoes
Buckwheat Gems Walnuts
Apple Sauce or Fresh Apples

DINNER

Bean Loaf with Bread Dressing [1]
Baked Potatoes Mashed Squash
Sliced Beets with Lemon
Prune Whip with Custard Sauce

SUPPER

Fresh Celery Buckwheat Gems
Rolled Oats Cookies [1]
Buttermilk or Sweet Milk

FOURTH DAY

BREAKFAST

Rolled Oats
Nut Hash [1] Corn Muffins
Crabapple Sauce

DINNER

Vegetable Oyster Soup
Mashed Peas with Mint Cream Sauce [1]
Boiled Sweet Potatoes
Stuffed Olives Apple Pie

SUPPER

Cottage Cheese Corn Muffins
Sliced Cucumbers with Lemon
Pop Corn Raisin Marmalade

FIFTH DAY

BREAKFAST

Buckwheat Cakes with Sirup
Browned Sweet Potatoes
Pears

DINNER

Cream Celery Soup
Nut and Rice Croquettes with Peas [1]
Boiled Potatoes with Nut Gravy
Stuffed Eggplant Pineapple Shortcake

SUPPER

Barley and Tomato Soup
Warmed-up Potatoes
Autumn Fruit Salad Cup Cakes

SIXTH DAY

BREAKFAST

Baked Potatoes with Egg Sauce
Corn Pone Honey
Sliced Bananas with Top Milk

DINNER

Shelled Beans
Scalloped Potatoes Spinach with Lemon
Filberts
Caramel Irish Moss Blancmange

SUPPER

Scalloped Potatoes Corn Pone, Toasted
Baked Potatoes
Grape Jelly with Custard Sauce
Cocoanut Macaroons

SABBATH

BREAKFAST

Hominy with Maple Sirup
Canned Peas Warmed-up Potatoes
Fig Barley Rolls Grapes

DINNER

Succotash
Sliced Tomatoes Potato Salad
Mixed Nuts Ripe Olives
Date Cream Pie[1]

SUPPER

Hulled Corn and Milk
Fig Rolls Apple Sauce

CANNING and drying foods for winter use should continue during this month. One of the best things to put up for winter use is grape juice. When put up at home it need not be considered a luxury any more than canned peaches. It is food and medicine. This is the month for bottling grape juice. This is a very simple process, and is as follows: Pick the grapes from the stems and wash them. Put them to cook in just sufficient water to cover the grapes. Cook till tender, which will require only a few minutes after boiling begins. Turn the grapes into a cheesecloth bag to drain. To the juice add one-half to three-fourths cup of sugar for each quart of juice. Put on the stove and bring to a boil. Boil about five minutes, then fill thoroughly cleansed fruit jars with the boiling juice, having the jars in a pan of hot water. Put rubbers on the jars before filling them. Put the cover on each jar and tighten it as soon as the jar is filled. The juice may be put into bottles instead of fruit jars, filling the bottles with the boiling juice, and immediately putting a cork, which has been standing in boiling water, into the mouth of the bottle, pressing the cork down as the level of the juice in the bottle descends. When the cork has been pressed a little below the top of the bottle pour a little melted parafin on top of the cork. If the cork cannot be pressed below the top of the bottle, cut the cork off, then press it down a little more and pour melted parafin on top of it.

NUT CHEESE

1 cup peanut butter.
2 cups water.
½ cup corn flour or ¼ cup cornstarch.
1½ teaspoons salt.

Stir the nut butter smooth with the water, adding the water a little at a time; stir in the flour and salt; put into a tin can that has a tightly fitting cover, and steam three hours. Or it may be cooked by putting the filled can into a kettle which contains boiling water to one half the height of the can, covering the kettle, and cooking the required length of time, adding boiling water as may be necessary.

When cold, this is ready for use. Run a knife around the cheese next to the can to remove the cheese whole. Cut the piece of cheese in two lengthwise, and it may readily be cut into even slices. It may be eaten plain, or may be broiled, or baked in tomato, or cut into dice and stewed, or stewed with peas, adding a little chopped mint, or may be made into hash with potato, or used in salads or in making sandwich filling.

NUT CHEESE A LA CREME

To one cup of cream sauce add one and one-half cups diced nut cheese, one hard-cooked egg, chopped, one tablespoon

chopped parsley, and one-half teaspoon grated onion. Put this mixture into a small basin that has been oiled, sprinkle crumbs over the top, and bake till just heated through.

HOMINY BLANCMANGE

⅓ cup fine hominy.
1 pint milk.
3 tablespoons sugar.
A few grains salt.
½ teaspoon vanilla.

Heat the milk with the sugar and salt to boiling in a double boiler; stir in the hominy. Stir frequently till the hominy thickens the milk and does not settle to the bottom. Cook one hour. Stir in the vanilla. Pour into molds wet with cold water. When cold turn from the molds and serve with cream.

BEAN LOAF

Wash one pint of beans. Soak them overnight. In the morning put them to cook in fresh water. Boil slowly for about four hours, or till thoroughly tender. Let them cook down dry at the last. If necessary put them on a pan and put them into the oven to dry. The good flavor of the loaf depends upon this drying of the beans. Rub the beans through a colander, putting in only a few beans at a time. Season with salt and cream or one-fourth cup of cooking oil. If the oil is used, it may be necessary to add a little water to the beans if they are too dry to stick together. Put into an oiled bread tin and put into the oven to bake.

BREAD DRESSING

1 pint soaked stale bread.
2 tablespoons oil.
¼ cup brown gravy.
1 teaspoon sage.
½ teaspoon thyme.
½ teaspoon savory.
1 teaspoon salt.

Canning and drying foods for winter use should continue during October. Grape juice when put up at home need not be considered a luxury any more than canned peaches. It is food and medicine.

Soak the bread in cold water till just moistened through. It should be moist, but not wet. Crumble it lightly. Measure it, pressing it down lightly in the measure, then mix all ingredients, put into an oiled pan (do not press it down), and bake till lightly browned.

When the bean loaf is baked, remove it from the tin and slice it. Serve a spoonful of the bread dressing on each slice of beans, on an individual platter (on a lettuce leaf, if desired), and pour nut gravy over all. Garnish with halves of walnut meats.

ROLLED OATS COOKIES

½ cup hard vegetable fat.
½ cup brown sugar.
2 teaspoons molasses.
⅓ cup seedless raisins.
⅓ cup walnuts, cut fine.
1 egg.
¾ cup barley flour.
1¼ cups rolled oats.
A few grains salt.

Mrs. Oliver Harriman, of New York, working a dehydrating, or food drying, machine. Mrs. Harriman has established a food research laboratory to further the preservation of food.

Cream the fat, beat in the sugar, molasses, and salt, then beat in the egg. Fold in the flour and rolled oats, then the nuts and raisins. Form into small balls with the hands. Put on an oiled tin, flatten, and bake till lightly browned.

NUT HASH

1 cup chopped nuts.
2 cups, or more, chopped cold boiled or baked potato.
½ onion, chopped.
1 tablespoon oil.
½ cup cream or strained tomato.
1 teaspoon salt.
1 teaspoon sage, if desired.

Cook the chopped onion in the oil till lightly browned, then mix all the ingredients together, put into an oiled pan and heat in the oven. One-half cup chopped ripe olives added to this makes nut and ripe olive hash.

MASHED PEAS

Prepare dried whole or split Scotch (green) peas as the beans were prepared for the bean loaf; but after rubbing the peas through the colander, season them, leaving them a little softer than the beans; beat them well, and reheat them in a double boiler, instead of baking them in the form of a loaf. When ready to serve them, pile them in a mound in the center of a hot platter, and put boiled sweet potatoes around the peas. Serve with mint cream sauce, which is made by adding chopped fresh mint or powdered dry mint to cream sauce.

NUT AND RICE CROQUETTES

1 pint cold steamed rice.
½ cup chopped walnuts.
3 tablespoons vegetable oil.
1 teaspoon salt.
1 teaspoon sage.
2 tablespoons chopped onion. Thick gravy.

Brown the onion lightly in the oil, mix the ingredients, using enough of the gravy to stick the mixture together. Dip balls of the mixture into beaten egg to which one tablespoon water has been added, roll in dried bread crumbs. Lay on an oiled pan. Bake in a hot oven till lightly browned. Serve with peas.

DATE CREAM PIE

1½ cups milk.
¾ cup stoned dates.
1 large egg.
A few grains salt.
1 teaspoon vanilla.

Stew the dates in a small amount of water till well softened and stewed down dry; rub them through a colander; add the egg, beaten; the salt, vanilla, and the milk, heated. Pour into a pie tin lined with a crust made of barley flour, building up an edge around tin, bake till set.

AS WE SEE IT

Conducted by G. H. Heald, M. D

HAPPINESS AN ATTITUDE, NOT A CONDITION

POSSIBLY every pedestrian believes that if only he owned an automobile he would be happy. How he would enjoy breaking speed laws, worrying the police officer, and frightening the children! The owner of the motor car has troubles of his own. He thinks he would be perfectly happy if he could ride in an airplane, independent of jolty roads and traffic officers. How delightful it must be to sail swiftly like a bird, curving, looping, diving, volplaning, or sailing serenely over the city and coming down amid the plaudits of spectators! And the airman — he has some wish, something in view which, if he could have, he would be happy. For the poor man envies the rich, and the rich is struggling for more, or else he wishes he might be rid of his riches and be care-free. There is no station in life that of itself gives happiness. If you are striving to attain a certain object with the thought that you will be happy when you have reached your goal, you are a candidate for a grievous disappointment; for happiness does not come that way.

According to the story books, "they married and lived happily ever after." But in actual life marriage does not necessarily bring happiness, often the reverse. Wealth, social position, political power — none of these give happiness. The most unhappy person in the world is the young child whom parents idolize and give everything that heart could wish. It becomes self-centered and selfish, and the very things intended for its happiness prove to be elements of unhappiness. Let us understand, then, that no condition on earth will of itself give happiness. Happiness cannot and will not come as an end sought through various means.

Happiness is a condition of contentment, but not of stagnation. One may be happy and still be reaching out for further ideals. If he is unmarried, he may be looking for an appropriate mate. If he is in some poorly paid position, he may be laboring and studying with a view of advancement. If he has only an elementary education, he may be working earnestly to improve himself. There may be really no bound set to his ambition. His ideal may travel before him, as the rainbow eludes the boy running after it. But while he is thus reaching out, he should enjoy his work, enjoy the knowledge of his growth, enjoy the prospect of improvement, enjoy life daily, just as the boy enjoys his chase. This is happiness.

One may enjoy the present, and at the same time plan for a greater future; and as the improvement comes and the plan grows, the enjoyment should grow with it. The child of eight with an eight-year mentality is normal; but should its brain cease to develop, so that at the age of twelve it still thinks like a child of eight, we could no longer be satisfied with its mental condition. So in life, whatever our station, the normal condition is one of progression, not stagnation. We are satisfied with the mental condition of the child of eight because it is a condition of development. As we reach out, as we develop, we should take satis-

faction in that reaching out. Our very efforts to improve should give us contentment and happiness. If we postpone our happiness until we reach the goal, we shall probably postpone it permanently. When the time comes, if it does come, that we no longer desire to press forward, to progress, to enter new fields, our capacity for enjoyment or happiness will be largely a thing of the past.

WORRY, THE EMOTIONS AND ARTERIAL DEGENERATION

PERHAPS none of us realize to what an extent unfavorable emotions hasten the aging process. We occasionally see an extreme example where as a result of a deep sorrow an acquaintance so changes that we say "he [or she] has grown ten years older." On the other hand, as a result of worries removed, as, for instance, by a happy marriage, we sometimes see the persons actually take on a more youthful aspect. I do not refer to the effects produced by powders, pomades, younger clothes, face massage, and the like, but to an evident rejuvenation of both mind and body. But notwithstanding we may occasionally witness such marked instances of the influence of emotion on the aging process, we probably do not realize how universal is the influence of emotional condition upon senescence. The following quotation from I. H. Hirschfeld ("The Heart and Blood Vessels," page 55) states the matter briefly:

> "The influence of the mind on the circulatory apparatus is a fact on which not enough stress can be laid. Arteriosclerosis was considered until recently a condition peculiar to old age, syphilis, tobacco, and lead poisoning, although people over eighty years old were known who showed no traces of it, and others who at the age of thirty had blood vessels like clay pipestems, in spite of the fact that they had never used tobacco in excess, never had syphilis or lead poisoning, and had abstained from every thing injurious. Today [1913] we know that arteriosclerosis often represents the *worn-out condition of blood vessels which have been overworked by the continual pulling of their walls by an emotional and restless mind.*" [Italics supplied.]

When we realize that growing pale is the result of muscular action pulling on the walls of the minute blood vessels as a result of certain emotions, that blushing is the result of other emotional influences acting through the nerves on the small blood vessels; when we realize that every time we worry and fret and get angry, or experience terror or fear or dread, there is an unpleasant accompanying bodily feeling caused by a change in the blood vessels by muscular action,—when we understand that every strong emotional state is in some way reflected in the circulatory apparatus, we can appreciate to some extent the truth of Dr. Hirschfeld's statement. *There is no surer way to make a man grow old than to tell him he has hardening of the arteries, that his blood pressure is 30 or 40 points above what it ought to be, and that he is condemned to a life of uselessness and invalidism.* Such a prediction helps to bring about its own fulfilment. For this reason it is a custon of some medical men to read their blood pressure readings low for the benefit of the patient.

Sometimes a patient who is reckless, who at forty-five or fifty is trying to live as if he were thirty, who is endangering his circulatory system by his excesses, needs some strong drastic admonition in order to bring him to a full stop. But even in this case it is not easy to say whether the excesses or the worry following an enforced siem-invalid form of existence will do the most harm.

There is probably nothing quite equal to worry in its power to gnaw out the vitals.

LET US TAKE AN ACCOUNT OF STOCK

DEAR reader, let me help you for a few moments to take an inventory of your mental processes. The self-examination, with an honest diagnosis, may enable you to help yourself.

Are you looking forward or backward? Have you definite plans and aims for the future, to which you are bending your energies, or do you spend your time thinking over the past?

Are you engaged in large thoughts and deeds, or are you frittering away your time with petty details? One woman who always had more than she could do would spend a half hour sorting nails that were not worth two cents. She was in this act placing an exceedingly low valuation on her time. The cheapest and least essential work that we do sets the value upon our time.

Do you view everything from the bright side, or does every event and every circumstance come to you in minor music? What we used to call "melancholia" is a state of mind beyond the control of the patient, but there are lighter degrees of the same condition which are largely the result of a bad habit — the patient gradually getting into the way of looking at the dark side. Sometimes the mere presence of a companion with a sunny disposition will be sufficient to dispel this mental cloud. If you have a tendency to form such clouds, try out the method of looking for the bright side. You can thus spread your own sunshine.

Are your methods and your criticisms constructive or destructive? When you see an opportunity to criticize the work of another, or your own work, do you always seek to point out a better way?

Are your acquaintances glad to see you? Are you bringing to them cheer and courage and hopefulness? Or when some one says, "It's a beautiful morning," do you reply, "Yes, but it's going to be hot this afternoon"? Do you always leave a little fly in the ointment?

Ask yourself seriously and honestly these questions, for your manner of reacting in these particulars is determining just how your acquaintances will size you up, and whether they will be attracted or repelled by you. Your manner of reacting is also in a measure determining what your health shall be, and your influence.

THE VALUE OF GREEN VEGETABLES IN THE HUMAN DIETARY

DAVID FAIRCHILD, agricultural explorer, in charge of foreign seed and plant introduction in the United States Department of Agriculture, has scoured the world for new (to us) and valuable food plants which, however, have in their own country been used possibly since the dawn of history. Some of these foods are brought to us with the information that they possess high nutritive value, yet we shrug our shoulders. We have a sufficient answer: "We don't like them." And why not? — Simply because we have not been accustomed to them. We are surprised to learn that Belgians, though starving, can scarcely be induced to touch corn. "That's food for chickens and hogs!" Our prejudices are about as blind. We have hardly learned to eat rice, using only about seven pounds per capita, though rice is one of the finest of cereals, and one that, the world

over, is consumed more than any other. We can scarcely be induced to use the soy bean, though it possesses nutritive properties more approaching the animal proteins than any of the other legumes. We follow certain customs in eating and can scarcely be coaxed, argued, or driven out of them, even though we have convincing evidence that the change would be advantageous. Fairchild, in the National Geographic Magazine, April, 1918, has an article bearing on McCollum's nutrition experiments with animals. Speaking of the use and value of dried vegetables, he says:

> "Why do we eat vegetables at all? They are expensive to transport on our railways, they are bulky things to handle in our kitchens, they rot easily and fill our garbage cans, and many of them require a great deal of labor to grow.
>
> "Our showmen have exhibited to millions of Americans giants and dwarfs, fat ladies and living skeletons, but far more inspiring and educational would be the exhibition of some of those fine physical specimens of humanity from southern Italy who have lived for generations without eggs, without milk or cheese, and with meat only a few times a year [four times, perhaps]. These Italian peasants, according to Lusk, have built up these strong working bodies on the simple diet of cornmeal, beans, olive oil, and the leaves of the cabbage and the beet, with garlic and Spanish peppers for flavoring.
>
> "It is these Italian peasants who for years have done the heavy construction work of our railroads, getting rich because they are willing to live on their cheap foods, while side by side with them work the Southern darkies, who have demanded meat twice a day and paid any price for it.
>
> "McCollum has shown through his rat experiments that the matter is not so mysterious as it was thought to be. The secret lay in the use of green vegetables. Rats will starve and men, too, on Indian corn alone. They will do better, although not really well, on corn and olive oil; but on corn and oil, with the addition of greens of some kind, they thrive and reproduce."

There it is in a nutshell. What the rats have done humans have done. Thrived on a cereal-oil-green menu,— practically vegetarian,— and the thing has been done for generations; so there is no chance to suggest that there may be a slow degenerating process which will show its effects in later generations. This diet has historically proved its efficiency. We know it is economical. We know that so far as danger from transmission of disease is concerned, it is far superior to animal food. In every way it is a superior diet, BUT — *we don't like it!* That's argument enough for the average person, and so we will go on — some of us — eating our high-priced, juicy beefsteak, believing, in spite of all evidence, that in it is the acme of nutrition. Let us not blame the Belgians for *their* conservatism.

PELLAGRA; ITS NATURE AND PREVENTION

LIKE some other diseases, pellagra is much more readily cured if it is taken in the early stages, and it is so insidious in its advance that it has often done irreparable damage before there is a suspicion as to the nature of the trouble. For this reason it is important to know some of the more obscure early symptoms, and to be especially guarded in reference to those who are on a diet largely cereal, with practically no animal food; for the disease is confined largely, if not entirely, to people on such a diet.

The distinguishing symptoms of pellagra are weakness, nervousness, indigestion, and a skin eruption, especially on the parts of the body exposed to the sun, worse in warm weather and improving with cold weather. The absence of the eruption, however, does not necessarily indicate that pellagra is not present, as this symptom is sometimes late in making its appearance.

Among the suspicious symptoms which should suggest an immediate change of diet without waiting for the eruption, are the following: Loss of strength, with indigestion or nervousness, or both, appearing or made worse with the advent of warm weather and getting better as cool weather comes on. The patient feels fagged out, has dizzy spells, discomfort in the stomach, constipation, some headache, with loss of sleep. Other symptoms may be present, such as a scalding feeling in the mouth, red tongue, burning of hands and feet, and diarrhea.

The presence of any or all of these symptoms does not justify an absolute diagnosis of pellagra; but in case the diet is such as is commonly used by those who develop pellagra,— a diet consisting largely of carbohydrates (cereals) with little or no animal protein, and perhaps little fruit or green vegetable food,— it is important to get the patient on a more liberal diet at once, without waiting for a complete verification of the diagnosis. At any rate, the change in diet will be beneficial, and cannot be harmful. And if the old diet is persisted in, the patient may grow rapidly and progressively worse and less amenable to treatment.

If the patient uses regularly a liberal quantity of milk or other animal food, there need be little fear of pellagra.

There has been much discussion, both in this country and in Europe, regarding the cause of pellagra. It has been supposed to be caused by eating corn, especially spoiled corn. It has been supposed to be caused by some infective agent, being transmitted by some insect. It has been supposed to be spread in some way through faulty sewerage conditions. And there have been other theories as to the cause of the disease, each apparently supported by some facts. But the theory which at present has gained all but universal assent is the one proposed by Surg. Joseph Goldberger of the United States Public Health Service. This theory makes pellagra a dietetic disease, caused by an unbalanced dietary, consisting of an excess of cereals and other carbohydrate foods, as sugar and molasses, together with fat foods, with a deficiency of the proteins, particularly the animal proteins.

The facts which are held to prove the truth of this theory are that pellagrins, when closely questioned, are found to have lived on just such a diet; that in institutions where pellagra has gained a foothold the patients are found to have been on such a diet; that the nurses and doctors in such institutions — who are on a very different diet — do not contract disease; that pellagra patients in the early stages have been cured by means of diet alone; and it has been found possible to produce pellagra in healthy prisoners by feeding them a one-sided diet as above described.

The evidence favoring the theory that pellagra is caused by a one-sided diet is thus quite conclusive. It should not be forgotten, however, that there must be some other as yet undiscovered factor, for not every one who is on such a one-sided diet as above described contracts the disease. Very many escape. But it would seem that diet is an important contributing factor. It is true that pellagra sometimes invades the homes of the well-to-do, whose circumstances would enable them to supply a liberal diet; but in such cases, we are told, the patient, on account of a finicky appetite, or for some other reason, has not chosen a well-balanced dietary.

According to Goldberger, "milk is the most important single food in balancing a diet and preventing or curing pellagra. . . . This single addition to the customary daily diet will, in practically all instances, protect an individual from an attack of pellagra."

For those who cannot obtain sufficient milk, Goldberger recommends other animal protein foods, and when these are not to be had, he recommends the dried soy bean. "From a nutritive standpoint," he adds, "it is probably the most valuable of the beans and peas. Recent studies have shown it to be decidedly superior to the dried navy bean, lima bean, and the pea. The soy bean may be eaten boiled or baked, and in the form of soy-bean meal, may be included to great advantage in the biscuit or the corn bread to the extent of one fifth to one fourth of the flour or the cornmeal." He continues: "Generous helpings of green vegetables (cabbage, collards, turnip greens, spinach, string beans, or snap beans) or fruits (apples, peaches, prunes, apricots), and preferably of both, should be included in the daily diet, especially when milk is not used or used only in small amounts. This is particularly important during the late winter and spring, the season when people have the fewest number and least variety of things to eat."

Any one who desires Dr. Goldberger's complete paper, giving pellagra-preventing bill of fare, should send to the United States Public Health Service for Reprint 461 from the Public Health Reports.

In view of what is known regarding pellagra, it is important for those who live largely on a cereal diet, if they do not have an abundance of milk, to use very largely of vegetables, especially green vegetables, and fruits. Where it can be obtained without depriving the children of their share, adults who do not use other animal food are safer to use some milk.

CAUSES AND PREVENTION OF BLINDNESS

(Continued from page 303)

cases of nearsightedness, and especially those of the progressive form, should have prompt and careful treatment, and the patient should wear suitable correcting glasses. The condition often is not discovered until it has progressed so far as to be difficult to control.

Aside from injuries and diseases of the eye, there are certain abnormal living conditions which act as factors in weakening the structures of the eye, producing various eye disorders and often resulting in blindness. Among these factors may be mentioned the following: Dust and sand pulverized by intense heat and blown into the eyes, setting up a process of irritation and inflammation; the constant glare of the sun reflected from paved streets, paved sidewalks, walls of buildings, or from snow; in cities and in sandy and barren districts the absence of the refreshing green of grass and trees and growing crops. Little do we realize what a great blessing we have in the green carpet covering the earth. It is restful, refreshing, and healing to the tired and irritated eyes.

The cold sea air of the coasts is injurious to the eyes, as are also the night dews, which affect the eyes of those who sleep on the roofs in warm countries.

QUESTIONS AND ANSWERS

Conducted by J. W. Hopkins, M. D., Washington (D. C.) Sanitarium

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

For prompt attention, questions should be addressed to J. W. Hopkins, M. D., Takoma Park, D. C.

Soda in Bread

"Is it necessary to use soda in bread raised with dry yeast, where milk is used with rye, barley, or oat flour, etc.? So many recipes call for soda in the dark flours when raised with slow yeast, and our cook seems to think bread of the heavy dark flours raised overnight with dry yeast, and containing half milk (more or less) will not be sweet unless soda is used."

Some bakers and cooks use soda with yeast in bread making, particularly where there is no wheat flour used. They seem to think that it makes lighter bread. We are opposed to the use of baking soda and kindred powder, as the action of these substances is harmful to the stomach when they are not completely neutralized by the tartaric acid or by the lactic acid of sour milk. Better and more healthful bread is made without sodium bicarbonate or baking powder. Sodium bicarbonate and sodium carbonate are injurious to the stomach, especially when used over a long period of time. Why not use beaten breads or unfermented breads? Yeast changes quite a percentage of the flour into carbon dioxide.

Quick Versus Slow Yeast

"Which is best in using these dark flours entire, slow yeast (dry) or quick yeast (compressed); and is it necessary to use more yeast than with white flour? We have been experimenting for some time, but with poor success."

Compressed, or quick, yeast is better when the dark flours are used entirely; i. e., with no white flour. The slow yeast does not make as good bread. The quick yeast gives a better fermentation and raising and makes lighter bread. It is necessary to use considerably more yeast with the breads made without wheat flour.

Soda and Hydrochloric Acid

"I am instructed that soda should never enter the human stomach. A vegetarian cookbook recommends the use of soda and hydrochloric acid for raising cakes, etc. Is this harmful?"

If the proper amount of hydrochloric acid is combined with the soda, the latter will all be neutralized, producing sodium chloride, which does not hurt the stomach. The difficulty is in using the proper proportions. It is not uncommon to have too much soda, leaving some which is not neutralized and the continual use of which irritates the stomach mucous membrane, neutralizes the hydrochloric acid of the stomach, and deranges digestion. Cakes are much more healthful when made without the use of soda or baking powder. The ordinary individual will have better health if he uses fruits, as oranges, apples, bananas, and raisins, and a few nuts for his dessert instead of complex cakes, pies, and puddings. Desserts should be a part of the meal and not an addition to a full meal.

Bread Without Wheat

"Can good bread be made from rye, barley, or oat flour, or any combination of these flours, without any kind of wheat flour? Our family is large, and when our white flour is gone we still have plenty of substitutes left; have been using 50% white flour with substitutes with success."

Farmers' Bulletin 955 from the United States Department of Agriculture gives instructions for bread making with the partial use of wheat flour. The *Ladies' Home Journal* for July, 1918, contains several recipes from experts of the Food Administration. These recipes call for bread made without wheat flour. Light bread cannot be made without wheat flour. The gluten of the wheat is necessary in making a light, elastic dough. Bread having the shape of the pan can be made without wheat flour, but it is more or less heavy, depending upon the materials used. It is, however, good bread and can be sliced and will give satisfaction.

Intestinal Worms

"My little girl has intestinal worms. Will you please give treatment."

For pinworms the patient should take a dose of castor oil in the morning, and the following evening take a capsule or tablet containing one-fourth to one grain of santonin, depending upon the age of the child. This treatment should be repeated two or three nights, and should be accompanied by the use of an enema of salt solution, a teaspoonful of salt to one-half pint water, or by infusion of quassia chips. For round worms, the child should have a vermifuge for several days, and then a brisk cathartic should be given. Santonin does well for these

cases, but spigelia or chenopodium may be used. These medicines should be prescribed by a physician. Care should be taken to prevent the child from reinfecting himself or spreading the disease to other children, by means of dirty fingers.

Cough and Loss of Weight

"I am fifty-three years of age, weigh one hundred twenty pounds, and have lost twenty pounds in the last year. I have had bronchitis for years, and cough some now. My heart often beats at the rate of 135 to 160. My appetite is good and I sleep well, but am weak and pale. The trouble seems to come from my stomach, especially in the morning. I use no meat, fish, chicken, tea, coffee, or cocoa."

You should have a careful examination of your chest, and an analysis of your sputum made. The trouble may be primarily with the lungs, the loss of weight and the rapid pulse being often due to lung trouble. Your history would bear this out. If your stomach were originally at fault, I would not expect your appetite to be good nor your sleep sound. You should spend as much time as possible in the open air, sleeping out of doors if possible. Begin to do this in the summertime. Be careful that you do not overdo in the hot sun. Get at least nine or ten hours' sleep at night, and one or two hours' sleep in the daytime. Rest twenty or thirty minutes after each meal. Follow the suggestions of a previous question in regard to the diet. You should use more milk, cream, butter, and eggs. You should keep your skin active by frequent bathing, taking a full warm bath two or three times a week, and a sponge bath every morning.

Weakness, Emaciation

"Why should a woman thirty-six years old, apparently in normal health, be weak and tired all the time? We use principally cereals, vegetables, whole bread, butter, and eggs, and sleep on a screened porch the year round. I am always under weight, am hollow chested and anemic. My skin is dry, bowels are regular, and I sleep soundly. I have no cough. I am taking cod-liver oil, have been on a meat diet, also on a milk diet, but the latter makes me bilious."

You should adopt a definite program, having your meals at regular times. Your breakfast should be early, about 6:30 or 7 A. M. Use one or two soft-boiled or jellied eggs with dry cereal, milk, cream, and butter. At 10:30 or 11 o'clock take a glass of rich milk. At 12:30 P. M. you should have your midday meal from vegetables, bread, butter, and milk. If you use steak or meat of any kind, take it at this meal. We do not recommend or encourage the use of flesh foods, as we think them worse than unnecessary. You can obtain sufficient food without using flesh. At 4 or 4:30 P. M. take another glass of rich milk or fruit juice, and at 6 or 6:30 P. M. have a light supper of bread, bran, stewed fruits or well-ripened fruits. Do not overload the stomach, but endeavor to take what you can digest at these periods. You should get one hour's rest in the forenoon, and another hour in the afternoon, preferably at the time of taking food at 4:30. You should also rest for twenty or thirty minutes after your midday meal. Masticate your food thoroughly. Take fomentations to your stomach and liver at bedtime. Take a saline enema three times a week, one teaspoonful salt to a quart of water at a temperature of 90° F, and a warm bath at night three or four times a week. Your anemia will be relieved by the use of plenty of fresh green vegetables; apples, strawberries, and the legumes. Keep in the fresh air and sunshine as much as possible. Regulate your exercises by your strength.

Baby with Sour Stomach

"Our baby boy, sixteen months old, has been bothered with sour stomach nearly ever since birth. At present when he vomits, the milk is sour and offensive. We feed him evaporated and condensed milk. Rice, oatmeal, etc., sour on his stomach. We are using limewater. He is a stout, healthy boy. Can you give suggestions?"

You are undoubtedly feeding your child too much. If the percentage of protein food is too high, you will find curds in the stools and he will have colic as well as vomiting. You should endeavor to get him to take some of the cereal gruels which you have mentioned, but use them in smaller amounts. Do not give him two kinds of food at the same meal. He is old enough to take the juice of one orange every day. This should be given in divided doses, beginning with a teaspoonful or two in a little water two or three times a day. He should also be fed strained vegetable soups containing the vegetables in a finely divided state. Carrots, potato, and the broth, or soup, from peas and from string beans should be added to the daily diet. In another month or so he can use some dextrinized cereal, as corn flakes, rice flakes, puffed wheat or rice, and whole-wheat zwieback.

Another Nostrum

"1. Is the '—— —— —— Blood Purifier' which the inclosed label advertises, really able to remedy the various diseases mentioned? 2. What is the probable cost of the ingredients composing the remedy? 3. Would not this remedy fall into the same class as other quack nostrums that exist primarily to enrich the manufacturer?"

1. This medicine claims to contain potassium iodide and to cure a variety of diseases from skin eruptions to high blood pressure. Patent medicines are not as a rule reliable, as their composition is not constant. You should not take medicine unless it is recommended by your physician and prescribed by him. Medicines which are not known by the physician to contain a definite amount of a certain drug should not be used. This particular remedy is not a blood purifier.

2. I do not know the probable cost, as I do not know the size of the bottle.

3. Yes.

NEWS NOTES

New Local Anesthetic

Dr. Bacht, of Baltimore, reports in *Journal A. M. A.*, June 8, 1918, that benzyl alcohol is fully as effective a local anesthetic as cocaine; and whereas the use of cocaine always involves more or less danger, benzyl alcohol appears to be harmless.

Magnesium and Cancer

Dubard (report quoted in *Journal A. M. A.*, June 8, 1918, page 1798) finds he gets marked improvement by administering magnesium carbonate after operations for cancer. Loss of magnesium, he says, serves to favor the onset and development of malignant disease.

Thrift Habits Supremely Important

Thrift, the economy of time, material, and means, has always been a patriotic virtue. A nation is prosperous in proportion as its people are thrifty. Now as never before, when the national wealth is being offered up freely in order to determine whether an irresponsible nation shall run amuck in the world, thrift is an act of patriotism.

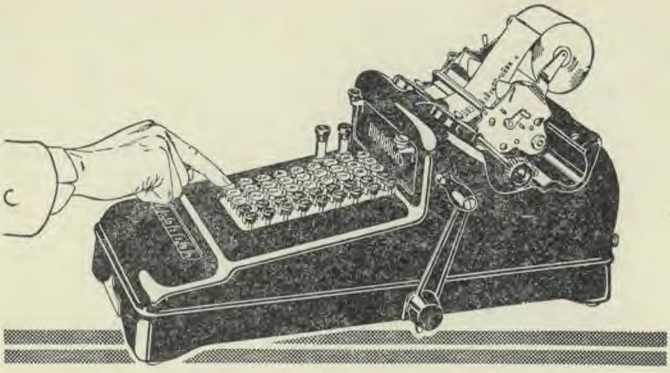
Colorado Coal Districts Bone-Dry

Owing to the fact that miners, through lax interpretation of the law, could obtain alcoholic "medicine" sufficient to make them drunk, the Fuel Administration has taken drastic measures to make the coal-producing counties bone-dry. This step was taken not as a moral or as a health measure, but as an efficiency measure, in order to secure a maximum production of coal. Liquor always and everywhere lowers industrial efficiency.

Milk in the Diet

Every government engaged in the war stands squarely behind milk as a necessity of the ration. Milk has been restricted only to the extent absolutely demanded by conditions, and then the milk supply of the babies and young children has been carefully protected. During the hardest months of her second year in the war, Germany was not only encouraging the consumption of milk by young children, but instituted a propaganda to secure milk from America.

(Continued on page 320)



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Canal Zone Dry

By Government order, the Canal Zone has been made dry. The order forbids the possession of liquor in the zone or the transportation of liquor across the zone. Does this mean that all shipments of liquor must go around the Horn?

A World in Need

President Hibben, of Princeton University, says: "A world in need has sent forth across the waters its cry to us for help. We cannot respond, and at the same time continue our comfortable, easy-going mode of existence. The times demand sacrifice, and sacrifice can no longer be free from suffering."

Restriction in Sugar

Beginning July 1 there was an added restriction in the amount of sugar permitted in the manufacture of ice cream. Ice cream manufacturers up to July 1 received 75 per cent of the amount of sugar used in 1917. Some of the products which have been receiving 80 per cent of the normal amount have been reduced to 50 per cent, and some of the less-essential sugar products have been taken off the list of essential foodstuffs and will not be permitted to use sugar. These restrictions have been made necessary on account of a shortage in the amount of sugar we shall be able to get from Cuba. Efforts have been made to insure a sufficiency of sugar for home canning purposes.

Urges Prohibition as Health Measure

Dr. A. D. Bevan, president of the American Medical Association, in his presidential address delivered before 7,000 physicians in Chicago, June 12, urged every physician and surgeon in America to help make the nation dry. He said: "I want to plead for the united action of the organized medical profession of this country to secure protection by law against the injury that drink is doing to our people not as a political measure, but as the most important health measure that could be secured."

Alcohol as a By-Product of Bread

Through the seizure of a still in a bakery in New Mexico, where a quantity of alcohol was discovered that had been distilled from bake-oven fumes, considerable discussion has taken place concerning the feasibility of manufacturing alcohol as a by-product of bread. This still was a crudely constructed affair, the vapor from the bread being conducted from the oven into a worm, which was cooled by passing through a barrel of water, condensing the vapor. The baker was not arrested, as it was clearly shown that no evasion of the law was intended. However, possession of a still is in violation of the law, and this one was seized by the Internal Revenue Service. This baker states that quantities of alcohol can be manufactured for war use at a very small cost by army bake shops and bakers in large cities. The practicability of the plan remains to be worked out.

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