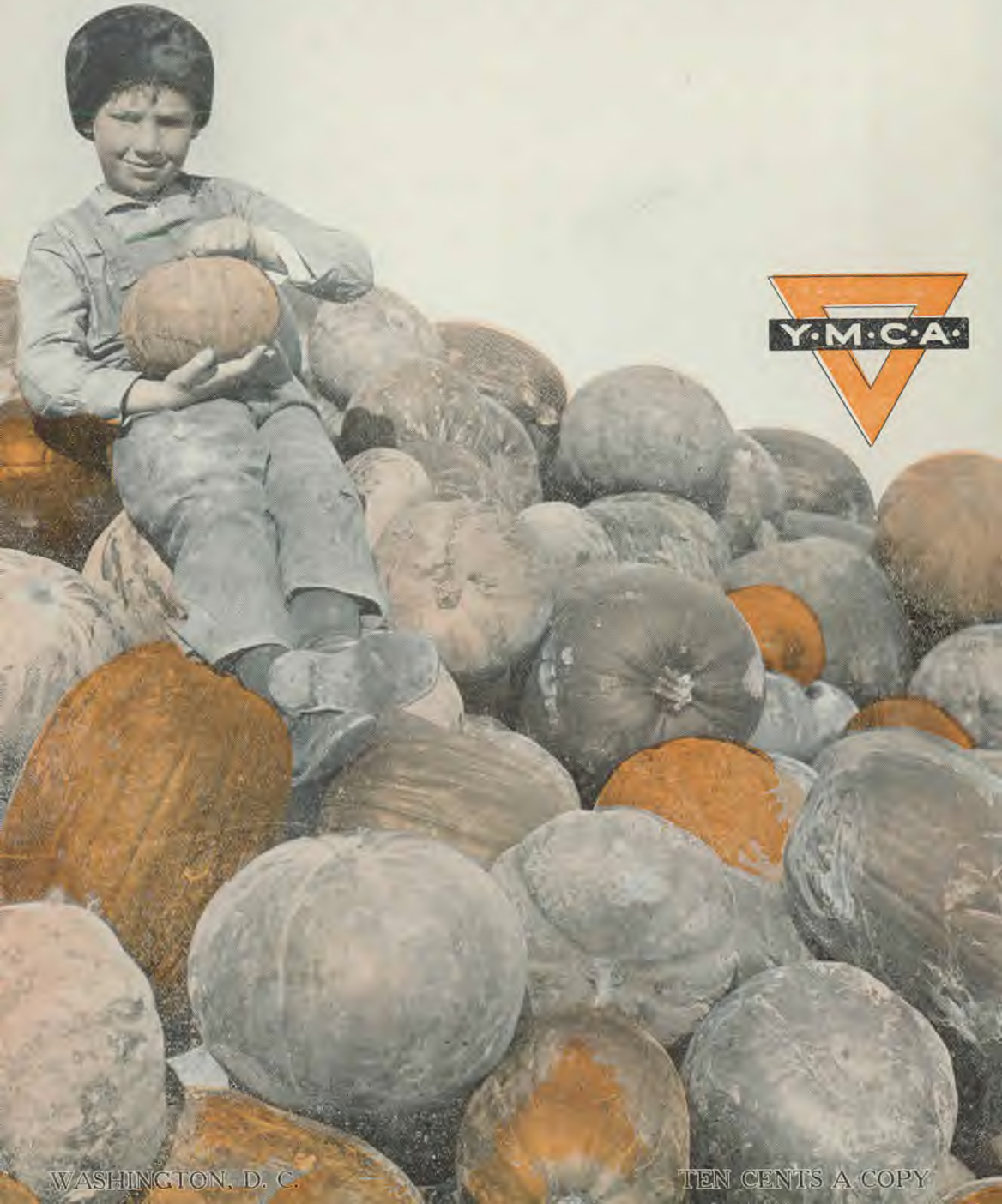
Life & Health



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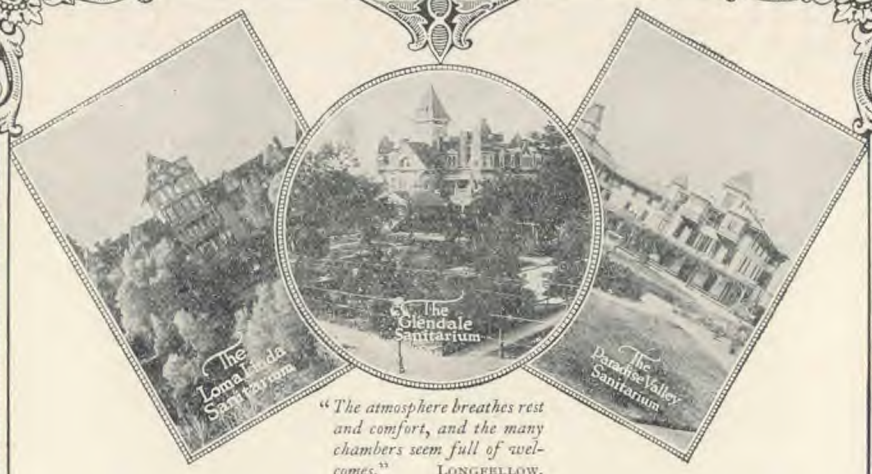

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Photo, American Red Cross

THE CASINO AT EVIAN

Where the Repatriates Enter France from Germany Through Switzerland

Life & Health

HOW TO LIVE

Editor H. W. MILLER, M. D.
Associate Editor L. A. HANSEN
Office Editor G. H. HEALD, M. D.

VOL. 33 NOVEMBER, 1918 No. 11

Exiles Come Home

E. Buckner Kirk

IN the cold gray light of a December morning, a group of men and women stood waiting the coming of a train. On a bench in front of the station sprawled or slouched several old soldiers, hugging battered musical instruments and wearing the traditional uniform of France,— blue coats and baggy red trousers. The newer horizon blue of the modern armies was not for them, because their business here was to meet and greet French people who had never even seen that uniform. Old men and women, mothers and little children, who have spent the years of the war in Germany or in the occupied regions of northern France and Belgium, would not recognize the color in which their sons and brothers and husbands are fighting.

When Germany reached out her mailed fist over Belgium and France in 1914, she swept back into her own land hundreds of civilians. These she used as she wished, in her fields and factories. Then she discovered that some were completely used up, no work left in them. Besides there were the sick and helpless, the very old and the very young, the sickly and the diseased. They must be fed, so why keep them? Why not let France take up the burden of their support? So in August, 1917, the first repatriates began to come back to France via Switzerland through Evian. And France, eager to give the exiles a welcome home, sent to meet them a little group of soldiers, too old to fight, who wore the familiar red and blue of days when war was rather a picturesque profession than a grim business.

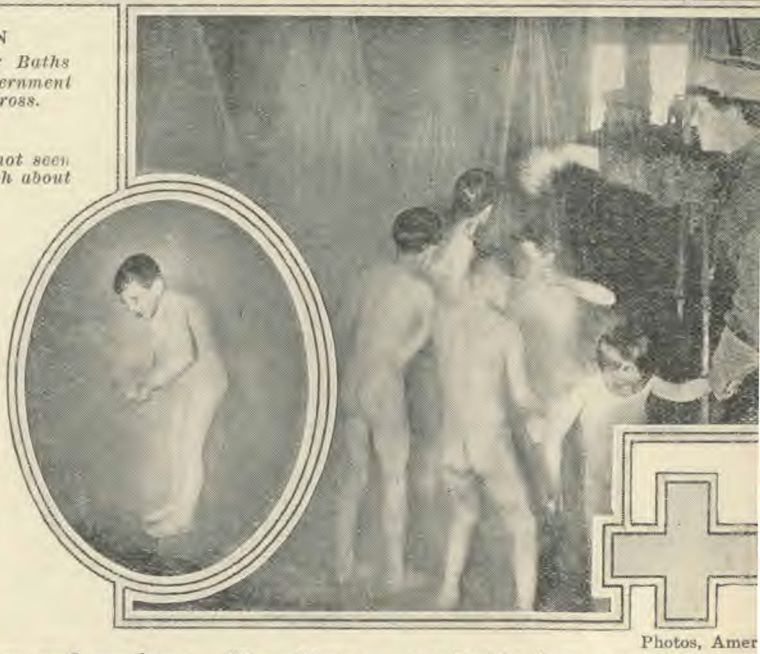
And now, this winter morning, besides the old soldiers, there were a few townspeople, out even at this early hour to

One of the patients in the Chateau des Halles

Photo, A. R. C.

THE CASINO AT EVIAN

The Shacks are the Shower Baths Put Up by the French Government and the American Red Cross.



IN THE SHOWER

These small boys, who have not seen a shower bath for years, splash about with delight in this compulsory bath for sanitary reasons.

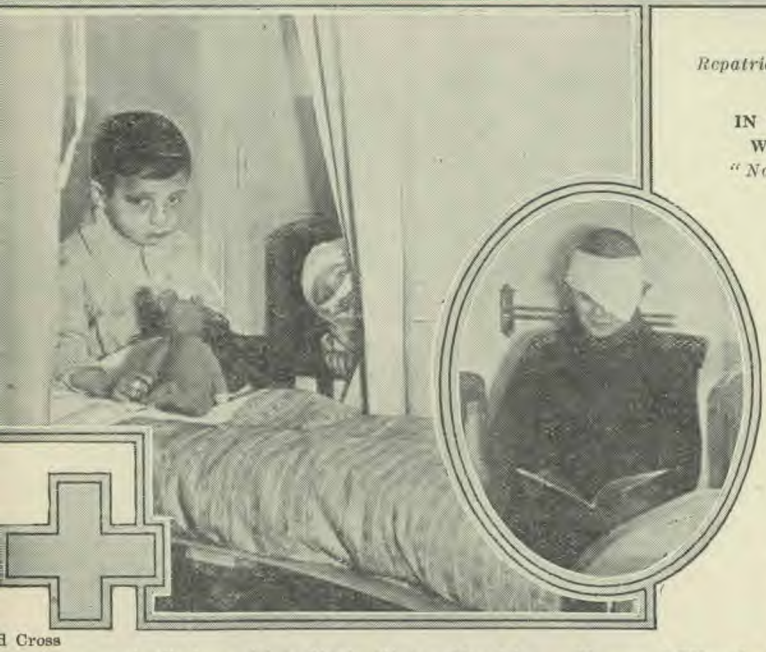
Photos, Amer

welcome the exiles home. Across the platform was still another group, these also in uniform. There were the long blue cloaks and coifs of French women relief workers, the khaki coats and caps of American Red Cross doctors, and finally the blue greatcoats of the Red Cross nurses and workers.

Two of these last, a tall woman with a gray fur coat over her uniform and a small nurse with her hands plunged far down into the pockets of her greatcoat, were walking up and down together, talking and trying to keep warm. The little nurse was blinking both eyes in her efforts to keep awake. She had spent most of the night with an old man who was dying, and who had, by turns, whimpered like a child and then called her the most outrageous names. She was tired. The older woman beside her was tired too. Her visits to Evian had been, heretofore, less strenuous. Before the war, Evian-les-Bains had been a luxurious fashionable resort, where one came to rest after "the season," to gamble and dance and go to concerts.

An engine whistle wailed a long, dismal blast. Far down the track there was the gleam of a light through the mist. Miss P—— shivered with something more penetrating than cold. "When I see these people, especially the children,

CONVALESCENTS
Repatriate French Children at the Château des Halles



IN THE HOTEL CHATELET
Ward for Contagious Cases
"Not so lonely as he looks."

d Cross

come in," she said to little Sister Freddy, "I have just one thankful thought, and that is that they are not Americans."

"And I," answered Sister Freddy, who had worked among the school children in the slums of New York City, "keep thinking how like they are to lots of the children I have seen at home. Children covered with dirt and skin disease, undernourished and undersized are scattered pretty much everywhere at home. The difference is that this is spectacular,— that's all."

Just then the train swept slowly in, and the old soldiers, suddenly recalled to life, stand at attention. There is a flourish and roll of drums, the bugler sounds the stirring "Assembly," and from the windows of the train, hundreds upon hundreds of childish voices are calling in every treble key, "La France! La France! Vive la France!" They crowd off the train, the older children leading or carrying the little ones, all of them half laughing, half crying, and some of them trying to sing.

Up the street of the town they go, following the gayly garbed musicians as their German prototypes followed the Pied Piper of Hamlin, long ago. At the Casino, breakfast is waiting for them. There in the great green and gold hall, where only a few years before men and women came to gamble, these little exiles

are served with steaming bowls of hot cocoa, good bread, and the first meat they have seen for many a month.

Poor little hungry children! they fall to and eat ravenously until the bugle sounds again and they rise to sing the Marseillaise. The mayor of the town speaks a few words of welcome, and then comes business. Each child must register his or her name,— those who can remember, for most tragic of all are the babies in each convoy who are too little to remember, and who can tell the workers nothing at all except that they "want mamma." After the registration, comes a bath and medical examination, and a temporary disposition of each child,— hospital, detention ward, or orphan asylum, as the case may be; for by nightfall another train load of repatriates will have arrived, and will need room and attention.

When the Germans first began sending people back to France through Switzerland, the French government sent a whole corps of workers to Evian — and they are there still and more too. They supply food and clothes, register the repatriates, deliver their mail and messages from friends, find homes for some and asylums for the very old, and generally manage the business of caring for the adult refugees. The American Red Cross, at the request of the French authorities, sent ambulances first, to carry the old and sick from the station to the Casino. Later, again at the request of the French, doctors and nurses came, and now, into their hands have been given the medical examination and care of all the children who come into Evian.

At first, things from a doctor's point of view were primitive enough. A dentist set up a chair made out of a wine cask, and went to work in a cellar. But the work has grown with the need. One large hotel, the Châtelet, has been turned into a children's hospital; one of the cottages connected with it has become an office for the enterprising dentist; and another cottage is used as an orphan asylum for children who have no other place to go. At first Hotel Châtelet accommodated one hundred sixty patients; now arrangements have been made for four hundred, and there is an isolation villa, where suspects are kept, until all fear of a contagious disease has passed. As the children are sent out from Evian all over France, this latter precaution has undoubtedly stopped the spread of many an epidemic, — bad enough at any time, but doubly dangerous in the crowded quarters where most refugee families find homes.

Just outside of Lyons, the nearest large city to Evian, is a convalescent hospital for children which the city has turned over to the American Red Cross. It used to be a comfortable country estate, but has now become a modern, well-equipped hospital for the care of the undernourished, anemic children whom Germany has sent back to France to feed and care for. In the city itself plans are under way for the establishment of a clearing hospital of sixty beds for children on their way to institutions in other parts of France; and there is also to be a summer fresh-air camp, where several hundred mothers and babies can go during the very hot weather. Then there is already in Lyons a hospital for tuberculous women and children, besides the larger one near Paris, where many of the refugees are sent.

In the first three weeks of their work at Evian, the American Red Cross doctors and nurses examined 31,228 children, and often averaged 5,000 a week in the months that followed — that is, until the end of February, when all Germany was so busy preparing for the spring drive that the convoys stopped, and did not begin again until June, when they started once more, just when every doctor and nurse available was engaged in a strenuous fight with a threatened epidemic of diphtheria.

The Red Cross work for repatriate children does not end with hospital care, baths, and well-tended teeth. Many a child has no home to go to, no family to join, and these must be cared for most tenderly of all. Asylums and homes have been established for them, especially in

southern France, where, in a healthful climate, they may grow and study and learn to work, that they may take their part in the France of the future, for which their fathers have given their lives. One of these homes, for Belgian children, is especially interesting, because it is in what used to be a famous old monastery, La Grande Chartreuse. In the old gray cloisters where a company of lonely men formerly gathered to meditate and pray, little lonely children are finding comfort in each other's company, are learning to play the games that four years of war have robbed them of, and are slowly forgetting the awful experiences through which they have passed.

When the war is over, and our doctors and nurses come home, they will bring with them experience that will be of incalculable value in their work among our own children. They will leave behind them, we believe, the foundation for greater health than France could have hoped for unaided, during the great war. And the wise ones, who knew how to help without patronizing, will have done even more. Memories of their courtesy and gentleness, their devotion and honest work, will be another bond between us and the republic to whom we already owe so much.

A Recent Criticism of Vegetarianism

G. H. Heald, M. D.

ONE of the fairest criticisms of vegetarianism which it has been my privilege to peruse is that by Macleod.[1]

Admitting that one can on a vegetarian diet obtain a sufficient quantity of protein, he calls in question the quality of the vegetable proteins.

He explains why certain proteins, containing all the amino acids needed in the body, are superior to those in which one or more of the necessary amino acids are deficient. In general, as he says, the animal proteins (gelatin a notable exception) are more complete or adequate than the vegetable proteins. Gelatin and certain of the vegetables will not sustain life. But, says Macleod, "It should be emphasized that there is in wheat and Indian corn, besides the imperfect proteins, gliadin and zein, another protein, that is of first quality, namely glutenin. This is present in sufficient amount to make even strictly vegetarian diets [with no milk, eggs, butter, or cheese.—ED.] perfectly safe, provided enough of either of these cereals is taken to allow for the fact that only a part of the protein is of first quality."

It will be noted here that he is not discussing the so-called vegetarian diet which includes dairy products or eggs, or both. Such a diet, containing as it does an abundance of perfect proteins, would, of course, be adequate. He admits that a vegetarian diet (cereals, fruits, nuts, vegetables, legumes) may be perfectly safe provided it contains a sufficiency of such foods (wheat, corn) as contain protein with all the essential amino acids. He continues:

"Real danger from protein starvation could arise only in case of strict vegetarians who did not take a sufficiency of wheat or corn; for although other vegetable proteins than glutenin do contain some of all the essential amino acids,

[1] "The Scientific Principles Involved in the Economic Readjustment of Dietaries," by J. J. R. Macleod, professor of physiology, Western Reserve University, Cleveland, Ohio, December, 1917.

A WHEAT HARVESTING SCENE ON A FARM IN MARYLAND

yet these may be deficient in amount, and it would be decidedly risky to attempt to live on them alone. Strict vegetarians are therefore liable to run the risk of partial starvation. One of the most valuable proteins is probably casein of milk; another, vitellin of egg yolk. A glass or two of milk with an egg, along with vegetable food, makes the diet a safe one, provided always, of course, that the caloric requirements are met and that no excessive wear and tear of the tissues is going on."

"Real danger from protein starvation could arise only in case of strict vegetarians who did not take a sufficiency of wheat or corn; for although other vegetable proteins than glutenin do contain some of all the essential amino acids, yet these may be deficient in amount, and it would be decidedly risky to attempt to live on them alone."

He thinks, however, that "it is probable that such a diet is inferior to one containing a proper but not excessive amount of animal proteins" which, of course, might consist entirely of milk products and eggs; but he continues: "It has been found that the smallest amount of protein required to maintain nutritional equilibrium is secured by taking flesh food, along with abundance of carbohydrate and fat, because this, in its amino-acid make-up, comes closest to that of the animal tissue." Surely he does not intend to attribute to "nature" a mistake in furnishing young mammals a food not the *very best* for building tissue, or in placing in an egg anything but the very best possible material for building bird tissue. If the flesh of the calf and the chicken are completely adequate in their proteins, how about the milk and the egg from which these tissues, respectively, were built?

Macleod next considers what is the safe minimum of protein in the diet. He believes that notwithstanding Chittenden's well-known experiments on a low-protein ration there is danger that on a low-protein diet one may not provide sufficient protein with which to elaborate the protective substances by which the body resists disease. He concludes that "with animal protein there is no doubt that we can get along with perfect safety by taking daily not more than fifty or sixty grams, which is about half what we actually consume." But, "If the protein be of vegetable origin and part of it of the first quality, as wheat and Indian-corn preparations, more should be taken so as to allow for the deficiency of certain amino acids. When vegetable proteins of the second quality, such as peas, beans, lentils, etc., are alone available, much larger amounts are necessary. Such proteins are inadequate in the case of growing children, at least, and even in adults; it is undoubtedly advisable that other proteins should supplement them."

A MARYLAND FARM DAIRY RETURNING FROM PASTURE

"To insure safety, therefore," Macleod continues, "it is almost imperative that the diet should contain *proteins of various sources.* [Italics his.] If for economic reasons the main source must be proteins of vegetable origin, then some animal protein, such as is contained in milk or meat or eggs, should be added to at least one of the daily meals."

"One of the most valuable proteins is probably casein of milk; another, vitellin of egg yolk. A glass or two of milk with an egg, along with vegetable food, makes the diet a safe one, provided always, of course, that the caloric requirements are met and that no excessive wear and tear of the tissues is going on."

To the question, What should we take in place of meat on "meatless" days? he replies: "Milk and eggs will completely make good the deficiency; or if these also be unavailable, then the taking of a more liberal supply of wheat or Indian-corn preparations will be satisfactory. Protein deficiency for one or two days a week could, however, scarcely entail any risk to health, provided the usual allowance of animal protein or of first-class vegetable protein be allowed on the other days. The value of potato protein should be remembered in this connection."

I think Macleod has overlooked one important factor of safety in a vegetarian dietary — the green vegetables themselves. As we have learned from McCollum's work, the green vegetables contain not only proteins which make up the deficiencies of the cereal proteins, but they also furnish in abundance these accessory substances upon which growth and adequate nutrition depend.

Regarding the advantage of the vegetable foods for their laxative effect, Macleod says: "A diet of meat, milk, eggs, and white bread is apt to be unphysiological because there is nothing in it to act as what has been called intestinal ballast, that is, a material which will keep the intestines sufficiently filled to stimulate their muscular movements. This ballast is best furnished in the shape of cellulose, the most important constituent of green food. Peas, beans, cabbage, salad, and many fruits, especially apples, should always occupy a place in the daily menu. Another valuable food yielding this ballast is the outer grain of wheat, oats, etc. So much must not be taken as to produce a constant intestinal irritation, and each person must determine for himself where this limit lies. The differences among various breads is almost entirely in the degree to which they supply ballast."

The green foods not only act as "ballast." If we may judge from the investigations of McCollum and others, they have a high nutritive value, in making up some of the lacks of the cereals.

Why Does a Back Ache?

A Diversion for the Doctor's Patient

Edwin F. Bowers, M. D.

A GREAT American philosopher from the corn-belt district once said, "Sometimes it's just as well not to know so much as it is to know so many things that ain't so."

The solicitous inquiry which inspires our tale drops naturally into this category. The question implies that if you get up with a lame back, how it behaves the rest of the day evidently doesn't matter, you are "threatened" with, if not actually in the fell clutch of, kidney disease.

Those interested in finding out about your lame back usually volunteer the information that kidney disease is alarmingly on the increase, and also that it is love's labor lost and time scrapped to be concerned in doctoring the effects instead of plunging boldly after the original cause.

All of which is true. Kidney disease — with the heart, liver, and bladder conditions as well as the nervous disorders that accompany it — is undoubtedly on the increase. But this has no more to do with backache than a pig's curly tail has to do with dynamics. It's just the same Alice in Wonderland sense as though one said, "James Smith is red-headed and lives in Brooklyn; therefore his wife must be fond of music."

Now, here is the truth about the kidneys. Their regular job in life is to filter off a certain definite proportion of the waste material from the body tissues. They pick out this effete matter in the form of urea and urates, dissolve these in water, and eliminate them.

If they become damaged by alcohol, overeating, lead poisoning, toxins from acute infections,— as scarlet fever, pneumonia, bronchitis,— overwork, worry, severe physical strain or injury, excessive use of tobacco, veneral diseases, and many other causes, their work output is crippled and their function is greatly impaired.

When this impairment is manifested, the first symptom will usually be headaches, not "splitting," but dull and persistent, and apparently without cause. The patient lacks ambition, is listless and drowsy, and awakens from an apparently heavy sleep unrefreshed. The retained poisons, acting upon the nervous system, affect the stomach and the digestive organs, and appetite, digestion, and elimination are all unfavorably influenced.

The retina and the optic nerve become involved, and while blindness rarely results, yet frequently there may be a 50- or 60-per-cent reduction in vision.

Unless the process be recognized and checked and the body poisons actually eliminated through the skin and the bowels, the muscle cells of the heart become weakened and the cellular structures of the body become water-logged. This causes the unsightly puffing under the eyes and also swelling about the ankles, together with distressing shortness of breath that results from the water-logged condition of the lungs.

Some acute infection, throwing an extra amount of strain upon the overworked and badly weakened or dilated heart, may terminate the disease. Or the gradual accumulation of poisons in the system that should have been eliminated may bring about a "stroke," or an attack of apoplexy, and end the strange, eventful history.

All of which is bad enough. But it has nothing to do with backaches. Ninety per cent of all backaches have to do with nerves, muscles, and tendons, and are not in the slightest degree related to the kidneys.

The things that cause backache may range from hollow teeth to falling arches, and from an insignificant draft to a significant pair of corsets, or a hysterical attack.

In men the most frequent cause lies in some latent venereal infection — usually some uncured disorder affecting the prostate gland. Nothing except a thorough course of treatment by a skilful genito-urinary expert will permanently relieve this backache.

Pus-generating factories in the hollows of carious teeth or around their gum margins are also a cause of the "kidney and bladder trouble" that causes a lame back. Skilful attention by a dentist may cure many chronic cases of this "kidney trouble."

Reflex symptoms from fallen arches cause innumerable backaches. A well-adjusted arch support or a properly fitting orthopedic shoe will correct these.

A displaced hip joint or a "slipped" or rotated spinal vertebra may occasionally cause backache — not only when you get up, but most every other hour of the twenty-four. A good osteopath — one that knows his anatomy and osteology — will work wonders with these backs.

Many chronic backaches are caused by nothing more rare and unusual than an uncomfortable bed, the spring of which sags where it should support, and humps "where it should flatten out." This is particularly true of sleeping in a bed shared with another sleeper, which prevents either one from avoiding the hollow by "diagonalizing" the bed.

Retained urea and uric acid also cause some rheumatism and lumbago. If from ten to twenty glasses of hot and cold water be drunk during each twenty-four hours, and if meat be eaten only once a day [or not at all.— ED.], and fruit, salads, and vegetables more frequently; if sugars and starches are eliminated, and if alcohol is absolutely interdicted, many backaches will give up in disgust.

And right here it may also be mentioned that a pair of dull-toothed aluminum or steel combs, grasped firmly in either hand and held so as to cross the zones affected by the backache, will sometimes work absolute miracles of healing.

In women the most frequent cause of backache arises from inflammation or irritation of the genital organs, or from some abnormal strain resulting from a prolapsus or displacement of these organs.

A gynecologist who will replace the uterus in its proper position, or who will relieve the local congestion or irritation, will cure all the backaches these very common disorders bring about.

Women may greatly aid in this — indeed, sometimes it is the only treatment they require if they will discard tight corsets, which constantly force the abdominal organs downward, and also high-heeled shoes, which throw the body into a faulty equilibrium, and destroy the proper center of gravity. But this is almost too much for a mere doctor to expect — except in a court of last resort.

SAVING GASOLINE

A Severe Case of Chronic Pellagra Followed by Recovery

With Suggestions

J. E. Caldwell, M. D.

THIS patient, when she came to me about three years ago, was about forty years of age, slight build, light blond, with light-auburn hair. Her father and mother seem to have been healthy at the time of the patient's birth. We will call her Mrs. A. As a child she was delicate. It is believed that except for the special care and attention afforded by her father, who was a physician, she might not have lived through the troubles of infancy.

Having grown up and qualified as a kindergarten teacher, our patient accepted a position to teach in a mission school in Turkey under the Presbyterian Board. It is interesting to know that her pupils were Armenian children, many of whom have since been killed or forced into a condition worse than slavery in Turkish harems. After seven years of service in Turkey and one year in a mission station in Japan, our patient returned to America and was happily married and settled on the west coast in Florida.

During the later years of her stay abroad Mrs. A's health was not good. She was nervous and irritable, sometimes better and sometimes worse, had more or less difficulty in digesting her food, but was seldom disabled.

In the summer of 1915, after steadily becoming more and more seriously affected, her disease was recognized. Soon after this the case fell into the hands of the writer. At that time she could walk some, but with a halting, staggering gait. Her muscular co-ordination was imperfect, the mouth was sore, tongue and lips red, and of appetite she had little or none. Her mind was fickle, erratic, prone to hallucinations, and so irritable as to sever or threaten the ordinary ties of friendship. The skin of her forearms, neck, wrists, and hands showed characteristic pellagra lesions, not moist and pouring out quantities of serum as in recent acute cases; for while the area involved was red and tender and easily irritated, it nevertheless showed dry, branny scales constantly forming on a thick and indurated base or underskin. There also appeared dry gangrenoid lesions of both her great toes, a symptom that was unique in my observation. At that time there was prescribed for her a liberal diet rich in proteins including milk, eggs, flesh meat, and as many cereals, vegetables, and fruits as she would take. She also received the commonly prescribed doses of arsenic in the form of neo-salvarsan intravenously administered.

The appetite returned, and for four or five months she talked and walked better, the lesions in the skin began to disappear, and high hopes for ultimate recovery were entertained. But a relapse came with aggravation of all the symptoms, and attended by marked evidences of autointoxication, the common, and, I must say, almost inevitable result of a prolonged ill-balanced dietary in both sick and well. In moral law to do evil that good may come is regarded as a monstrous heathenish practice. I cannot see why it should be regarded more favorably in physical law relating to the care of the human body. There may be unfavorable conditions found in sickness that are best met by a course of treatment that would injure a healthy man, as a few days of fasting in autointoxication; but I am becoming more and more wary of fads in the practice of medicine, even when urged by great men, *when they violate well-known laws of nature.* I believe that when the present fad in the therapeutics of pellagra shall have "run its course," medical authorities will cease to urge, contrary to the laws of health, as they now do, that a diet excessively rich in proteins should be made the *sine qua non* in the treatment of pellagra.

To the credit of the profession it is to be said that "up-to-date" physicians have recognized, and have abandoned, that other similar dictum of authorities put forth a generation ago, namely, that an exclusive flesh-meat diet is the pillar of successful diabetic therapeutics.

While suffering the relapse named, our patient became too weak to feed herself, or even to turn over in bed. Near relatives began to prepare for the funeral, and it did seem that she had but a short time to live. The autointoxication was met by fasting for about two weeks. She had no appetite, and nothing was urged upon her. Later the diet was very spare, more nearly balanced than before, yet fairly rich in proteins. As recovery advanced, great care was taken to recognize and meet by suitable changes of diet every mark of inability to eliminate the nitrates eaten.

I wish to make it clear that this relapse occurred while a protein diet and arsenic were being pushed. The arsenic then being given was in the form of sodium cacodylate in doses suggested by the manufacturers. After the patient began to recover from this autointoxication, the cacodylate was continued for a while, but at rarer intervals.

While at her worst condition a system of auto-serotherapy was begun. The very first dose was followed by marked improvement, and after eight days of waiting another dose seemed still further to improve the condition. For many weeks these hypodermic injections were given at intervals of about eight days with results that were very gratifying. The effect of the serum injections seemed so marked that the arsenic injections began to be delayed, and about two years ago they were discontinued altogether. After the patient had improved steadily for many months, the serum injections were dropped for a time, and upon the reappearance of an aggravation of either the mental symptoms or the skin lesions, they were begun again. The last dose was about five months ago. At present the patient seems normal. We have endeavored to anticipate the seasonal exacerbations of symptoms expected, by one or more doses of serum. She does her own housework, attends to all her domestic duties and social functions, including the care of a large kindergarten class in the Sabbath school, which work she had been obliged to abandon three or four years ago. She also does much home missionary work in her neighborhood, and is by her friends regarded as fully recovered.

Erratic mental activities, the characteristic gait, susceptibility to the reappearance of erythema on the back of her hands when slightly irritated, and the sore toes, were the last indications of disease to disappear.

In the administration of more than thirty doses of serum to this patient I

think I am safe in saying that not once have we been disappointed in looking for improvement. In later months the serum was often withheld until some aggravation of symptoms called for another dose.

The serum used has been drawn from blisters produced by common, fresh commercial Spanish-fly plasters placed upon the chest of the patient. A square of plaster an inch and a quarter on a side was well oiled, and placed upon a spot sterilized and oiled, and held in place by straps of adhesive plaster. Provision for a plump blister is easily made if a roll of absorbent cotton is placed between the Spanish-fly plaster and the strips of adhesive plaster. If the cantharis is fresh, twelve hours will be sufficient time to furnish the required amount of serum, i. e., about one mil. The plaster is not to be entirely removed when the serum is wanted, but the upper portion is separated and the needle of a sterile syringe is thrust into the upper part of the blister and the fluid withdrawn. It is at once discharged into the subintegumentary tissues under a spot selected and prepared as for any ordinary hypodermic injection. No reaction need be looked for, and no ill results.

The comfort of the patient will be increased if the drained blister is dressed with gauze moistened with a saturated solution of picric acid, as it is used after scalds and ordinary sunburns.

The well-to-do condition of this patient's family, and the fact that when her disease began to develop in 1907 she was in a well-equipped Presbyterian mission school, preclude the idea that she had been underfed. Her own testimony is that she never ate much corn. She says also that she has always liked fresh meat and generally ate it once or twice a day. In Turkey the meat eaten was usually mutton.

I have treated three other cases, giving in all about seventy-five doses of serum by this method with good results in all. The other cases were ambulatory, and not so severe as this one, and not so chronic. Dr. Wm. L. Secor, of Kerrville, Texas, whose technic I have followed, reported eight cases successfully treated by the serum method (*Journal of the American Medical Association*, May 8, 1915, Vol. LXIV). I am indebted to him also for further suggestions in private communications.

Some of Dr. Secor's cases were acute. He suggests that in these more frequent doses may be given, but when 2 c.c. doses were attempted in one case, the symptoms were aggravated.

MOUTH HYGIENE

The Relation of Teeth to the Alimentary Canal

W. C. Dalbey, D. D. S.

THE alimentary canal is about thirty feet long. We exercise a voluntary control over the first three inches only. No more. If we do not take advantage of our prerogative over these first three inches, we may expect trouble beyond. We should allow no excuse — haste, laziness, bad teeth, or no teeth at all — to prevent us from masticating our food thoroughly. Once we allow it to leave the mouth without being thoroughly masticated, and to

start on its devious internal wanderings through the stomach and intestines, we may sit back in full assurance that the joy-killers of indigestion, constipation, intestinal congestion, loss of vitality, rheumatism, together with their more deadly allies, diphtheria, tuberculosis, etc., will be ours by deed of gift.

Authorities tell us that more than ninety per cent of all our bodily ailments arise from disturbances in some part of the alimentary tract. If you doubt this, ask your doctor why he almost invariably gives you a physic as his first dose of medicine to flush out the poisons from this tract, and why it is that you always feel better when this is accomplished.

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DENTISTRY IN THE U. S. ARMY

There is nothing that will disturb the intricate working functions of the alimentary canal like forcing into it poorly masticated food. The food may be ever so good, yet if it is poorly masticated it will bring about disturbances hard to cope with.

The alimentary canal consists of the mouth (don't forget the mouth should have teeth, and that they should be used), throat, æsophagus, stomach, and intestines. Through this internal highway, or subway, all our food must pass. And, like a country with but one transcontinental railway, the human body is solely dependent on this thoroughfare to perform the two functions indispensable to life — to receive, and through its lateral branches distribute, those elements that support life in the body; and to receive from those lateral branches, transit, and discharge beyond the border, those elements of waste and decay which, retained in the body, make for sickness and death.

Thus are the forces of life and death in constant and delicate balance in the human body, almost solely dependent on the health and activity of the alimentary canal. Any impediment to the continuous flow of the necessary materials, whether from shortage of food at the source, a congestion of traffic at the switching or terminal points, or in fact anything which interferes with the smooth, functionless flow of food into the body, and the ebb of waste out of it, disturbs the delicate balance, and may spell anything from a slight mishap to fatal disaster.

The human body may fitly be compared to an engine, and the food we prepare and eat to the fuel which supplies the steam power to the engine. The fuel (food) must not only be supplied with tolerable regularity, but, above all, the *kind* is essential. The life engine is much more imperious in its demands for quality than for quantity of the food fuel. Starting a fire in the cook stove with two or three chunks of coal and a match is exceedingly difficult, but not half so difficult or dangerous as to try to keep the fires burning in our human engine by feeding it chunks of poorly masticated food.

Then, to avoid trouble, eat good food regularly; and, above all, masticate it well to avoid sickness. Do not overeat.

A Wheatless and Meatless Luncheon

George E. Cornforth

ON the afternoon of June 27 last, there was served on the lawn of the Columbus Rural Rest Home, to about one hundred fifty people, a wheatless and meatless luncheon, of which the following was the menu with recipes:

Rice au Gratin
Wheatless Nut Gems Barley Fruit Gems
Ripe Olives
Vegetable Salad Wheatless Crackers
Loganberry Jelly with Whipped Cream
Wheatless Maple Cake
Wheatless Caramel Nut Cake
Fruit Nectar

RICE AU GRATIN

1 cup rice.
3 cups boiling water.
1 teaspoon salt.
2 cups sour cream.
1 egg, beaten.
½ teaspoon grated onion.
2 tablespoons chopped walnuts.
2 tablespoons chopped canned sweet peppers.
1 teaspoon salt.

Wash the rice thoroughly in several changes of hot water. Put it into a double boiler with the three cups of boiling water and one teaspoon salt, and cook one hour. Then mix with the rice the remaining ingredients. Spread in an oiled baking pan, sprinkle with crumbs, and bake till set.

The luncheon was served on paper plates. A large spoonful of the rice au gratin was served on a large paper plate with one gem of each kind, cut open and spread with butter, and a few ripe olives.

WHEATLESS NUT GEMS

1 cup milk.
2 tablespoons cooking oil.
1 egg.
1¼ cups barley flour.
½ cup corn flour.
¼ cup chopped walnuts.
½ teaspoon salt.

Beat together the milk, oil, egg, and salt. Stir in the remaining ingredients and beat with a batter whip till smooth. This will require about two minutes' beating.

Turn the batter into a quart measure or pitcher, and from this pour the batter into oiled gem irons, pouring into the irons all they will hold without running over. Bake in a hot oven till nicely browned.

BARLEY FRUIT GEMS

1 cup milk.
2 tablespoons oil.
1 egg.
½ teaspoon salt.
1¾ cups barley flour.
¼ cup seedless raisins.
Put together like the nut gems.

VEGETABLE SALAD

1 cup boiled carrots, diced.
1 cup green peas.
½ cup cucumbers, diced.
½ cup radishes, sliced thin.
1 hard-cooked egg, chopped.
1 teaspoon grated onion.
½ teaspoon salt.
1 cup mayonnaise salad dressing.

Mix ingredients carefully. This was served on a lettuce leaf on a small plate

with wheatless crackers on one side of the plate.

MAYONNAISE SALAD DRESSING

1 egg yolk.
1 teaspoon barley flour.
1 cup salad oil.
3 tablespoons lemon juice.
1 teaspoon salt.

Put the egg yolk into a small bowl. Beat it with a Dover egg beater till it begins to thicken. Then beat the flour into the egg yolk. Then pour about a teaspoonful of oil down one side of the bowl. Then beat with the egg beater in such a way as to gradually draw the oil into the yolk. Then pour in another teaspoonful of oil and beat again in the same way. Continue beating in oil in this manner till the dressing becomes as thick as soft butter, then beat in half the lemon juice. Then beat in the rest of the oil, a teaspoonful at a time, and then beat in the rest of the lemon juice and the salt.

LOGANBERRY JELLY

1 cup loganberry juice.
¾ cup cold water.
2 tablespoons lemon juice.
¾ cup sugar.
½ ounce vegetable gelatin (agar-agar).
1 cup boiling water.
A few grains salt.

Soak the gelatin in three changes of hot, but not boiling, water, using about one quart of water each time, and allowing the gelatin to remain in each separate quantity of water about fifteen minutes.

While the gelatin is being thus prepared mix together the remaining ingredients, except the one cup of boiling water. When the gelatin has been drained the last time, put it to cook in the one cup of boiling water. When it dissolves, turn it through a wire strainer into the remaining ingredients. Mix well, and pour into cups wet with cold water. When it is cold, it is ready to be unmolded and served with whipped cream.

Wheatless Maple Cake

2 eggs.
¼ teaspoon salt.
¼ cup boiling water.
½ cup sugar.
¼ cup corn sirup.
½ teaspoon vanilla.
1 cup sifted barley flour.
¼ cup oil.

Break the eggs into an earthenware mixing bowl. Set the bowl into a basin of hot water. Add the salt to the eggs. Beat the eggs with a Dover egg beater till they become light and stiff. Then beat the boiling water into the eggs, and beat again till stiff, and very light. Gradually beat in the sugar, adding it a little at a time, and beating well between the additions of sugar. Then beat in the corn sirup and vanilla and then the oil. Lastly, with a wire whip, fold in the flour with sufficient care not to lose the air that has been beaten into the batter. When the flour is all folded in, pour the batter into a layer-cake tin into the bottom of which a piece of thin oiled paper has been fitted. Bake in a moderate oven. When cool, remove from the pan, take the paper from the bottom of the cake, and frost with maple frosting.

MAPLE FROSTING

1½ cups maple sirup.
1 egg white.

Boil the sirup till it forms a thread as it drips from a fork which has been dipped into the boiling sirup and lifted. Then pour the sirup in a fine stream on the stiffly beaten egg white, beating the white as the sirup is poured in. Set the bowl which contains the mixture over a dish of hot water and beat the mixture till it stiffens a little, then spread it on the cake.

WHEATLESS CARAMEL NUT CAKE

3 eggs.
¼ cup boiling water.
¼ teaspoon salt.
⅔ cup sugar.
¼ cup corn sirup.
1 teaspoon vanilla.
1 tablespoon caramel (that is, burnt-sugar sirup).
2 cups sifted barley flour.
¼ cup oil.
½ cup sliced walnut or pecan meats.

Put together like the preceding cake, beating the caramel into the batter just before folding in the flour, and folding the nuts in last.

FRUIT NECTAR

½ cup loganberry juice.
½ cup grape juice.
¼ cup cherry juice.
Juice of two lemons.
2½ cups water.
About ½ cup sugar.
¼ teaspoon vanilla.

Mix ingredients, stirring till sugar is dissolved, and set into the refrigerator to chill. Other fruit juices, such as strawberry, raspberry, pineapple, may be substituted.

This is the recipe that my grandmother used for making brown bread:

2 cups sweet milk.
1 cup sour milk.
3 cups Indian meal.
1 cup white flour.
¾ cup molasses.
1 teaspoon salt, level.
2 teaspoons soda, level.

No doubt the Indian meal was unbolted, different from the common cornmeal that is sold in the stores today.

Dissolve soda in milk; add remaining ingredients; beat well; pour into oiled brown-bread tin, cover, and steam three or four hours.

Here are two other recipes that my mother uses:

NO. 1

1 cup sour milk.
2 cups water.
1 cup cornmeal.
1 cup Graham flour.
1 cup white flour.
¾ cup molasses.
1 teaspoon salt, level.
2 teaspoons soda, level.

Follow directions given with preceding recipe.

NO. 2

2 cups sweet milk.
1 cup sour milk.
2 cups cornmeal.
1 cup white or Graham flour.
1 teaspoon salt.
½ or ¾ cup molasses.
2 teaspoons soda.

As far as taste is concerned, the brown bread made by these recipes is in no way superior to the brown bread made without soda, according to recipes that have been published in LIFE AND HEALTH, as for example, the wheatless brown bread, the recipe for which appeared in the August LIFE AND HEALTH.

How to Get Indigestion

L. A. Hansen

NEGLECT your teeth. Bad teeth and missing teeth cannot do much toward grinding the food in the mouth where the process of digestion begins, and a bad beginning is a good start toward a bad ending. As there are no teeth in the stomach, of course the food that is not properly chewed becomes more of a task for the digestive system.

Another thing about improper chewing is that it does not give time for the digestive fluid given out by the glands in the mouth to be properly secreted. With digestion poorly begun, there is bound to be some extra work for the rest of the digestive organs.

Pay no attention to how you combine food in your eating. Eating acids with starch foods is quite likely to hinder the starch digestion. Large quantities of milk and sugar together are often productive of fermentation. And fruits and coarse vegetables is a combination well suited to cause digestive trouble.

Don't bother about good cooking. Some kinds of cooking not only spoil perfectly good food material as far as its market value goes, but ruins it for alimentary purposes. Of course the digestibility of a dish ought to be considered along with its palatability, but, if you don't mind having indigestion, you may eat merely to please your taste, no matter how perverted it may be.

Be irregular about eating. Having regular meal hours is conducive to good digestion. Crowding one meal on

another gives both meals a chance to make trouble. Having meals too far apart lets one get too hungry and leads to overeating.

Eat hurriedly and bolt your food. When food is well chewed it stands a fair chance of being digested, which is not the case when it is swallowed in solid particles, for then the digestive fluids cannot act on the different food elements.

Bring your worries to the table with you. Cheerful surroundings, pleasant company, and the enjoyment of the meal hour encourage a good digestion. Serving gloom and worry at the meal will do the other thing.

Then worry a lot about your food hurting you after you have eaten it; then it will be sure to do so. If you should happen to forget about it, and let your mind dwell on cheerful things, being thankful that you have good food to eat, even your indigestion, if you already have it, might get better. There is a close relationship between mind and body, and the digestive functions are included in the scheme.

Among the things that may be eaten to cause indigestion are these: Highly seasoned foods with considerable salt; condiments, such as horse-radish, mustard, pepper, and many other spices; salted and preserved meats; coffee, tea, and alcohol; fried foods and greasy preparations; extremely hot or cold foods in any considerable quantity; too much sweet stuff, either as pastries or candies; late suppers, especially of foods hard to digest; fresh bread.

Among some of the symptoms given by the doctors which indicate that you may have indigestion are the following: Pain in the stomach, heartburn, unusual thirst, headache, eructations of gas, nausea, dizziness, fulness in the stomach, bad taste in the mouth, bad breath, coated tongue, capricious appetite, and constipation.

Seriously now, indigestion is a splendid thing *not* to have. The isolated symptom or the apparently minor distress of it may not be so isolated or minor as you think. Other functions may be closely and seriously affected. You would better give up the things that cause indigestion and see how much better is a good digestion.

Health Rules for the Child

STUDY and obey the laws of health.

Do not suck the fingers, pick the nose, or wipe the nose on the hand or sleeve.

Do not wet the fingers in the mouth when turning the leaves of books.

Do not put pencils in the mouth or wet them with the lips.

Do not put pins or money in the mouth.

Use the mouth for eating good plain food, drinking pure water and milk, and for saying only good and proper words.

Chew the food thoroughly.

Avoid " clearing the throat " when unnecessary.

When coughing or sneezing, hold a paper or handkerchief before the mouth.

Never spit on the floor, stairways, or sidewalks.

Keep the hands and finger nails clean.

Wash the mouth every morning on getting up, and at night just before going to bed, and if possible also use a toothbrush.

Get all the fresh air you can; sleep with the windows open.

Work when it is time to work, play when it is time to play, and rest when it is time to rest.

Do not bite fruit that has been bitten by other children. Never eat another person's apple core.

Never, never chew gum that has been chewed by somebody else.

Let tobacco in any form strictly alone, and do the same with any kind of drink that you do not know is pure and good. Avoid alcohol in every shape.

AS WE SEE IT

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

COMPARATIVE IMPORTANCE OF NATURE AND NURTURE

It is a perennial problem — Which is the stronger in determining characteristics in the young, heredity or environment? Is it all-important to be well-born or to be well-reared? There have been advocates of both sides of the controversy; but now it is generally accepted that neither is unimportant. Experiments in plant and animal production have shown beyond the shadow of doubt that for the development of the best characteristics both heredity and environment are indispensable.

It is said that the introduction of the Burbank potato revolutionized potato culture, and added millions of dollars to the value of the potato output of this country. But a bushel of Burbank potatoes planted in some of the soil of my back yard, would not yield a peck of potatoes, and they would be as small as quail's eggs. A bad environment would utterly nullify any advantage of using choice seed, and my result would be little if any better than if I had used scrubs. On the other hand, as is well known, the use of inferior seed, even in the best of soil, will give only indifferent results. In raising potatoes, seed and soil are both important — vitally important.

In my back yard are some tame blackberries, near a wire fence beyond which are wild ones. A few of the tame ones did not come up at first, but later ones came up in about the right place, which, notwithstanding they were cultivated the same as my other vines, were small and bore small fruit. On the other hand, there sprang up beyond the fence evidently shoots from the tame vine, for they were stocky vines, different from the wild vines and bearing large berries similar to my cultivated berries. In this case it is very evident that heredity, at least at the present, is more influential than cultivation. Probably a few years of careful cultivation might improve the wild fruit, and constant neglect might cause deterioration of the tame vines.

Some people try to keep poultry, having a few old hens of any or no variety — just hens, of scrub or mongrel stock. They get a few eggs from time to time, but do not count them, and do not know which birds lay or if all lay equally. They do not keep strict account to learn whether the eggs they get are worth the feed and care they give their chickens. A little bookkeeping would convince them that they are doing a losing business, and yet if advised to exchange for a flock of some breed or strain known to be good layers, they will reply that in their experience the scrubs do just as well, require less care, and are not so liable to die off. It is true, the scrub hens will survive more mistreatment and neglect than the " fancy " hens; and in case one will not give proper attention to his poultry, he will do better, perhaps, with the more hardy mongrels; but at best, his record of egg laying will fall far short of that made by one who has a good laying strain and gives them proper care. Both nature and nurture are important in the poultry business, and so it will be found to be in all animal raising. The most careful breeders also give most attention to the feeding and care of their stock.

Some persons think that this rule, which is universal in the animal and plant kingdoms, does not hold good in the human race. The reason for this observation is that not infrequently some person from an unpromising family is placed under different environment and makes good, or on the other hand, one from a family having, so far as known, the best of characteristics, by falling under bad influences, leads a life which is a disgrace to the family. It is true that in these instances the environment has apparently had much greater weight than the heredity, but such a generalization may be the result of imperfect observation.

In a mixed population, characteristics apparently from the same parents, are passed on very differently to the different children. John has his mother's eyes and his father's hair. Mary, on the other hand, has her father's eyes and her mother's hair. And so the characteristics are segregated. One child seems to resemble one parent in several particulars, the other in few. Another child seems to be more like an uncle or an aunt or a cousin than like either parent. We have all observed these differences, which have been latterly explained by the observation that inheritance is for separate characteristics, the characteristics which the parents received being handed on, but parceled out variously among their progeny. In a family which in general is wayward, there may be some "good seed" which would show in a particular son or daughter. And on the other hand a family of high standing may have some wild seed which shows forth in some boy. It is impossible to subject these data to the close laboratory analysis that we can apply to plants and animals, and so we can only surmise that what is true of the plants and animals is true of man. A person's constitution, his hair, his eyes, the shape of his nose, his tendency to short or long life, his susceptibility to certain diseases, his mental aptitude and perhaps his moral aptitude, have come to him through his parents, from his ancestors. He is born with certain predisposition to disease and health, to long or short life, to social or unsocial qualities, but his surroundings and his training may modify this materially.

But while we may improve the boy who was unfortunately born, either physically, mentally, or morally, we must not expect to work a miracle. No amount of training will make a successful running horse from the progeny of a draft animal.

ADVANTAGES OF A MIXED DIET

In a health column of a prominent newspaper, it is stated that it is not healthful to live on milk and vegetables alone, and that the highest opinion is that the average man thrives best on a mixed diet. Is this true?

It is true that "the average man" thrives better on a diet containing flesh than upon the restricted nonflesh diet often adopted by the poor. It has not been shown to be true that "the average man," or any man, will thrive better on "a mixed diet" (one containing meat, vegetables, cereals, etc.) than on a scientifically selected nonmeat diet containing milk and eggs, or even better than on a scientifically selected vegetarian diet containing no animal food whatever. It has been proved beyond all cavil that the problem of adequate nutrition is one of supplying the body what it needs of each "building stone," using the expression to include not only the animo acids, but the vitamines or hormones, the sugars, fats, and other essentials. No one food furnishes all this. Meat does not, neither does

wheat, nor barley, nor corn, nor egg. Milk is most nearly a perfect food, though it lacks in lime and iron.

In order to insure perfect nutrition and good health, it is necessary to make a selection of foods which will furnish an adequate supply of each of the elementary substances needed by the body. Such a selection can be made — and is made — without the use of meat. It can be made, with a little more difficulty, without the use of even milk or eggs. But one attempting such a dietary should be sure of his ground, and be careful that he is not starving himself in some one or more ingredients. Where milk is freely used there is little danger on that score. A properly selected diet consisting of cereals, fruits, green vegetables, and milk, with perhaps eggs, is amply sufficient for the needs of the body. No less authority than Dr. Graham Lusk has stated emphatically that meat is not needed in the human dietary — that its principal function is as an appetizer.

Another example of how the war has brought forth, in plain language from new sources, admissions as to the adequacy of a vegetarian diet, appears in a little war-food book, "The Physiology of Food and Economy in Diet," by W. M. Bayliss, M. A., D. Sc. (Oxon), F. R. S., Professor of General Physiology in University College, London. The book appeared in 1917, evidently with the object of helping the people of England to live economically as regards cost of food consumed, and as regards the food supply itself, and at the same time to obtain adequate nourishment. Any economy of food which did not include this would not be economical. In his chapter on "Vegetarianism," Professor Bayliss says:

> "Perhaps one of the most widely spread errors in reference to food is that there is some special virtue in butcher's meat. Sometimes it appears to be thought that there is no protein in vegetable foods. This, we have seen, is not the case.
>
> "Vegetable foods, if *properly chosen*, can supply all that is necessary for a complete diet. The protein is not quite so easily digested, but more of the food can be taken in compensation. The proper choice, however, may be the most difficult thing, since it is not an easy matter, unless some animal product, such as milk, is added."

Owing to the fact that we still know so little about the properties of different foodstuffs, he believes that a diet of purely vegetable origin cannot yet be safely made up. He concludes with the statement, "It is certain, on the other hand, that all the components of a successful diet can be found in foods of plant origin."

A MESSAGE OF CHEER FOR THE CONDEMNED

HAS your physician told you in plain language, or have you "read it between the lines" of his somewhat enigmatical explanation of your condition, that in his opinion you have little or no chance to recover? It may cheer you to know that just such a death sentence has been the making of some men.

I'll never forget a certain friend who had pneumonia. He was not expected to live,— in fact, was considered as good as dead,— when suddenly he began to mend, and regained fully his health, so that he did a number of years' useful work. Relating the circumstance to me later, he said that he was lying apparently in a stupor and a number of physicians were holding a consultation. Supposing him to be unconscious, they conversed freely about his case in the sickroom, agreeing that he was past hope and that nothing could be done for him but to make him comfortable. The thought came suddenly into his mind, "I'll fool 'em," and from that time, much to their surprise, he began to improve, and had an uneventful recovery.

Such a dismal prognosis often has a depressing effect on a patient, apparently proving to be the instrument of its own fulfilment. Sometimes a patient has had a presentiment that at a certain time he would die. The fact that he did die at the predicted time argues not so much in favor of a supernatural foresight as in the power of autosuggestion. It is probably a case similar to that of the condemned man who was experimented on by having his arm slightly scratched, and then by means of trickling warm water the idea was suggested that he was slowly bleeding to death. He died as a result of the experiment, having been killed with an idea, an autosuggestion.

Such may be the fate of one who gets an unfavorable prognosis from his doctor, unless, as in the case of my friend, he rises superior to the occasion, and, full of the fighting spirit, determines to live, doctor or no doctor, and says to himself, "I'll fool 'em." It can be done, if you *will*. Often when the doctor can see no chance for recovery, the will-power of the patient — and nothing else, it would seem — pulls him through. While there's life there's hope, so don't give up simply because your doctor has found a damaged kidney, or some sugar, or a high blood pressure! Roll up your sleeves, so to speak, and get right down to work, not worrying over symptoms, but by studying the lives of other condemned men who have fooled their doctors, just teach your doctor a thing or two!

If you have been going the pace, living pretty fast, remember that now is conservation time. Moderate a little, and the grave may not get you for several years yet.

TOO MANY LIVE IN THE BORDERLAND

Many are content to live in a condition just above actual incapacity, eking out a rather poor existence, never abounding in health, always subject to one little ill after another. I said they are content to live in such a condition. Perhaps I should have said they know of nothing better, and have no hope of improving their condition.

If they attempt anything in the way of alleviation, it is to try the very questionable expedient of using Dr. Fakem's pale pills or Lydia Stinkem's Weed Compound, or Professor Gougem's Duplex Magnetic Belt and Vitalizer, or perhaps some grandmother's remedy. The last thing thought of is the possibility that such a condition of half-life may be due to certain faulty habits, and may be remedied or greatly relieved by a radical change in the manner of living.

Were I to tell the sallow-complexioned woman who has almost constant sick headaches that she ought to leave off that strong tea which she is in the habit of drinking two or three times a day, she would reply, "But I couldn't do my work without tea. I should go all to pieces!" And possibly she might for a day or two, or even for a week, if she took my advice; but in the course of a little time she would not only cease to miss the tea, but would feel better without it. Her complexion suggests that she has been using strong tea for so long that it has damaged the mucous membrane of her stomach, and it will be a long time before she has good health; but by leaving off tea permanently she should make a complete recovery.

This is just by way of illustration. There are other hurtful habits that tend to perpetuate themselves so that the victim imagines he cannot give them up, and at the same time they are sapping and undermining the health in such a way that the victim is inefficient, dissatisfied with himself and his work, and yet is apparently unable to help himself.

It may be a little old-fashioned to say it, but from conviction and experience, the writer can say with confidence that if one really wants to break away from old habits, and will place his determination on the right side and will seek God earnestly for help, he can overcome them. And so long as he remains true to his resolve and will not dilly-dally with temptation, he will be conscious of a power over his old enemy; but the moment he begins to play with the tempter he will surely fall.

Some persons are so weakened by constant yielding to habit that they cannot themselves make a serious effort to overcome. Such should seek outside help, such as may be had in a well-conducted sanitarium, where nurses and physicians believe in prayer and in the power of God to help.

Often the victim of evil habits may need personal help — personal encouragement. He does not know how to pray. He feels so weak. His prayers seem to be unanswered. God seems so unreal. In such a case one who has a personal acquaintance with God through prayer can help to strengthen a weak faith and fortify a wavering purpose. Often the consecrated nurse or physician can be of vastly more help to the patient spiritually than physically, though the spiritual help will in the end work out the patient's physical healing.

To one who has long been defeated in his struggle against some habit — any habit — we should advise, Go to a sanitarium where the physicians and nurses are praying, God-fearing men and women, and they will do for you what drugs fail to do.

THE BYWAYS OF HYGIENE

PERHAPS the typist who by inadvertedly striking a B for an H wrote the word Bygiene, typed better than he knew. At any rate, Bygiene sounds well and it looks well in print, that is, in typewriter characters.

Hygiene and Bygiene; highways and byways. The fact that there are highways presupposes that there are also byways. Highways are the well-known, the well-traveled routes — the routes that go somewhere. Byways meander. Sometimes they seem to be a short cut and prove to be a longer route than the highway. The byway may frequently prove to the unwary a time-consumer rather than a time-saver. The byway often comes up against a barbed wire obstruction, or ends in a swamp, or loses itself in the woods.

Are there byways of hygiene, supposed short cuts to health? Many persons evidently believe that there are such short cuts, or means by which they can avoid the old-fashioned and well-known way of living a temperate life. We find them scanning the patent medicine ads. in the newspapers for something to stop a headache. We see them inquiring at the druggist's counter for a sleeping powder; we hear of their following this, that, or the other drug, or appliance, taking up a new "remedy" as soon as the one last tried has failed; we know of their paying hard-earned dollars to metaphysical healers, Christian

Science practitioners, magnetic healers, administers of "absent treatment," and other "drugless healers." We meet them going to the "springs," the seashore, the mountains, in search of health.

It is true that each of these measures often gives a temporary uplift to the body, and produces for a time a feeling of well-being. Were it not so, these various fads and "isms" could not continue in business. "You cannot fool all the people all the time." These byways to health must make good at least temporarily, else they would soon be discarded, for the people are not all idiots. These various agencies are used because they give, for the time, some relief. That they rarely do more is attested by the fact that one who uses headache tablets, or sleeping powders, or what-not, continues to do so indefinitely, and usually in steadily increasing dosage. The "cure" is often a makeshift, a masker of symptoms which, as a result of the supposed cure, are the more firmly fixed. Purgatives only increase the tendency to chronic constipation. Headache remedies aggravate the condition that brings on the headaches; sleeping powders establish the insomnia more firmly, and render the patient more dependent on hypnotics. So with all the remedies that deal with symptoms. They may temporarily relieve the symptoms, but they increase the condition that brings on the symptoms. And all the remedies likely to be called for and used by the laity are of this type,— remedies for symptoms,— a purgative for constipation, a hypnotic for sleeplessness, a "tonic" for depression, an "appetizer" for loss of appetite.

The real cure of the condition is one which, from the nature of the case, must necessarily take time and trouble, and may not immediately relieve the symptoms. For this reason it is not at all likely to be chosen by the sick person.

If the "get well quick" remedies are the byways which offer an apparent short cut to health but leave the victim floundering in some bog or caught in some thicket, the highway to health is through institutions which give treatments to restore to organs their proper function, and that train the patient in the art of simple, healthful living. Such institutions are the sanitariums which have been founded for the one purpose of restoring health and teaching people how to live.

The "Sanitarium Idea" is one that actuates each of the sisterhood of sanitariums. That idea is, that it is better to restore organs, as near as possible, to their normal functions by the use of natural methods, than to whip up artificially one or the other of the organs in order to make it for the time being appear to be doing its work properly.

Bygiene: the nostrum way.

Hygiene: the sanitarium way.

Choose the right way. It is you who must suffer the consequences if you choose wrongly.

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.

Digestive Tablets

"I am using B——, which claims to contain carica papaya, sodium bicarbonate, and charcoal. Are these tablets reliable, and is their use physiological and curative?"

Medicines compounded and sold by advertising firms are as a rule unreliable. These tablets have been examined by the American Medical Association, and have been found to vary greatly in the amount of their constituents. Many of the tablets contained absolutely none of the digestive agent, papaya. When you need medicine, it is much better to get it through a prescription written by your physician. He can have tablets made up which will contain the proper drugs in the proper amounts, or he can buy them ready-made from certain reliable wholesale drug houses. Carica papaya is a vegetable digestant which acts equally well in acid, neutral, or alkaline media, and in many cases gives excellent results. Charcoal absorbs gas and is a deodorizer. Sodium bicarbonate is an antacid. These remedies are unquestionably necessary in many cases, but their use should be accompanied by proper diet and by physiological treatments. If these precautions are taken, less medicine will be necessary, and very often the course of treatment with medicine can be materially shortened. The habitual use of sodium bicarbonate is harmful, as it neutralizes the acidity of the stomach, and, in excess, irritates the mucous membrane of the stomach.

Cold or Hot Foods

"Is the use of very cold or very hot foods to be recommended?"

Very hot foods are apt to burn the mucous membrane of the mouth and stomach, and may produce serious diseases of these parts. They also relax and weaken the muscles of the stomach, and retard the action of the stomach glands. Very cold foods chill these glands, and check digestion until the temperature of the stomach has returned to normal. Of the two temperatures, cold is the less harmful. Cold foods and drinks should not be swallowed until they have been warmed in the mouth to a temperature that will not produce injury. In small amounts, cold foods and drinks stimulate the muscular and glandular activity of the stomach. If the term "cold foods" includes uncooked foods, I should say a certain amount of these is necessary in the daily ration. Uncooked foods provide bulk, mineral elements, vitamines, and variety in the diet. These are all highly important.

Fish for Food

"Along with other flesh foods, you condemn fish, and yet Christ fed fish to the multitude and to his disciples, and ate it himself. How do you justify your teaching?"

I have not intended to condemn flesh eating from a Bible standpoint. One might say that an ethical reason, a desire not to kill, should excuse one for not taking flesh. As the world grows older, diseases multiply, and the ability of the human race to resist disease is decreased. Animal food also becomes more subject to disease. I believe the instances where Christ ate fish were emergencies, and yet, as he undoubtedly could have created a vegetarian bill of fare as well as a mixed diet, he probably desired to furnish food suitable to the time and to the class of people he was feeding. Flesh does not die as soon as the heart stops beating and the brain ceases to act. The individual cells cease to live only as sufficient poisons accumulate in them because elimination has stopped. Thus, flesh is a poisoned and dead food. If it is used it should be from herbivorous animals. Fish as well as chickens are cannibals. Fish are especially prone to decomposition. They putrify readily both in the open air and in the intestines of the eater. They are also subject to disease. The flesh of the sheep or of the cow is more healthful than that of fish or fowl. I believe that one who eats fish or flesh, unless in an actual emergency, does so because he has not informed and educated himself on these matters, and has not trained himself to relish natural clean food, but has developed a false appetite which enjoys the devouring of flesh.

The Sigmoid

"What is the sigmoid, and of what troubles is it the seat?"

The term "sigmoid" is applied to several parts of the body, as the sigmoid artery, the sigmoid cavity in some of the bones, and to a part of the large intestine. You probably mean the last. It begins at the termination of the descending colon at the crest of the ilium, or hip bone, and continues to the rim of the true pelvis, forming a loop and terminating in the rectum. It is very movable, and thus is often

the location of stoppage of the bowels because of a volvulus, or twist, especially if the individual is constipated. The mucous membrane of the sigmoid and rectum often becomes inflamed, and gives rise to decomposition of the retained material, with resulting inflammation of the adjacent parts, thus being a cause of appendicitis and inflammation of other neighboring organs. The poisons absorbed and the local irritation may be a cause of nervous prostration, headache, rheumatism, etc. The treatment includes proper diet, mild laxatives, medicated enemas, and local applications to the inner bowel.

Chlorosis — Green Sickness

"My daughter, fourteen years old, is anemic, blood test is only 60. Her hair comes out badly and her menstruation has stopped. Please give me cause and treatment for her."

Your daughter has a condition known as chlorosis, sometimes called green sickness. The causes are bad hygiene, as neglect of the bowels, improper food, improper schooling, and overwork. The symptoms are a greenish sallow color of the skin, with pallor and weakness, without marked loss of flesh. The patient has dyspepsia, and the appetite being usually perverted she desires substances as chalk, clay, pickles, etc., in diet. Menstruation becomes scanty and ceases. There is a moderate reduction of the number of red blood cells with a great reduction of the hemoglobin. Treatment consists in getting the child into the fresh air as much of the time as is possible day and night. She should live in the sunlight; and should take exercise which is adapted to her condition. She must have good food, with plenty of cereals, fruits, fresh vegetables, nuts, milk, and eggs. Flesh foods are not to be recommended, neither steak, fish, nor chicken, as the undigested particles accumulate in the intestines and putrefy, producing toxemia. The patient must have a great deal of rest in bed, preferably in the open air. If the patient does not receive sufficient iron from the food materials, she should take Blaud's pills, 5-grain each, two or three times daily, after meals. She should drink plenty of water, and should have warm baths three or four times a week, with cold douches and mild massage following. Laxatives are necessary if the food does not keep the bowels in order.

Barium Enema and X-ray

"1. Is the use of a barium enema with the X-ray necessary in diagnosing disturbances of the colon? 2. Do you advise removal of the colon? 3. Do you advise the use of an abdominal supporter? If so, what kind? 4. My physician is giving me nux vomica in doses of ten to fifteen drops three times daily, after meals. Is this right?"

1. Yes. This examination reveals the size, location, and mobility of the colon. It also shows the shape and whether there are pockets or strictures present. If the valve between the large and small intestine is incompetent this examination will reveal the fact. Many times this valve does not prevent the reflux of the colon and contents into the small intestine. When this condition obtains, there is an absorption of poisons from the small intestine, and the result is toxemia. A laxative and a cleansing enema should be given before the barium enema.

2. The prevailing opinion is that this is permissible only in malignant or tuberculous diseases. A partial removal of the colon is sometimes done when the cecum and ascending colon are greatly pouched retaining the feces for a long time. As a rule, however, this condition is better remedied by the use of a laxative and antitoxic dietary which will not putrefy. Mineral oil and occasional laxatives may also be used. An enema at night will flush out the colon, and if given at a temperature of 90° or 95 ° F. and followed by a cool enema, will not produce a dilated colon.

3. An abdominal supporter is often of great benefit in selected cases. We recommend them for many of our patients, but think that they should be selected by the physician attending the case and fitted by him, as the results obtained depend almost as much upon the proper application as upon the kind of supporter used.

4. Nux vomica is often used as a tonic to increase the appetite and the muscular and glandular activity of the stomach and bowels. The dose is perhaps a little large, and we prefer to accomplish the same results by the use of cold frictions to the entire body, cool sponge baths or shower baths, exercises, and by a carefully selected dietary.

Asthma Smokes

"Are asthma smokes beneficial?"

Many cases of bronchial asthma require the inhalation of medicated vapor, but the decision as to whether to use these remedies should be left to the attending physician, as the nostrums commonly sold are often too strong.

Treatment of Acne

Two correspondents ask for the treatment of acne. One has good general health, the other has rheumatism, with poor general health. Both have tried vaccine, bichloride of mercury soap, and healing salves.

The treatment of acne is both local and general. The rheumatism should be treated, and cured, if possible. Some infectious focus, as of tonsils, teeth, appendix, gall bladder, or accessory sinuses of the nose, should be sought for. Investigation should be made of the intestinal tract, to know if intestinal indigestion is present. Vaccines produce relief in many cases, but their administration should be under the direction of a physician. Bichloride of mercury soap gives excellent results in many cases, particularly if the lather is applied and allowed to dry on. It should then be removed with a soft cloth and warm water, and a soothing salve applied; the ointment of zinc oxide is good. Many cures have recently been reported by the use of half a cake of compressed yeast dissolved in a glass of water and taken before meals two or three times a day. This treatment must be kept up for several weeks.

SOME BOOKS

Chemistry of Food and Nutrition

by Henry C. Sherman, Ph. D., Professor in Columbia University. Second edition, rewritten and enlarged. Cloth, 454 pages. The Macmillan Company, New York.

Since the publication, in 1911, of the first edition of this book, many facts have been added to our knowledge of nutrition. In fact, we might say that during that time our knowledge of this subject has been revolutionized. In keeping with this advance Professor Sherman has made such a thorough revision and rewriting of his book, that it might have been brought out as a new book.

Our knowledge of the proteins, adequate and inadequate, and their relation to nutrition of the so-called "vitamines" or "fat-soluble and water-soluble accessories," and of the mineral salts, our more exact knowledge of the calorific needs of the body, these are all brought out clearly by Professor Sherman, who himself is one of the investigators who have helped to advance our knowledge of this important and most fascinating subject. But Professor Sherman realizes that he has not said the last word on the subject, and that our present beliefs are subject to revision, for in his preface he says:

"Special attention has been given to the difficult task of attempting to present the striking results of some of the most recent investigations in nutrition in such a manner as to make clear their importance without giving exaggerated impressions and with due emphasis upon the fact that on many significant points any interpretation which can now be offered is necessarily tentative. It is hoped that study of the text will be supplemented by consultation of the references suggested at the close of each chapter, which should serve to put the reader in touch with much of the more significant literature and make him familiar with the scientific journals in which the future developments of this rapidly growing subject may be followed as they appear."

The Conservation of Food Energy

by Henry Prentiss Armsby, Ph. D., LL. D. Cloth, 12mo, 65 pages, 75 cents net. W. B. Saunders Company, Philadelphia.

Rudely awakened from its dreams of food opulence, the United States stands face to face with the problem of a world-food shortage in which she must bear her share. Important questions arise as to how to make the available food supplies go the farthest.

Dr. Armsby in the present volume has undertaken to make comparisons showing the comparative energy value of certain foods when used entirely as human foods and when used for the production of meat or milk.

The most obvious lesson he draws "is the great loss of energy involved in the conversion of vegetable into animal products, that is, the feeding of live stock. . . . Obviously, the diversion to stock feeding of any material edible by man is from this standpoint a very wasteful proceeding."

"In milk production," he says, "the conversion appears to be decidedly more efficient than in meat production, while there is no inedible waste." "It is clear, then," he says, "that the endeavor should be to utilize as large a proportion of vegetable products as is possible directly as human food, leaving only the by-products to be fed to stock."

Brewing and distilling he shows to be a wasteful economic process, even if we accede to alcohol its theoretic energy value.

Any one interested in this subject should have the volume for the carefully prepared tables.

Preparing for Womanhood

by Edith B. Lowry, M. D. Cloth, $1. Forbes & Company, Chicago.

A mother of several daughters one day expressed her contempt for a certain book of instruction to young women, saying: "I would not have one of my girls read that book for the world; and if one of them should ask me a question on that subject, I'd slap her face!" It may be only a coincidence that her eldest daughter, within a year, was the mother of an illegitimate child. "Indecent," it may be, to teach girls what they must look out for, and how they must conduct themselves as they grow into womanhood, but such knowledge has saved many a girl from disgrace — or worse! Safety first.

Dr. Lowry has prepared a most commendable series of manuals for sex instruction — clean, chaste, yet perfectly plain and matter-of-fact.

"Preparing for Womanhood," written as a general book of instruction for girls in rather a romantic style to hold the attention, contains just the information every girl approaching womanhood should possess. Among the subjects considered are: Health, Recreation, Personal Appearance, Home Making, Business, Right Thinking, Motherhood, Friends.

Here is some of Dr. Lowry's most excellent advice on home making: "Knowing that the chances are eight to two that you girls will marry some time, it would seem good business for all of you to study for the profession of home making. Too many girls learn by bitter experience after marriage the lessons which should have been learned before leaving home. How many tears and unkind words might be avoided if every young wife could enter her new home adequately prepared for her profession and drilled in the practice of the manifold duties which await her. . . .

"A young man always is asked by the father of the girl he wants to marry: 'What are your prospects? What are your business qualifications to support my daughter?' Upon his abil-

ity to answer these questions satisfactorily depends largely whether he is given the parents' consent. Now by the same token why is not the young man's mother justified in going to the girl and asking her: 'What are your domestic qualifications to make a home for my son? What do you know about housekeeping, wifehood, and motherhood?'"

Sunshine and Awkwardness

by Strickland Gillilan. Cloth, $1. Forbes and Company, Chicago.

Those who have read or heard the inimitable Gillilan will need no introduction to this volume, which though full of rollicking fun, carries a serious message. Automobilists will appreciate Gillilan's characterization of humor. "Humor," he says, "is not the gasoline of life — it is the transmission oil and gear grease." He continues:

"You have caught me now and then slipping in a sermon between the laughs. I didn't care if you did catch me at it. Mother wanted every one of her big ugly boys to be regular preachers. You know what those good old Christian mothers are, God bless 'em. But we couldn't all preach alike. Every human being is born into the world with the ability to preach the gospel in some way that no other human being can. If we could only find our own ways to preach, what a world it would be! But we used to think all preaching had to be done the same way, and we wanted to please mother. One of the boys is a regular preacher and a good one. I am neither. I tried it once — one consecutive time, to preach the regular way. When I had finished, the choir arose bewilderingly to its hind feet and sang, 'Hallelujah, 'tis done.' And for once, the choir was right. I saw that if ever I preached it would have to be some other way. I couldn't do that kind. So this was the way that found me — slipping the sermons in between the laughs, so that maybe they might digest more readily and live longer than any other sermons I could preach — little sermons so simple that I even understood them myself."

Here is a sample of Gillilan's philosophy:

"The purpose of humor is to foster in human beings that sane, wholsesome philosophy or religion known as optimism. Now, optimism isn't what some people think it is. Some people think an optimist is that sort of thing that goes around grinning all the time like a Cheshire cat, saying, 'Everything's all right, everything's all right,' when half the time everything isn't all right. That isn't an optimst who does that — it's a cheerful idiot. There's a vast difference between an optimist and any kind of idiot. It takes intelligence of the finest, faith of the most sublime, sanity of the most complete, to be a real optimist. Faith and intelligence and balance to *know* that although there may be heartaches today — and God who made us and loves us knows that some todays are just crowded with heartaches that nobody but an idiot or a lunatic could laugh at at the time — though those things come and hurt as deeply as we think we can bear, those things aren't permanent — Oh, isn't it great that they don't last always! What a little of the sum-total of our life they form!"

With God and the Colors

Prayers by a mother for her soldier boy, by Mrs. Lelia Atwood Foust. Specially designed cover and fleur-de-lis border printed in khaki color. 50 cents, net. Vir Publishing Company, Philadelphia, Toronto, and London.

"The author, with the wonderful spiritual endowment of a Frances Ridley Havergal, voices what is deep down in many a mother's soul who, like herself, has a boy at the front fighting for the world's freedom and liberty. It cannot fail to inspire, strengthen, and deepen the devotional life of the mothers of our sailor and soldier boys."

The Wooden Horse

or America Menaced by a Prussianized Trade, by Deets Pickett. Pamphlet, 88 pages. Sent for 1 thrift stamp (or 25 cents). Board of Temperance, 204 Pennsylvania Ave., S. E., Washington, D. C.

Sets forth the waste and ruin of turning grain into poison, and weakening the morale of the nation by allowing pro-Germans to brew beer in this country when it is reported that the kaiser has stopped all such waste in Germany.

NEWS NOTES

Food Rationing Vessels

The Food Administration ration is on a man-per-day basis. Three ounces of sugar per man per day are allowed crews and passengers on salt-water vessels and for crews on lake ships. On the latter, passengers are limited to three pounds for every 90 meals served, the same regulation governing public eating places and households ashore. Most of the trans-Atlantic passengers nowadays are soldiers, whose ration is larger than the civilians ashore.

Potato Candy

Food Administrator Peden, of Texas, was recently visited by a candy maker of that State, and given a box of chocolate bonbons, all of them tempting as to exterior, and each splotched with tiny stars. An examination of the candy disclosed a taste similar to cocoanut, while a bite and slow munching showed that the interior, in addition to being like cocoanut, also had an additional quality not unlike brittle, but a good deal more delicate than brittle.

Cut Sugar in Diners

Sugar bowls are banished from the tables of dining cars as part of the conservation program, and hereafter travelers who eat en route receive not more than two half lumps or one teaspoonful per meal.

Don't Aid the Subs.

Every time a German submarine sinks a ship, so much product of labor and materials is wasted. Every time you buy anything not needed, so much product of labor and materials is wasted.

Peanut Oil

Edible peanut oil is being substituted for olive and corn oils. The Spanish type of nut is peculiarly adapted to the production of oil, and the best grade of the Spanish and the cheaper of the Virginia are commonly employed for the manufacture of peanut butter.

Pinto Beans to the Soldiers

Fifty carloads, 4,000,000 pounds, of beans were ordered from Colorado by Allied governments for immediate use overseas. The British government has already placed large army orders for canned pinto beans.

Wheat Conservation at Sea

In order to conserve the national food supply by encouraging purchase abroad, ships clearing for Uruguay, Argentina, Chile, India, and Australia are permitted to take aboard only enough wheat flour for the initial outward voyage and must supply themselves for the return and the next voyage to foreign destination from the markets of the above-named countries.

Meat Conservation at Sea

Cargo ships clearing for Brazil, Uruguay, Argentina, Chile, and Peru may take aboard stores for only one way in beef, pork, mutton, veal, lamb, poultry, lard, and eggs. All passenger ships are urged to buy in foreign ports as much as possible, and more is expected of steamers with refrigeration plants than of others that carry only ice to preserve their stores.

Potato Flour in Iceland

Iceland will make a new departure this year in the matter of using potato flour. Already representatives of that government are sending out propaganda looking to the general and extensive planting of potatoes. Since the summer season is so short in Iceland and other arctic countries, the raising of grain is not possible, but its climate is adapted to the raising of potatoes. Plans are being made for the installation of potato-milling machinery, so that in a measure Iceland will in the future be a little more independent of outsiders for its farinaceous foods. Shortage of shipping, with a consequent curtailment of imports, has made it impossible to maintain Iceland's wheat supplies.

Potato Week in Kentucky

The Kentucky Food Administration estimates that the people of Kentucky have saved 10,000 barrels of flour by eating potatoes during their recent "potato week."

Ban Caffeine and Near Beer

Camp Commandant Major-General Hale signed an order June 16 forbidding after July 1 the sale of near beer, and soft drinks containing caffeine. This step was taken in the interest of the morals of the soldier boys.

No More Gluten Flour

The manufacture of gluten flour from 1917 wheat is now forbidden. The largest manufacturer of gluten uses 10,000 barrels of flour to make 750 barrels of gluten. Inasmuch as physicians are not agreed that gluten is necessary for diabetes, it has been decided that the manufacture of gluten is too wasteful of wheat.

Abundant Peanut Crop

Last year's peanut crop was 51,096,000 bushels, and according to the most recent estimate it is believed that this year will see double that amount raised. There were fifty peanut-crushing establishments in 1916 and the oil produced was slightly over 26,000,000 gallons. No definite estimate of the amount of oil produced in 1917 has been made.

Food Conservation in Hotels

By simplifying their bills of fare and calling attention prominently on their menu cards to conservation requests of the Food Administration, hotel proprietors of Atlantic City are in a fair way to make that watering place the model food-saving resort of the country. Guests from every State in the Union are carrying the food message home, and urging their own hotel men to fall into line.

Chicago Anti-Spitting Campaign

A novel anti-spitting campaign has been inaugurated by the Chicago Department of Health, according to *Popular Mechanics*. An officer is detailed to visit numerous unsanitary places and disinfect them, using for the purpose a spraying outfit labeled "Germ Killer," which is carried slung over the shoulder. On the officer's back is a placard reading: "Because you spit in violation of law the Department of Health is compelled to disinfect."

Naval Officers Conserve Sugar

Naval officers and their families who buy at commissary stores have gone on the some honor system of sugar purchase established by the Food Administration for civilians throughout the country. A recent order from Rear Adm. Samuel McGowan, paymaster-general, calls attention of commanding officers of shore stations to the fact that three pounds per capita per month is the maximum ration, and that not more than two pounds can be sold at a time to city customers and five pounds to dwellers in the country.

Drowned by Weight of Iron

The dry town of Republic, Mich., has recently buried a man who having purchased six bottles of "beef iron & wine" (19% alcohol) went up the river with a comrade in a boat. He was found after the river had been dragged for several hours. The iron was probably so much ballast it took him to the bottom. "Beef iron & wine" should not be permitted in a dry town.

Beer Versus Potatoes

While 15,000,000 bushels of potatoes were rotting in Wisconsin because no cars could be obtained for their shipment, four special trains were leaving Milwaukee every night carrying nothing but beer, one to the Northwest, one to the East, one to Kansas City, and one to Chicago. Is that not defeating the work of the Food Administration and playing into the hands of the Huns?

First Truck of Eggs

Without breaking an egg, a five-ton truck carried a load of eggs from Vineland and Millville, N. J., into New York City (140 miles) in fifteen hours,— faster time than is made by express shipments by rail. The saving in time, in expense, and in breakage, and the difficulty of obtaining cars, will probably soon establish the motor truck for much of the transportation that has been done by railways.

Condensed Goat's Milk

According to the *Scientific American* of June 1, California has a large ranch stocked with Swiss and Nubian goats, the milk of which is condensed and canned. Goat's milk is said to be very rich. As the goat is not so susceptible to tuberculosis as the cow, goat's milk is in some demand for infant feeding. An eleven-ounce can of goat's milk retails in the drug stores in the West for 20 cents a can.

Hog Versus Man

In one California county the health officer receives a salary of $25 a month and the county veterinarian $125 a month. The county supervisors even went so far as to dispense altogether with the health officer's salary, but finally reconsidered the matter when their attention was called to the law. Possibly these supervisors felt a kind of family interest in the hog. Why not be a hog, and have governmental protection?

Rats Costly Eaters

Experts have estimated that one rat will consume 40 to 50 pounds of food in a year. It has also been figured that it requires the continuous work of about 150,000 men with farms, agricultural implements, and other equipments to supply the foodstuffs destroyed annually by rats in the United States. In addition, rats destroy other pro erty, mainly of agricultural origin, the production of which requires the work of about 50,000 men. This gives a total of 200,000 men whose economic output is devoted solely to feeding and otherwise providing for rats.

Child Welfare in Buffalo

The City council of Buffalo has authorized an appropriation of $15,000 for child welfare work, to be used for the equipment of nutrition clinics, for the care of convalescent mothers and sickly babies, for the health education of parents and children, and for the prevention of stillbirths.

To Increase Sorghum Production

"Iowa can help meet the serious sugar shortage," said A. T. Erwin, professor at Ames College, Iowa, "by growing sorghum for sirup making. A small amount of cane grown on each farm would greatly lessen the demands for sugar by providing a substitute." He stated that the sorghum industry was at one time an important one in Iowa, but with the advent of corn sirup at a low price the production of sorghum sirup waned decidedly. A yield of from 100 to 150 gallons per acre is not uncommon, and at present prices sorghum is a profitable as well as a much-needed crop in Iowa.

Farthest North Substitutes

Alaska produces no wheat substitutes in large quantities. Potatoes, however, are easily raised in most parts of the Territory, and there is a definite endeavor to increase the production to such an extent that they may be called the prime wheat substitute crop. To encourage the use of potatoes, the local food administrator allows them to count to a certain extent as a wheat substitute under the 50-50 regulations. Other substitutes, such as cornmeal, oatmeal, rolled oats, rice, hominy, cornstarch, and buckwheat flour, are imported and used.

Peanut Industry

In studying the food situation, especially as relates to fats, the *Manufacturers' Record* points out that due attention should be given to the remarkable growth of the peanut industry, which has doubled the value of the output within one year and carried the total last year to over $105,000,000. A large portion of the South is suitable for peanut growing, and what has been done in Virginia, Carolina, and Texas, and other parts of Dixie in profitable agriculture through the growth of the peanut industry can be duplicated over a large portion of the Southern States wherever suitable soil is found.

Cafeteria Saves Sugar

The cafeteria in the Food Administration Building, run for the benefit of employees, recently in ten working days, served six thousand meals, using only 50 pounds of sugar. This is at the rate of 1 pound to 120 meals, much better than what the administrator is asking American housewives to do — to use 2 pounds a person a month or one pound for 45 meals. The Food Administration Cafeteria feeds an average of six hundred persons a day, for the noon meal, and the sugar ration above mentioned covers its use for all purposes including tea, coffee, desserts, and in cooking. The cafeteria uses such substitutes as honey, maple sirup, and corn sirup.

Sauerkraut Naturalized

It has been proposed to take the German out of sauerkraut by calling it "liberty cabbage;" but does this take the "germ" out?

Public Health Association

The American Public Health Association will hold its next meeting in Chicago, October 14-17. The central theme of the meeting will be: "The Health of the Civil Population in War Times."

Drying Saves Tin

There are many advantages to be gained by dehydrating fruits and vegetables: Transportation costs are saved, spoilage is reduced to a minimum, the fresh flavor is largely retained, and less packing material is needed. Right now the conservation of tin is important.

Birch Tree Sirup

Sirup made from the sap of birch trees is a foodstuff rivaling in substance and flavor the sirup derived from maple trees, in the opinion of D. M. Lynch, owner of a marl deposit north of Anchorage, Alaska. Samples of his product have been pronounced excellent.

Save!

Both you and the Government cannot use the same labor and materials.

Further Restriction of Sugar

Owing to the increasing sugar shortage the United States Food Administration found it necessary to urge upon loyal Americans another restriction in sugar in the home — this time to two pounds a person a month — about one ounce a day. This to include that used at the table and in cooking. This restriction is to continue until January 1. A similar order is being issued limiting public eating places to 2 pounds of sugar for every 90 meals served.

Carrots as a Substitute for Eggs

Boiled carrots, according to the *Popular Science Monthly*, when properly treated, form an excellent substitute for eggs in puddings. The carrots are boiled until they are tender and nearly ready to fall apart; then carefully drained and mashed and pressed through a coarse cloth or strainer. This pulp is then introduced among the other ingredients of the pudding and the eggs omitted. Puddings made in this manner are as light and as palatable as where eggs are used. The carrots also impart a rich yellow color to the pudding, so that no one can tell whether eggs were used or not.

TRI-CITY SANITARIUM

Located on the main line of the Rock Island Railroad, and also on several branch lines, making the institution easily accessible from several surrounding States.

The institution is situated in the beautiful city of Moline, on a high bluff, in good view of the great Mississippi River, only one mile away. The Sanitarium is equipped to give scientific and rational treatment to both medical and surgical cases, employing hydrotherapy, electricity, massage, and the X-ray.

Send for Booklet. Address the

TRI-CITY SANITARIUM, MOLINE, ILL.

THE HINSDALE SANITARIUM

Is beautifully located seventeen miles from Chicago on the Burlington Road, and is of easy access to the great metropolis of the Middle West.

Surrounded by spacious lawns and sixteen acres of beautifully wooded grounds, this institution provides a quiet, restful retreat for the chronic invalid.

The institution is also well equipped for the scientific and rational treatment of the sick, both medically and surgically, this equipment including Swedish movements, electric apparatus, radiotherapy, hydrotherapy.

Instruction in dietetics especially adapted to each patient, is part of the daily program; also individual physical training and mental diversion in the way of occupational therapy, both in and out of doors.

Private rooms with private telephone in each room and regular hotel service.

Send for booklet. Address

The Hinsdale Sanitarium - - Hinsdale, Illinois

St. Helena Sanitarium

THE MAIN BUILDING — SHOWING THREE OF THE FIVE STORIES
New Concrete Hydrotherapy Building at the Right

AWAY from the noise, excitement, and contamination of the city, and nestled close to the heart of nature, on a beautifully wooded slope of Howell Mt., is situated the St. Helena Sanitarium.

ITS natural setting, in a forest of live-oaks, firs, manzanitas, and madronas, together with an almost unending variety of flowers and foliage, gives a beauty and fragrance to the place that beggars description. It must be seen and enjoyed to be appreciated.

EVERY modern facility favorably known to medical science in the treatment of curable conditions, has been incorporated into the institutional régime. Thus nature and science have combined to make the St. Helena Sanitarium all that can be desired by the diseased body or the weary mind.

Health is Contagious at St. Helena

Sixty-five miles from San Francisco, easily accessible by either steam or electric line; three and one-half miles from St. Helena; 750 feet above the sea level; splendid climatic conditions at all seasons of the year; pure mountain water; beautiful view of valley, mountain, and plain; seven physicians, seventy nurses; excellent service, liberal cuisine,— these and many other advantages are to be enjoyed at this beauty spot of California.

The St. Helena Sanitarium

Sanitarium, Napa County - - - California