

Life & Health

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APRIL
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58th YEAR OF
PUBLICATION

- ★ Relief for High Blood Pressure
- ★ The Treatment of Constipation
- ★ The Man Who Could Not Sleep
- ★ Water Treatments for Nervousness
- ★ Don't Cut Your Margin of Safety
- ★ Do We Need Meat for Good Health?



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Coming Next Month

If possible call a physician in cases of influenza. However, in epidemics, with doctors and nurses scarce, knowing how to give certain simple yet effective treatments may save many lives. A physician tells about water treatments for influenza. . . . That hair problem is often encountered, one has too much, or not enough, or not the right shade. A discussion of depilatories and hair dyes. . . . In the neck are the lines of supply, the communications to headquarters. A swelling in this area is like a congestion on highways, and affects the smooth functioning of the neck. . . . An article of special interest to women, disorders of the uterus. . . . So tired, can hardly hold your eyes open? Fatigue is dangerous. How can we best combat it? . . . The case history of the woman who felt inferior and insecure and found it difficult to adjust herself to work and to life. . . . Need a spring tonic? It needn't be grandma's kind. The doctor can tell you of some good ones, effective and easy to take.

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PAGE 3



► THE kidneys have been incriminated by some medical observers as a most important factor in the production of high blood pressure. The experiments that have led to this conclusion are discussed on page 6.

► It has been demonstrated before that meat in the diet is not essential to good health, that a vegetarian diet is quite adequate. Now with meat rationing confronting our country, the question is most timely, Do we need meat? Read what a doctor says about it. Page 8.

► ARE you nervous? Can't sleep at night? Then you ought to know and experience the quieting and helpful benefits of water treatments. How they are given, the equipment you need, etc., is found on page 10.

► It may be just a little habit, but a habit that has followed you and clung tenaciously to you, that cuts down your margin of safety. Read what habits can do. Page 12.

► CONSTIPATION afflicts from early infancy to old age. In infants, particularly, it has a far-reaching effect, for unless correct habits are established early in life, they may trouble one all his days. How to deal with constipation in infants and children. Page 14.

► TOOTH a little jumpy? Bothers you now and then? Now while optimism is necessary to serene and purposeful living, don't exercise too much hope that an aching tooth is going to stop aching all at once and be all right thereafter. Better see your dentist the first thing. Page 17.

► NUMBER four in our personality problems series is the case of the overworked man who could not sleep. Maybe you'll see in this some of your troubles, and be helped accordingly. Page 19.

► BE sure to read "No Lack of Loveliness," on page 18.



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Food Shortages

SO far as America is concerned, the repeated warnings about food shortages in certain classifications of foods need give us no sleepless nights. In the first place most of us eat more than our bodies require, certainly so far as bulk is concerned. And as to the nutritive quality of food, it is possible with a little effort and study to find adequate nutrition from foods that are not scarce. Fortunately, the important vitamins and minerals are not confined to foods that are now hard to obtain. In fact, many of the most ordinary foods that are still found in abundance are filled with these indispensables.

So far as that vital element, protein, is concerned, we need not fear that the body machinery will wear out because steaks are not to be had. There are many millions of this earth's inhabitants who rarely see a steak and who live quite exclusively on a vegetarian diet. And for physical endurance—well, they would put most of us Americans in the shade. Soybeans, for example, contain a very high quality of protein. Recent experimental work is providing increasing proof of this. The advertisements of soybean protein foods which LIFE AND HEALTH carries might profitably be examined by all our subscribers. They have a timeliness as well as a health value today.

And is butter impossible to buy at times? Well, good nutrition is not confined to this particular toothsome spread for bread. A report of the Council on Foods and Nutrition of the American Medical Association declares: "There is no scientific evidence to show that the use of fortified oleomargarine in an average adult diet would lead to nutritional difficulties. A similar statement is probably justified in the case of growing children." Elsewhere in the report is this statement: "There is no significant difference in the digestibility of butter and oleomargarine."—August 22, 1942.

Cheer up, we are not going to starve in America. Far from it! We may have to do a little adjusting in our eating habits and give a bit more study to the subject of nutrition, but that will be good for us all. We have proceeded too long on the senseless theory that we can eat almost anything we desire, just so long as it suits our palate, fills our stomach, and gives us a sense of being well fed. The modern science of nutrition is proving that this is nonsense.

Insurance Companies Promote Five Health Rules

THE Institute of Life Insurance is carrying a most excellent educational campaign in behalf of better health, particularly in the light of the present doctor shortage. The posters published by the Institute set forth five rules that all should follow. 1. Eat right. 2. Get your rest. 3. See your doctor once a year. 4. Keep clean. 5. Play some each day. How much ill-health and indisposition might be prevented if these few simple rules were followed! We cannot refrain from calling attention to the order in which these rules are set down. The first listed is "Eat right." There was a time not many decades ago when LIFE AND HEALTH was thought to be just a little faddist because it placed right eating in the very forefront of health rules. In those times very few, even among the most learned, were in any way conscious of the importance of right eating to good health. Something has happened. We are encouraged.

We believe that the posters and accompanying health promotion literature of the Institute are worthy of the widest circulation. We would especially like to call attention to a statement in this literature by Dr. Thomas Parran, Surgeon General, United States Public Health Service. He says: "Each individual can contribute to his own health protection and improvement by adopting a few simple ways of healthful living. Each of us must accept this responsibility and stick to it with firm purpose. The total of individual responsibility for personal health, accepted by millions of American men and women, will make an incalculable contribution to victory." It is unfortunate that most of us had to wait until we were immersed in a fearful war to appreciate this simple truth. But if the citizenry can now learn how much they themselves can contribute to their health, the war will have had at least one good result.

NEWS in Small Doses

▶ A CHICAGO dentist has invented a device that will let the dentist stand on both feet; it is a finger-tip control of the dental machine.

▶ MAYBE we'll be using plastic jar rings for our home canning next summer. At least, such a jar ring has been tested by the United States Department of Agriculture.

▶ THE section of the United States having the highest record of deaths from tuberculosis is along the Mexican border, whereas the Midwest and mountain areas score the lowest.

▶ You might not think it, but it is true, according to Dr. Edgar E. Martmer of Detroit—city children are healthier than country children! They receive better medical care, and their parents are better informed on healthful living.

▶ THERE were about a thousand more cases of meningococcic meningitis in the United States in 1942 than in 1941.

▶ FROM a milk protein, casein, chemicals are secured that have proved of great benefit in treating that form of blood pressure so malignant that it causes blindness. Treatments are still experimental, however, and warning is given that people with the ordinary type of high blood pressure are not likely to benefit from them.

▶ AVOCADOS (the poorer specimens and those that are damaged) may offer a good source of oil for industries. The oil is said to be much like olive oil as to taste and quality.

▶ *Scientific American* tells of an ointment developed in Doctor Sperti's laboratory in Cincinnati in his cancer research experimentation. A worker in the laboratory was severely burned and the ointment was used in emergency. To the amazement of all, the burn ceased paining immediately, and the healing was accomplished without scars. A number of physicians who are now experimenting with the ointment report gratifying success. This ointment is full of biodynes, hormones given off by injured cells to aid in the growth of other cells.

▶ DENTIST BION R. EAST of Columbia University, says *Time*, reveals the fact that more tooth decay is found in the North than in the South; in fact, it is quite rare in the South. This is all the more mysterious because nobody really knows the underlying cause of tooth decay.

▶ ONE item of good news coming from the Solomons area is that the mortality among wounded men is the lowest in the history of war, less than 1 per cent. This is just a little better than the 1.5 per cent reported by the Russians. The use of blood plasma and sulfa compounds is given much credit for this good record. Much credit, too, should go to our use of the knowledge gained through the years, on how to treat wounds.

▶ A DRY soup mix that is ready for serving by merely mixing with cold water and bringing to a boil has been developed by the Agricultural Research Administration. The Marketing Administration is planning to use this on its school-lunch program, and it gives promise of being a good food for the United Nations. However, it will not appear on the average American dinner table until the overseas demand has been met fully.



• Right now about *three-quarters* of our usual production of Dole Pineapple and about *one-third* of our usual production of Dole Pineapple Juice are going to our Armed Forces.

• Even if you can't get as much Dole Pineapple as you'd like these days, there's good news for the future. We're now planting pineapples for 1945. It takes two years for nature to grow a pineapple. But there are millions who say that the time is well spent. Pineapple's glorious flavor and vitamins will be yours again when the war ends.

HAWAIIAN PINEAPPLE PRODUCTS

DOLE

Is There Relief for High Blood Pressure?

R JOSEPH D. WASSERSUG, M. D.

MORE than a hundred years ago—in 1836, to be exact—the English physician, Richard Bright, published certain observations in the Guy's Hospital Reports that tended to incriminate the kidney as a most important factor in the production of high blood pressure.

Many doctors and scientists since that time have confirmed the fact that Bright's disease and high blood pressure are frequently associated. But with the development of more accurate tests of kidney function, observers realized that there was a second large group of cases in which the kidneys worked normally, and yet the blood pressure was high.

Many investigators believed that these strange cases for which no obvious cause could be discovered were due to more generalized changes occurring in blood vessels. The caliber of the small arteries was decreased because they were in a "spasm." Because of the narrowing of these small blood vessels, with the resulting increased resistance to the flow of blood, more pressure was required to push the blood through the blood vessels. There was a simple and logical explanation! But just what caused this so-called "spasm" had never been satisfactorily explained, although numerous theories were advanced.

Probably the most important drawback to scientists engaged in searching out the cause of high blood pressure, was the fact that no sure method had been discovered by which high blood pressure could be consistently produced in an experimental way in animals.

In 1934 the experiments of Dr. Harry Goldblatt and his associates put research in this intriguing medical problem on a firm scientific basis.

In his research Dr. Goldblatt went back to the same organ that Dr. Bright had studied a hundred years earlier—the kidney. He first designed a small, adjustable silver clamp that could be used in experimental animals to shut off the main artery to the kidney. With this clamp in place the experimenter could control the flow of blood to the kidney.

Dr. Goldblatt discovered that every time he reduced the blood flow to the kidney, his experimental dogs developed

high blood pressure. In each instance the kidney with the clamped artery showed practically no change in its ability to secrete normal urine. Kidney function was either normal or only slightly impaired.

The similarity between this type of experimental high blood pressure and the type affecting human beings was astounding.

These experiments started a wave of

ing the past eight years, a definition has been found for the previously unexplained form of high blood pressure. This new interpretation now rests on a fairly firm chemical basis.

It can be claimed with a good deal of certainty that when the blood supply to a kidney is interfered with either by applying a Goldblatt clamp or by wrapping the kidney in cellophane (according to the technique described by Dr. I. H. Page)



H. M. LAMBERT

There Is Constant Laboratory and Clinical Research on High Blood Pressure

laboratory and clinical research on high blood pressure. Since 1934 several hundred scientific articles that bear directly or indirectly on his work have already been published. In many instances patients have received practical benefits from the theories worked out in his research laboratory.

As a result of the experimentation dur-

a substance called renin is produced in large amounts in that kidney.

Renin is manufactured in the kidney, and it enters the general circulation through the veins leaving the kidney. It can then react with the blood in the general circulation. It plays a most important role in raising blood pressure.

Although the exact nature of renin is



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Blood Pressure in Human Beings Is Probably Influenced by Many Factors,
Such as Heredity, Constitution, and Emotional Status

not yet known, many of its characteristics have already been described. It is a protein or a proteinlike substance. It has the characteristics of an enzyme; that is, it aids in the formation of more powerful chemicals without actually becoming itself a part of the substance it has helped form. Renin reacts with another protein substance called prehypertensin, which is present in the circulating blood serum. As a result of this reaction between renin from the kidney and prehypertensin in the blood, a third substance, hypertensin, is formed. This new substance has a decided action in raising blood pressure.

Many experiments have been undertaken to explore the chemistry of renin still farther. It has been shown, for example, that if a Goldblatt clamp is placed on the artery lead to a kidney, and at the same time the veins leaving the kid-

ney are tied so that no blood flows from the kidney, the blood pressure does not rise. This experiment proves that the renin from the kidney is effective only when it has a chance to react with the blood.

It has been demonstrated that when renin is formed, even though the kidney be stripped of all its nerves, yet blood pressure goes up. This proves that renin acts directly in the blood and not indirectly through the nerves in the kidney.

Most important of all, something has been found in the normal kidney that opposes the action of renin and tends to keep the blood pressure down to more nearly normal levels. This fact may eventually open the way for a new and more effective treatment of high blood pressure.

Further research has shown that if the kidneys of animals under experiment are

removed and extracts are made from them, these extracts contain renin. This renin, when injected into the veins of apparently normal animals, causes a rise in blood pressure. Similarly, if the blood of experimental animals is injected into other apparently normal animals, these second animals in turn develop a temporary but marked rise in blood pressure.

The simple experiments have demonstrated the presence of potent blood-pressure-raising substances both in the kidney and in the blood stream of animals with clamped kidney arteries.

When it comes to skyrocketing blood pressure, hypertensin and not renin is the truly powerful substance. The technician can manufacture hypertensin in the laboratory by mixing some renin and prehypertensin and allowing the reaction to take place. But even potent hypertensin can be destroyed or inactivated in the test tube by the addition of certain extracts from normal kidneys.

Thus scientists can closely duplicate in the laboratory the reactions that ordinarily take place within the body. Curiously, normal blood pressure is not lowered by extracts from normal kidneys even though the action of such extracts on dogs with high blood pressure may be marked. Many of the kidney extracts under investigation, however, produce fever when injected, and some scientists believe that this fact presents a serious obstacle in the study of these extracts or similar substances.

Since most, if not all, of the factors, or substances, that are responsible for causing high blood pressure are probably protein in character, it seems unlikely that their exact chemical composition will be worked out quickly or easily. Proteins, the most complex of organic chemicals, are difficult to analyze.

No one chemical substance has as yet been identified as the causative factor in high blood pressure, and theoretically a large number of different compounds might be this causative factor. Because many enzymes are capable of breaking down complex proteins into simpler substances, scientists are using different enzymes in their investigations; the results of this research should be helpful.

Just what is the practical use of all this theory? Well, by the application of Dr. Goldblatt's theories, many patients who once would have been condemned to an early death because of high blood pressure are now alive and in good health. Certain persons who had one diseased kidney and one good kidney are now well again and have a normal blood pressure because some surgeon operated and removed the diseased kidney.

Dramatic results have been obtained, especially in children, for cases in which the disease was only in its earliest stages in one kidney. In the *J. A. M. A.* of June, 1942, further confirmation of Dr. Goldblatt's theories was obtained when

(Continued on page 28)




H. M. LAMBERT

Do We Need MEAT

For Good Health?

An Article That Deals in the Facts and
Presents a Wholesome Nonflesh Diet

 By HAROLD M. WALTON, M. D.

WORLD War II has pointedly reminded the world at large how vitally important food is. Adequate nutrition must come first in any consideration of warfare or civilian need, and in practically any emergency, food is to be carefully conserved and wisely used.

Of the three major classes of energy-producing foods, namely, proteins, fats, starches and sugars, the protein foods head the list. Not that protein is the chief or most suitable source of heat and energy for the body, but proteins, or nitrogen-yielding foods, constitute the essential link in the nutritional chain—the central objective around which the scheme of adequate nutrition revolves. Protein may therefore be called the “must” food.

Proteins take first place in that they are essential constituents of every cell of the body. There is no known life without protein. Protein foods supply the material for construction, growth, repair, and maintenance of body cells and structures; they also supply energy to a certain extent.

Analysis reveals that protein units, or molecules, are highly complex compounds composed chiefly of carbon, hydrogen, oxygen, and sulphur. Proteins, of which there are several classes, varying somewhat in composition, are all found to be composed of a variety of “building stones,” or fractional parts, called amino acids. The nutritional value of proteins varies considerably, depending upon the form and quantity of amino acid present in each. Certain amino acids are more im-

portant than others, which means there is considerable difference in single proteins as to their essential, or biologic, value to the body. In a day's dietary, however, a balance in essential amino acids is quite readily secured, for several proteins are commonly associated in a protein-bearing food and several kinds of food are usually eaten in a day's menu.

The term “complete protein” is applied to those proteins which contain all the amino acids essential to the promotion of growth in the young and to the provision for maintenance of life. These complete proteins are of particular interest to the vegetarian because problems relating to an adequate nonflesh diet center about the protein intake.

In human nutrition the principal sources of protein are milk and milk prod-

ucts, eggs, nuts, legumes, cereals, and meats. Most green leaves contain protein of high nutritional value, but yield an insufficient quantity to make this type of food a significant source for man. This fact explains, however, how the cow and the horse can thrive on grass and hay in the quantities which their digestive mechanism allows them to eat.

Animal proteins as supplied in milk products, eggs, and meats constitute the chief sources for much of the world. Whenever food restriction or rationing becomes necessary, the animal proteins are the first to be affected because supplies are limited. These animal products, however, do not constitute the only source of complete proteins of high biologic value. In vegetable sources complete proteins in good proportion are found in almonds, and in lesser proportion in several other common foods—Brazil nuts, soybeans, and peanuts. In vegetable foods very commonly an incomplete protein is associated with a complete one. In wheat, for example, the principal proteins are gliadin and glutenin. Gliadin is incomplete, but glutenin is complete.

The proteins of the cereals taken alone, while good in themselves, yield a protein mixture which is neither ideal nor wholly adequate for a prolonged period of time. Hence the virtue of the practice of combining milk, eggs, nuts, or certain legumes with breadstuffs and cereals, which combination readily makes good any deficiencies in essential amino acids in the cereal group.

In many homes meat is regarded as an essential food. Flesh food is a valuable source of protein, but it is in no sense indispensable to an adequate diet. In fact, as regular readers of *LIFE AND HEALTH* know, meat is not even the most healthful source of protein. Flesh as a whole is not an abundant source of any ingredient other than protein, for muscle meat is a relatively poor source of mineral salts and vitamins and contains practically no carbohydrate or fat. For the most part, other protein-rich foods yield

also fats, and fuel foods, vitamins, and mineral salts.

The necessity of rationing meats would be serious indeed were there not abundant and even more desirable sources of first-class proteins readily available.

When suitable alternates are supplied, meat rationing will contribute to public health and will present no problem to those well informed in food values. Those who have felt they couldn't live without meat will find enjoyable adventures in eating the judicious, economical, tasty combinations of cereals, nuts, legumes, eggs, and milk, which make a wide variety of healthful meatless dishes.

The optimal daily protein requirement of man has received wide study over many years by a large number of research workers. There is no absolute unanimity even today as to the most desirable amount. The daily requirement for adults, however, appears to be quite constant and is generally accepted as being approximately ten per cent of the total caloric intake of the mixed adequate diet, or one gram of protein per kilogram (2.2 lbs.) of body weight. The proportion is much higher for children. During the period of rapid growth, children require 2.25 grams per kilogram of body weight. Provision for this essential structural food can be readily made through early childhood and youth by providing an adequate supply of milk or its equivalent.

Provision is made in the body economy for the storage of excess fuel food in the form of adipose tissue, but no provision is made for storing excess protein. The amount of protein eaten in excess of the body's need is in part converted into fuel-food form, and the remaining portion must be excreted, chiefly through the kidneys. There is experimental evidence that when protein foods are eaten considerably in excess of the requirement, deleterious results may be produced in the kidneys and to some extent in the blood vessels. It is now the consensus of opinion, however, that evidence adduced to date fails to prove that the smallest pro-

tein intake permissible is necessarily best.

McCollum and Simmonds, who are well qualified to speak with authority, have concluded: "There is no instance in our experience where a diet satisfactory in all other respects, but supplying just sufficient protein of good quality to support growth . . . has been found to promote as satisfactory nutrition over the entire span of adult life as would the same diet containing a more liberal supply of the protein factor."*

The function of protein in the body is more than merely to furnish fuel and structural material for growth and replacement. Through its specific action, cellular activity is accelerated and general physiologic efficiency, vigor, and a sense of well-being are effected.

Subsistence for any considerable period on a diet inadequate in total protein or lacking in certain of the essential amino acids results in irreparable growth defects in the young and in lowered vigor, increased susceptibility to disease, and decreased mental and physical efficiency.

As indicated above, the average daily requirement of protein is influenced principally by age. The need is markedly greater during the period of rapid growth and development. The requirement is also increased somewhat during pregnancy and lactation and during wasting disease.

The season influences somewhat the optimal protein intake. In severe winter weather a liberal supply of protein will increase physical comfort. Shivering and muscular exertion are minimized through the stimulation of metabolism by protein foods (specific dynamic action). During hot weather and in tropical climates the protein intake is to be reduced to the minimal requirement, which is approximately three fourths of a gram per kilogram of body weight.

In the practical outworking of the daily
(Continued on page 29)

* E. V. McCollum and N. Simmonds, "The Newer Knowledge of Nutrition," 4th ed. (New York, The Macmillan Company, 1929), p. 45.

The Vegetarian Diet Serves Adequately in Every Profession. The Professions Represented by These Seven Vegetarians Are, Left to Right—Stenographer, Secretary, Nurse, Accountant, Mechanic, Truck Driver, Printer. Are They Happy and Well? Are They!!

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Water Treatments



Nervous? Can't Sleep?
Water Treatments May
Provide Relief for You

IRVING BROWNING AND S. M. HARTMAN

THE human body is subject to many ills, ranking high among which are nervousness, insomnia, fatigue, and weakness. A survey of the care of these conditions reveals an astounding use of stimulating and depressing drugs. The basic cause is most often unhygienic living. Too often drugs are resorted to for the relief of these distressing symptoms. The use of drugs, however, may become a habit which is hard to break and which further undermines health. It may even lead to drug addiction. The sick frequently prefer the easy way of taking pills rather than the hard way of correcting wrong habits of living.

Before anyone resorts to the use of drugs in nervousness and weakness, he should give special attention to the cause. For the proper study of the cause, he should seek medical attention. No drugs should be used except under careful medical supervision. The cause for these symptoms may be quite innocent and easily remedied; on the other hand, the symptoms may be danger signs which indicate the development of some serious condition.

In this article we shall describe simple methods which may be used to supplement the physician's care of these cases. By diligent employment of the remedies suggested, the use of drugs may frequently be entirely avoided. One should never forget the employment of sane hygienic principles for prevention as well as treatment. The most important of these are adequate rest, proper diet, proper physical exercise, and good mental hygiene.

Tonic water treatments lend themselves well to stimulation of the body without drawing upon its reserves, as is frequently



The Cold Mitten Friction Is Tonic in Effect. It Should Always Be Preceded by a Warming Treatment Such as the Fomentation

the effect in the use of drugs. The intensity of the tonic treatments may be varied to a wide degree; for example, one may receive a mild tonic effect after a warm bath by dashing cool water over the back. A severe tonic effect results from the use of a full tub of cold water. These tonic methods are usually suitable both for maintaining proper health and aiding recovery from disease.

A few of the tonic methods one may use in the home are the cold pail pour, cold bath, cold shower, and cold mitten friction. An important rule which should always be followed in tonic treatments is that the body should first be warmed by a warm bath, by fomentation, or by exercise. Another feature of all these tonic procedures is that during the treatments the skin should be vigorously rubbed, especially if the body is not active. Swimming in cold water would be an exception to this. The tonic treatment should begin with a




mild procedure, which in each successive treatment should be increased in severity—accomplished by progressive lowering of the temperature. Since the cold shower and the cold bath are quite simple, we shall not describe them further. Cold mitten friction demands a little more consideration.

The cold mitten friction is the tonic procedure for bedridden patients. It should always be preceded by a fomentation for the purpose of warming the body well. The body is treated successively by uncovering one arm, treating it and re-

for Nervousness

and Related Maladies

 CLARENCE W. DAIL, M. D.

covering it, then by uncovering the other arm, treating it and re-covering it—and so on to the legs, back, chest, and abdomen.

The best friction mittens employed for this treatment are made of old Turkish towels sewed into sacks which fit comfortably over the hands. One is used on each hand. They are wrung from ice water so that they contain as much of it as possible without dripping. They are then quickly placed on the hands and im-

mediately employed to rub the parts vigorously. It is important to keep the bedding dry. This can be done by tucking a protecting towel around the margins of the part under treatment. After two or three vigorous applications to each part, it is thoroughly dried with a Turkish towel by much friction. In this manner the other arm, the legs, back, chest, and abdomen are treated.

For quieting effects upon the patient, one can use mild applications of heat to the body. These treatments are usually given about the time for retiring. For this sedative action the neutral bath, the hot foot bath, and the fomentation, especially to the spine, are useful. Many people suffer from cold feet. Frequently cold feet are an important cause of sleeplessness. In such cases the hot foot bath before retiring or the hot-water bottle at the foot of the bed may produce marked effects. The heating of one part of the body causes generalized heat of a mild degree, which in turn may produce quieting effects. The hot foot bath should be warm enough to cause a mild sensation throughout the body, but should not be hot enough to stimulate perspiration.

Applications of heat to the feet, especially by means of the hot-water bottle, are likely to be dangerous to people who are suffering from cold feet, which might be a symptom of a disease of the blood vessels of the legs. A person suffering from cold feet, pain in the feet or calves after walking, and possible slow-healing sores of the feet requires careful medical attention, for he may have a disease

which cuts off an adequate blood supply to the feet. In such cases, one should avoid heat.

The fomentation to the spine may be used. This is another method which has marked effects. At this point let us consider the preparation of the fomentation, which may be used also in treating other conditions, which we shall describe in the next two articles.

The principle of the fomentation has already been discussed in a previous article. The fomentation proper is essentially a part-wool cloth, which is wrung quite dry out of boiling water. It is then covered by a piece of dry flannel. The whole application is placed over two thicknesses of toweling which cover the part to be treated. The heated woolen cloth generates steam, which passes through the dry material and forms moisture on the skin, thus releasing heat on the surface of the skin.

The inside portion of the fomentation may be constructed from an old part-wool blanket, cut 30 inches square and folded into three layers so as to form a piece of thick material 10 inches wide and 30 inches long. The cover is made of similar material 36 inches square. It is folded over the insert. Besides this, as mentioned before, the fomentation requires one or two thicknesses of toweling, placed next to the skin of the patient. Most treatments require three or four fomentation applications. One should have at least two sets of fomentation cloths in order to give the treatments.

The fomentation inserts are heated by dipping all but the two ends in boiling hot water as shown in one of the accompanying illustrations. The fomen-

(Continued on page 23)

1. Have Two Sets of Cloths for Fomentations, Two Cloths for Wet and Two for Dry.
2. This Is How the Fomentation Is Folded in Thirds, and Placed Inside the Dry Cloth.
3. Place Cloth in Kettle of Hot Water With Ends Protruding to Keep Dry for Wringing. One Cloth Can Be Heating While One Is Applied to the Patient.
4. Wring the Cloth by Twisting Like This.
5. The Twisted Cloth Is Quickly Shaken Out and—



6. Placed in the Dry Cloth Like This.
7. The Dry Cloth Is Folded Over the Wet Cloth.
8. Now the Fomentation Is in Place for a Treatment to the Spine. Always Make Sure That the Room Is Warm and Free From Drafts.

AT a recent postgraduate medical assembly in Chicago the use of tobacco was definitely scored as an associate factor in, if not the sole one responsible for, certain diseases of the stomach, kidneys, heart, blood vessels. The men who pointed the finger were professors of medicine from top-flight medical schools throughout the land. They were men who have had the privilege offered by great clinics to observe the cause and effect of disease and to arrive at accurate conclusions from a correlation of patient study and research-laboratory data. These men tell us that ulcer of the stomach, Bright's disease, hardening of the arteries, and coronary heart disease can reasonably be products of the tobacco habit.

Yet every one of those men who made the observations smokes. Strange situation, is it not! Such an enigma serves to emphasize the fact that tobacco is a habit-forming drug. Most medical men who advise against the use of the weed indulge in it themselves in spite of the fact that statistics indicate that their colleagues are being knocked over right and left at too early an age by heart, kidney, and blood-vessel diseases. The use of a body-injuring drug is by no means justified by its acceptance as a universal custom, or by your doctor's smiling assertion that it is a "pleasant" vice.

An analysis of the physiological background of diseases attributed to tobacco may offer a degree of interest as well as substantial proof of our contentions. Every modern textbook on stomach and intestinal diseases lists tobacco as one of the causes of gastritis. This term simply means irritation and inflammation of the stomach, and gastritis may be a forerunner of many things. The smoker, the chewer, the user of snuff who complains of morning nausea or periodic and chronic indigestion, may have it, and later he may have ulcer or cancer.

Spasm of the tiny blood vessels throughout the body is another one of the damaging physiological reactions to tobacco. It prevents proper nutrition of important structures. This we know even-tuates in blood-vessel disease of a type that terminates in a damaged heart; paralysis; gangrene of the toes, feet, and hands; and sudden death. We are not painting a scare-head picture; every clinic in the land will attest to the certainty of hardening of the arteries and its complications here noted as a direct result of tobacco in individuals whose tissues are particularly sensitive to its toxic action.

Tobacco has been listed as a "social

A Doctor Describes
Some Common Habits
That Cut Down

Your Margin of Safety

R ARTHUR N. DONALDSON, M. D.



IRVING BROWNING



HARRIS & EWING

Alcohol Is Both a Narcotic and an Anesthetic. An Anesthetic Stupefies, Narcotizes, and Is Capable of Depressing Every Living Cell, of Suppressing Every Vital Function

poison." And a poison is defined as something which when taken into the body produces a harmful or deadly effect. If we were to compare alcohol and tobacco in their effects upon mankind, we would be justified in saying that tobacco provides a major physical hazard and alcohol a major moral hazard.

Tea, coffee, and cola drinks must also

be included in the so-called pleasant vices. All produce for the user a chemical element of similar nature—theine and caffeine—that classify as stimulating drugs. Stimulants are whips—injurious agencies adopted by humanity to soften their sorrows, to ease the dullness of the daily grind. They dim the sense of fatigue and thus allow the user to go far beyond his limitation in strength and vitality.

A cup of coffee, a pot of tea, or a glass of a cola drink distinctly removes that tired feeling, eases the dull headache, seems to facilitate mental processes, drives out that sleepy feeling. Now these results cannot follow altogether from taking a bit of sugar or cream, or from absorbing the heat of the steaming coffee or tea, the cold of the iced drink, much less from the aroma, pleasant as it may



H. A. ROBERTS

You May Not Realize It, but Many
of Your Little Daily Habits Cut
Down Your Margin of Safety

be. The same result will be observed if a capsule containing three grains of caffeine is swallowed with a bit of water. It is the drug effect that sells the drinks, that makes us feel more fit, that stimulates us.

Caffeine and allied chemical substances whip up the circulation principally by increasing the heart rate—the heart is given less time to rest, has to work harder because of increased circulatory demands. You may have noted that your heart is distinctly irregular at times when you are using caffeine beverages; that it seems to thump, stop, roll over, and do everything but jump out. This drug is dreadfully irritating to some hearts, adding to the element of overwork by making them abnormally touchy—really nervous hearts. The nervous system is put on edge, and the more caffeine-sensitive person may be driven to nervous exhaustion. With rare exceptions one is wakened and mentally excited by it, often to the point where sleep is destroyed.

It seems to make us stronger, because caffeine stirs up the adrenal glands, and the secretion of these glands in turn forces the liver to release from its storehouse sugar that normally should be held in reserve and not burned wantonly. Thus we are given added energy, mobilized by a product (caffeine) that can offer little

or nothing toward providing the raw material needed for developing the energy which it causes to be dissipated. It is very easy for a person to drive himself to a point of nervous exhaustion through reliance on caffeine beverages in his effort to secure relief from fatigue—to mobilize energy to carry on. It is a stimulant, a whip, a drug that gives a false sense of well-being and strength.

Do not forget that numerous cola drinks so popular at the drugstore fountain, contain just as much caffeine per glass as a cup of coffee contains. We sometimes wonder if parents who give their six-year-olds cola drinks really know what they are doing. They would not think of placing a steaming cup of coffee in front of them for breakfast, but there is apparently no concern about an equally hazardous drink at the corner store. And what is more, these cola drinks are sold in school cafeterias. Some good P. T. A. organizations should rise up in their wrath and put a stop to the "coke"-and-sandwich lunch from school counters.

The late David Starr Jordan made this true observation some years ago: "The basis of intemperance is to secure through drugs the feeling of happiness when happiness does not exist." The fact is that caffeine beverages provide nought in food value, but are taken not so much for the

pleasure afforded the taste buds as for the sense of "better" feeling that follows their ingestion. They owe their popularity entirely to this widespread delusion. Their use constitutes intemperance. And this applies essentially to tobacco and alcohol also.

We have spoken of alcohol as our greatest moral hazard in comparing the gross relative dangers of alcohol and tobacco. Alcohol, however, is more—it is a destroyer of living cells; a subtle narcotic agent that is capable of bringing slow or sudden death to him who trusts it. To the pharmacist, ethyl alcohol (the kind men drink) is both a narcotic (morphine is a narcotic) and an anesthetic (ether and chloroform you recognize as anesthetics).

We all know that an anesthetic works through its action on brain cells, which it stupefies, narcotizes, and is capable of killing. The fact is, the ether that put you to sleep for your appendectomy is a first cousin to alcohol—it is an alcohol. And in just the right stage of effect it can loosen your tongue and give the nurses and interns quite a treat. Finally you are unconscious, and unless the anesthetist knows his business, you may keep on until you are permanently so.

Alcohol, then, is capable of depressing every living cell, of suppressing every vital function. And this is probably the way it operates: It dissolves the fatty substances in the outer coat of the nerve cell, for alcohol is a fat solvent. Thus the cell membrane is injured and protection of the vital parts within is impossible. The cell itself contains what is known as protoplasm, a substance similar to the white of an egg. This material is actually cooked by alcohol. Then, with the protecting coat gone, the protoplasm is open to varying degrees of coagulation, depending on the alcoholic concentration in the blood.

This sort of thing affects the organs of reproduction and the cells that have to do with the development of new life just as surely as any other type of cell. There is plenty of evidence to support the claim that alcoholism can and does affect the stability, the vitality, and the resistance of posterity. The margin of safety in each individual is distinctly influenced by the treatment accorded the body by his forebears.

We are not going to say that certain specific diseases are actually caused by alcohol, but we are certainly safe in asserting that its presence hastens degenerative processes. Our bodies have been so constructed as to provide abundantly against loss entailed by normal wear and tear. We inherit a definite degree of tissue strength, vitality, and ability to withstand wear and tear. Some persons have tissues that are old at thirty, kidneys that need coddling at thirty-five, stomachs that are temperamental at twenty-six, brains that fail to track at fifty-two. Every organ at

(Continued on page 34)

"Sweetest Little Fellow"—Give Him Every Care and Attention Now That His Later Years May Be Healthful and Happy



H. M. LAMBERT

The Treatment of CONSTIPATION in Infants and Children

By MARY BAYLEY NOEL, R. N.

CONSTIPATION is one of the most common disorders of the human family. It is found from early infancy to old age.

Among infants and children constipation is a prevalent and troublesome derangement, having a far-reaching effect. Its causes are many and varied. Physicians divide them into two groups: predisposing and direct.

Among the predisposing causes the following are thought significant.

1. Since the intestinal walls of the child are less muscular than those of the adult, they have less power to contract and expel the contents. In other words, that peculiar wormlike motion of the intestines, known as peristalsis (produced by contraction of the muscular fibers),

which pushes the contents of the intestines onward, is less active in children than in adults.

2. The pelvis and hip bones, since they have not attained the adult breadth, form a basin with a relatively small capacity. In contrast to this, the bowel is about one third larger, proportionately. This means that the bowel must fold upon itself. Thus in place of one sac, or pouch, as in the adult, there are numerous loops, or curves, in the large intestine of infants and children. These naturally retard the passage of the intestinal contents.

3. Other factors, by many considered no less important, are that the digestive juices, especially bile, are proportionately less in the child and that nerve power is necessarily deficient, since the sym-

thetic nervous system is yet undeveloped.

These predisposing causes are beyond our control. We mention them merely to show that infants and young children are anatomically more liable to constipation than are adults.

The direct causes are the ones with which we are concerned. These are:

1. Errors in diet.
2. Deficient intake of fluids.
3. Irregularity of habit.
4. Improper posture at stool.
5. Some abnormal condition about the rectum.

Although it is sometimes difficult to determine the reasons for constipation in a given case, we usually find that among bottle-fed babies the chief causes are: (1) too much protein (the curd, or casein, of milk—that element in cow's milk which forms the principal part of cheese); (2) too low a percentage of fat.

Both these causes may be removed by determining in each case the proportions of fat and protein suited to the digestion. This is a problem always to be placed in the hands of a competent physician.

Other errors in feeding that may have a bearing on constipation among bottle-fed babies are: too little sugar, insufficient quantity of food (causing scanty stools), and the use of boiled milk.

If cutting down the protein and raising the percentage of fat does not correct the trouble (or if it is impracticable to reduce the protein, many physicians replace part of the sugar by maltose (a laxative); or they give one feeding daily of malted milk to replace the customary feeding. Some, in preparing the formula, use oatmeal water, which is laxative, in place of boiled water. Orange juice is of value in helping to relieve constipation. It may be given as early as the beginning of the third month. Start by giving one teaspoonful daily, strained and diluted with a little water. A little later this may be increased to a teaspoonful twice daily, between feedings. If well taken the amount of juice may then be gradually increased, until at six months the child is taking one tablespoonful twice daily, and at one year one ounce twice daily.

If constipation persists after one has regulated the formula and given orange juice, some physicians advise a teaspoonful of sweet oil (olive oil) two or three times daily, or one-half teaspoonful of mineral oil two times daily.

When the breast-fed baby is constipated, it is possibly because the baby is responding to this condition in the mother or because the mother is not paying sufficient attention to diet and exercise. The first consideration of the mother should

then be to look carefully after her own regimen. A checkup by her family physician would be in order.

For his general health the baby should have cod-liver oil daily.

The errors in diet causing constipation in children of the runabout age are usually (1) too much milk, to the exclusion of other foods; (2) lack of green leafy vegetables and the coarser cereals and breads; (3) insufficient fruit.

The diet of a constipated "runabout" should include oatmeal, hominy, corn-meal mush, green vegetables, coarse breads, and much fruit. Stewed fruit should be given at mealtime and raw fruit (ripe) freely between meals.

At all ages one of the body's greatest needs is sufficient liquid. This is necessary in order that normal elimination may take place by means of the skin, kidneys, lungs, and bowels. All too often infants and sometimes "runabouts" are given practically no fluid except milk. And how does lack of sufficient fluid in the system have a bearing on constipation? In children, especially where there is muscular weakness of the intestinal walls, the contents of the bowels are moved forward very slowly. During this leisurely process the fluid portions are absorbed, with the result that the stools become hard and dry and are naturally more difficult to expel. Water is as essential for infants and children as for adults. When given freely several times daily, it is a simple means of relieving constipation.

To establish the habit of regularity in bowel movement is of great importance. As early as the fourth month the mother can begin to train the child to have bowel movements at regular intervals. At set periods once or twice each day he should be placed upon a little bowl or an infant's chamber (small enough to fit the buttocks comfortably), which should rest on the mother's lap, in order that the baby's back be supported. The best time for the first effort is shortly after the first feeding. This is true, not only because when food goes into the stomach the wormlike motion is started along the intestinal tract, tending to move forward its contents, but also because the habit of moving the bowels the first thing every morning is healthful. If this is not convenient after the first feeding, it may be left until the second.

Though the effort may not be successful in the beginning, if persisted in it will bring the child to respond to the regularity; thus the habit of moving the bowels at a certain time each day will become established. The important point to remember is that *the effort must be made at the same time each day.*

When old enough to sit up unsupported, the child should be put to stool on a comfortable chair low enough to allow the feet to rest on the floor. The adult toilet seat, since it tends to allow displacement of the organs, should not be used by children.

It is hardly possible to begin too early to educate the intestine into the regular, unaided performance of its natural function. A habit early established and later understood by the child will not be easily broken. In fact, it is likely to be carried through life. On the other hand, if the habit has not been formed and the child is left to make known his wants, he may easily become constipated. The child prefers to play rather than spend the time required for his toilet obligations, and even though he feels the inclination, he may repress it. A regular performance of this function not only must be early established, but the child must be taught to go to stool at the same time each day and to remain until his bowels move.

Sometimes there is some abnormality about the rectum, such as cracks or slight tears in the mucous membrane just inside the anal opening or a relaxed condition of the rectum, called prolapse. Although both these conditions may have been caused by constipation in the first place (diarrhea may also cause fissures), their continuance may be a cause for further constipation. The first condition, because of the pain produced by the passage, causes a child (particularly an older one) to put off the ordeal as long as possible.

The second condition results in more or less inability to expel the contents. Abnormalities such as these always require the care of a physician.

And now let us consider just what constipation is.

Is it merely the inability to have a daily stool without artificial assistance? No. In the healthy child, there must be not only a daily evacuation but a normal one. Even though there is one daily movement, and possibly more, if this is dry and comes away in hard pieces, the child is still constipated.

During the first six months, infants usually have two stools daily. Many may have only one, however; and if this is

normal in character, constipation is not present. The stools of the bottle-fed baby, while not likely to be so frequent (when feeding is properly carried out) as in the breast-fed infant, are larger and more bulky.

The aim should be to relieve constipation by dietetic measures and habits of regularity. If these fail, temporary relief must be obtained by recourse to other expedients.

Massage of the abdomen will often aid in the relief of constipation. It is best given for about five minutes, night and morning. Let the child lie on his back with abdomen exposed. After moistening the hand with warm olive oil, albolene, or vaseline, gently massage the abdomen, using a light circular motion and very little pressure. Begin just above the right groin, proceed to the margin of the ribs, then across the body and down on the left side. This should *never be done* just after feeding, and care should always be exercised to avoid chilling.

If when putting a child to stool results are not forthcoming, the use of a soap stick or glycerin suppository may be all that is necessary to bring on action. In an effort to establish the habit of moving the bowels at a certain hour, the glycerin suppository may be used for several successive days; but it should be employed only as a temporary measure.

When the child is badly constipated and needs immediate relief, it may be necessary to give an enema of plain warm water (95 degrees) or, in especially severe cases, of one or two tablespoonfuls of warm olive oil. When the constipation is especially obstinate, in older children, an enema of two or three ounces of warm olive oil is often administered at bedtime for several successive nights. This is given through a very small rubber tube attached to a bulb syringe. The oil is intended to be retained until morning, when, after breakfast, the child is placed at stool. Enemas should not be commonly employed, however. When used indiscriminately, they may for two reasons result in more stubborn constipation: (1) they tend (a) to cause the bowel to lose its tone, and (b) to soften and dilate the bowel wall; (2) the child soon learns to wait for this stimulation and does not have a stool without it.

For these reasons, the use of enemas should be supervised by a physician, in order that the character and frequency of the enema may in each case be adjusted to the needs of the individual child.

Drugs should never be used unless ordered by a physician. The use of castor oil for chronic constipation is to be avoided, because its aftereffects are constipating.

By means of dietetic measures, persistence, regularity, and massage, constipation in infants and children may be overcome. Of these expedients, not the least is regularity, for children are made up of habits—good or bad.



The Aim Should Be to Relieve Constipation by Dietetic Measures and Habits of Regularity

the DIETITIAN SAYS

CONDUCTED BY
LUCILLE J. GOTHAM, DIETITIAN

This department serves as an aid to our readers in their dietetic problems. For information regarding some particular food or diet, address: The Dietitian, LIFE AND HEALTH, Takoma Park, Washington, D. C. Enclose stamped, addressed envelope for reply. This service is available only to subscribers.

Lunch Box

"I work on a defense job and must carry my lunch. Please tell me what to pack in my box that will be nourishing and laxative."

There are thousands, perhaps millions, carrying lunches today; and the quality of the lunches will play a great part in the success of our production schedules. Food is what makes muscle, nerves, blood, and bones. It has much to do with speed of movement, accuracy, freedom from fatigue, and endurance. The science of nutrition has shown that plain foods, simply prepared, supply everything needed to maintain the body in a state of vigor and normal activity. The following menus are prepared to meet the needs of different adults who are calling for help in selecting suitable lunches. The variety is small at each meal, but every effort is made to make the meals sufficient to supply as much as possible of the day's food requirements. It is better to eat plentifully of a few varieties at one meal, bringing the different foods into the diet day by day.

First we will make up lunches for the normal adult who wishes to reduce fatigue and desires great efficiency from his body machine. We will make the menus decidedly on the alkaline side. Recently a noted coach told how he demonstrated in a practical way that the alkaline diet does reduce fatigue. We shall also be careful to furnish sufficient protein and the always-important vitamins and minerals. We will have a hot food each time, for this raises vitality.

Lunch-Box Menus for Reducing Fatigue

1. Mostly alkaline.—A pint of milk, preferably hot; six to eight ounces of dried fruit, such as dates, figs, raisins; two to three ounces of almonds; an orange or other fresh fruit.
2. Quite alkaline.—Soy-bread sandwiches with cottage cheese or ripe olives for filling; a juicy fruit in season, maybe apple; three or four ounces of raisins; a pint of milk, which may be flavored with cereal beverage or prepared as cream soup.
3. Alkaline.—Baked beans with molasses; wheat-germ-bread sandwiches with cream cheese or pineapple filling; three or four ounces of dates, which may be stuffed with almonds; a pint of milk.
4. Less alkaline.—Soy-bread sandwiches

with chopped kale or spinach leaves and mayonnaise for filling; spaghetti with tomato sauce; three or four ounces of dried figs; a pint of milk.

Lunch-Box Menus to Combat Constipation

The special laxative menus include the common foods most people find to be on the laxative side. Individual responses vary and should be noted. Many find that drinking hot water a few minutes before the meal has a beneficial effect. If this is not possible, a healthful hot drink or food should be included in the menu. Use bran or whole-grain breads or toast for sandwiches, and chew all foods thoroughly.

1. Lettuce-and-mayonnaise sandwiches, ripe olives, oatmeal-and-bran cookies, an orange, buttermilk.
2. Cottage-cheese-and-chives sandwiches, celery, stewed prunes, milk.
3. Bran bread and butter, raw carrot, green-pepper-and-parsley relish, baked apple, buttermilk.
4. Chopped kale or spinach sandwiches, cottage cheese, ripe olives, stuffed dates, cereal coffee with honey and cream.

Lunch-Box Menus for the Soft Diet

You would be surprised to know how many efficient workers have some physical handicap. The doctor may say, "You may work, but you must have soft food because of stomach ulcers and colitis." The following menus are for the folks who must be careful.

1. Warm milk which is one-third cream, melba toast of enriched bread, ripe olives, sieved pears.
2. Cream-of-okra-and-parsley soup, dry toast of enriched bread, ripe olives, milk and cream flavored with cereal beverage.
3. Rice with milk, banana or scraped apple, melba toast of enriched bread, cereal beverage made with rich milk.
4. Cream-of-carrot-and-green-pepper soup, baked potato, melba toast of enriched bread, milk with cream.

Lunch-Box Menus for the Reducer

There are some who are really too fat for their own good. Being fat much above average usually slows down movement, reduces efficiency, and predisposes to serious conditions. Some workers with doctors' orders may wish to try these slenderizing lunches for a while at least. It is almost

unbelievable what a trim feeling the loss of even five pounds off the torso will give. We shall consider calories and approximate them for these menus so that they amount to about 300. Usually about 1,000 calories are sufficient for the day's total.

1. Vegetable bouillon (in thermos); two ounces of meat substitute, such as Protose, soybeans, or cottage cheese; 1 slice gluten bread; an orange.
2. One hard-boiled egg, 1 raw tomato, 1 slice bread, 1 glass buttermilk.
3. Two raw apples, a pint of skimmed milk with cereal coffee.
4. Yeast-extract bouillon; a green-vegetable salad with strips of carrot, green pepper, and celery; 1 cottage-cheese sandwich.

Lunch-Box Menus for Weight and Brawn

Many who are doing heavy work realize that they would live longer if they carried more body weight. Certain work demands power which only a powerful physique gives. These menus are planned for those who are seeking extra pounds. Each lunch contributes at least 1,000 calories. Some might even eat more for a more rapid gain.

1. Cream-of-Lima-bean soup, 3 slices whole-wheat or enriched bread or toast, 2 pats butter, 6 ounces milk and cream, a whole tomato, 1 hard-boiled egg.
2. Cream-cheese-and-lettuce sandwiches, ½ cake cheese with 4 slices bread, cereal beverage made with milk and cream, two or three ounces of dates, an orange.
3. Baked beans, cottage cheese, 4 or 5 slices of rye bread, 2 pats butter, prunes, milk with cream.
4. Spaghetti with tomato, creamed greens, ripe-olive-and-nut sandwiches (4 slices bread), orange, milk with cream.

Raw Potatoes

"Would eating raw potatoes have any ill effect? I crave them."

Raw potatoes or turnips may be grated and the juice given to small babies during seasons when other sources of vitamin C, such as oranges or tomatoes, are not obtainable. The fact that one craves raw potatoes is significant. Vitamin C is probably lacking in the diet. You might find that your craving could be satisfied by eating baked potatoes, skins and all. They are one of the most easily digested foods, some authorities claiming that they are digested in one hour.

Don't Wait Too Long Before You Visit Your DENTIST

By D. S. TETERS, D. D. S.

BR-R-R-ING! Br-r-r-ing! A sleepy Doctor Jones gropes under the bed to find a pair of slippers and reaches for a robe, only to find one sleeve wrong side out. Still the insistent clamor of the telephone bell!

"Hello—Doctor Jones speaking."

"O Doctor, this is Mrs. Smith. Can't you do something? I've a toothache, and I just can't sleep. It's hurt me for a week, but it hurts worse at night, and I've just got to get some sleep. I can be at your office right away."

"But, Mrs. Smith, I've been in my office every day this week," sleepily yawns Doctor Jones.

"I know, Doctor, but I was scared; and then it didn't hurt so bad when I was working. Won't you please take it out tonight? I can't stand it any longer."

"All right; as soon as I get dressed I'll meet you at the office. It will be about a quarter of three, as it's eight miles to my office."

Doctor Jones goes back to dress, casting a longing eye at the warm bed. He looks outside to see a soft, feathery snow rapidly covering a winter world. He hopes it won't start drifting. Doctor Jones has just had an exceptionally hard day at the office and doesn't feel like shoveling!

After arriving at the office, which is none too warm at this hour, he turns on the emergency heater, thankful that his hands can get warm before he extracts the tooth. He busies himself, and then notices fifteen minutes has passed—but where is Mrs. Smith? Watching the clock, he sees another ten minutes slowly trail off. Then he hears footsteps, and Mrs. Smith comes in.

"I'm sorry, Doctor, for being late. The baby woke up and I had to rock her a minute, and Jim had trouble starting the car. But here I am! Although right now my tooth doesn't hurt. Maybe you won't have to do anything."

Mrs. Smith is now in the chair, and Doctor Jones finds a badly decayed twelve-year molar with pus seeping. A gas anesthetic is indicated; but at three-twenty in the morning there is no assistant to help; so that's out. Doctor Jones makes the injection, but fifteen minutes must pass before the actual extraction begins!

After scrubbing his hands, Doctor Jones begins to remove the tooth. Of course, it's not an easy extraction, for the tooth

is too badly decayed to be removed in one piece. Mrs. Smith complains that she can feel it a little (which is no doubt true, for the anesthetic solution cannot act properly in pus-filled tissue). It takes the doctor three minutes to extract the tooth, whereas it would have been only a matter of seconds if the tooth had been removed earlier.

By four o'clock Mrs. Smith is ready to leave. "How much, Doctor?" she asks.

"Two dollars for the extraction is my regular charge, but I will have to add an after-office fee of another two dollars; so the total is four dollars, please," Doctor Jones replies.

"Why, I never dreamed it would be that much for just one tooth. I don't think that's right. Anyway, I have only a dollar along. You'll have to charge it." And Mrs. Smith leaves the office.

Do you consider Mrs. Smith a reasonable, good patient? Don't think this picture overdrawn. Show it to any dentist, and with a rueful, reminiscent smile he'll admit that that very thing, with variations, has happened to him.

Let's take a look at Doctor Jones' appointment book for the next day that starts at nine o'clock after an all-too-short sleep:

9:00: Mrs. Brown—4 fillings.

10:20: Mr. Jacobs—impressions for full-mouth dentures.

12:00: lunch.

1:30: Bobby Green—examination.

2:00: Miss Betty Lester—6 months' checkup and cleaning.

3:30: Mr. Martin—3-tooth bridge.

Doctor Jones arrives a little before nine, looking weary. His assistant has all the evidences of last night's adventure out of sight. He slowly buttons his office coat as he explains the upset. Just then, Mrs. Brown enters. "It certainly is a bright morning with the sun on the snow," greets the assistant. "Doctor Jones is ready for you now."

"Good morning, Doctor. I should have been in a long time ago. Last July I lost a filling back here, and then the other day something sweet made this tooth here begin to ache." Mrs. Brown pointed out the offenders.

After a good look with explorer and mouth mirror, Doctor Jones slowly shakes his head. "Sorry, Mrs. Brown, but you'll have to lose the two that bothered you, and you have five others that need filling. I suggest that we X-ray, in order that we may be sure that we have them all."

Mrs. Brown looks stunned, and then exclaims, "But they haven't hurt much. How can they be so bad? And five need filling? Why, it's been only three years since you put that last filling in—just before little Jimmy was born—and you said then they were in good shape. Are you sure, Doctor?"

Doctor Jones explains that in order to keep one's teeth in good repair, one must return every six months for a checkup, and that many people, because of faulty diet, need more frequent checkups, especially mothers of new babies.

I'm afraid Mrs. Brown can't qualify as our perfect patient.


It is ten-thirty, and Mr. Jacobs is having his impressions taken. His ridges are none too good, as he had an advanced case of pyorrhea which he never had treated. He had lost his teeth one by one until the remaining ones were so scattered and diseased that they had to be removed as well. He waited eight months after his last extractions before having his dentures made. This is the third dentist he has visited, as he was dissatisfied with the dentures the other two made for him.

(Continued on page 33)



H. A. ROBERTS

Too Bad! He Waited Too Long Before Seeing the Dentist



H. A. ROBERTS

No Lack of Loveliness

By JESSIE WILMORE MURTON

Dawn has still a crimson quiver
Filled with shining darts to fling
From the silver bow of morning
Deep into the heart of spring;

Forests, still their dim cathedrals
Where the soul finds sure release
From the restless round of striving,
In the cool green aisles of peace.

Sunset's golden-bugled fanfare
Lifts nor falls to man's acclaim,
And no wind of scorn or hatred
Ever quenched one white star's flame.

God still clothes the earth with verdure
After winter's bleak distress.
Heart, look up! And soul, take courage!
There's no lack of loveliness.

Could Not Sleep

Fourth in a Series on
Personality Problems

R CHARLES T. BATTEN, M. D.

ON a beautiful spring afternoon a worried-looking elderly gentleman entered a psychiatrist's office. He was restless and tense and once in a while moaned softly. "Doctor," he said, "I am having a frightful time; I certainly hope you can help me." Whereupon he proceeded to describe his trouble in detail.

"I have been practicing law for the past thirty-five years, and because of the pressure of work I have been unable to take a vacation in the past three years. This last winter my wife and I planned one in the South, for I was in dire need of a change, as I had become increasingly tense and high-strung and had trouble sleeping. Until recently I have not taken any medicine to induce sleep, for I was expecting my vacation to bring results.

"When we had been gone only ten days I foolishly lifted the bumper of my car, which had been caught on the fender of another car. I suffered a severe pain in my back which struck me to the ground. Somehow I got to my feet and went to a doctor, who treated me; it was evident to my wife and me that our vacation was ruined. We made up our minds that we would take this disappointment in the right way, deciding that things could have been worse. We tried not to be depressed over what had happened. As we started to drive back North, my back hurt most of the time. It seemed as if we would never reach home. I saw my own physician when I arrived, and he treated me.

"Though my back did not become worse, there was some discomfort which continued to annoy me, and I was growing more tense and nervous all the time. I had returned to my work, but was finding it harder to concentrate and make decisions. My sleeping was the worst problem, for I could not fall asleep; and almost every night I would have spells of moaning and groaning. I was afraid I would disturb my wife. I went to my doctor, who gave me some sleeping capsules, which have helped only a little. Now I am afraid I will develop a habit of taking them and do not know what to do about it. My doctor said he could do nothing more for me, and advised me to come to you."

After the lawyer had talked about an hour, the psychiatrist gave him a complete physical and neurological examination. The only abnormal condition he found was tenderness over the spine in

A Miniature Word Picture of Case No. 4



White Male. Elderly. Married

Successful lawyer for 35 years, taking work seriously, carrying problems at night, often making decisions when he should have been sleeping. Was a worrier, bothered by little things. Made mountains out of molehills.

When first seen, was restless, tense, and jittery; moaned softly. Had not taken vacation for three years because of pressure of work. Had become high-strung and nervous, had trouble sleeping, and was worried over wife's health. On vacation he injured back. Returned home immediately and was treated by his physician. His discomfort and increasing tenseness and nervousness made decisions difficult for him. His big problem was to sleep at night. Was afraid he would lose his mind. Went to sanitarium for treatments, but still had difficulty sleeping.

the lower part of the back. The psychiatrist advised him to go to a sanitarium near by, where he would care for him, and pointed out that he needed further examination of his back and that the treatments and facilities of the sanitarium would be helpful in his recovery. The patient did not readily agree to do this, claiming that he would lose his practice if he was away from his office, and that, furthermore, he could not afford it. Realizing, however, that he had been getting worse during the past weeks, that he was upsetting his wife, and was not doing good work at the office, he finally agreed to go.

An X ray was taken of his back, which revealed a fracture of one of the vertebrae, undoubtedly broken when he lifted the bumper about three months previous. He had been seen by several physicians; yet none of them had taken an X ray of the back. Some had manipulated the back, thinking there was a dislocation of some sort. This patient was given hydrotherapy and electrical treatment, followed by light massage, which later was increased to moderate massage.

Let us interrupt for a moment and explain just what sort of person this man is. He is a successful lawyer, conscientious and industrious, who always takes his work seriously, frequently carries his problems home at night, and often makes decisions when he should be sleeping. He was also a worrier, and little things bothered him.

When the weather was bad, he was inclined to be depressed. Lacking confidence in his own ability, he always thought he had to work harder to reach his goal than did his competitors. Throughout his life he had endeavored to develop the habit of seeing the humorous side of any experience, but this had failed to help him much in his trouble.

He admitted that for the past three years he had not felt equal to the difficult law problems, but nevertheless he had been engaged in a problem which took all his time. For many weeks he had worked from five in the morning to eleven or twelve at night. He seemed to feel that these long hours were necessary. Shortly before going South with his wife on their vacation, he had finished the work successfully. On several occasions, prior to their vacation, his wife had been very ill with a heart condition, and her condition had added to his burdens.

After having been admitted to the sanitarium and having had the X ray of his back, he was given a sedative to help him sleep that night. When the psychiatrist saw him next day, he reported that he had not slept more than three hours and was depressed; he could not see what was going to become of him. He was eating poorly and complained of a trembling sensation in the chest, which made him wonder whether he had heart or stomach trouble; it was always worse when he was agitated.

(Continued on page 26)

THE HOUSEWIFE'S CORNER

CONDUCTED BY
CAROLINE ELLS KEELER

Homemaking—A Career Packed Full of Adventure, Love, and Work

Brightly Shine

It's just too bad that spring and house-cleaning are almost synonymous. If one could just sit under a tree that is a bower of beauty and sniff the heavenly perfume of a dozen fragrant things, and dream—just give oneself up to dreaming—oh, wouldn't it be delightful! But with all this urge to dream and loaf, there is another urge within to be up and about. Dame Nature is washing the world with silver showers, and drying things in the sun. Why not we? Away with this and away with that; blankets are stored—but don't put them away too soon. You know, with all her beguiling smiles and warmth, April is a fickle lass. She's just as likely to give you the cold shoulder as to warm you with her smiles. There's nothing gives me more keen pleasure than to see my windows shining and sparkling, with clean curtains, clean dresser scarves, clean everything. My husband is always telling me to relax and sit down a few minutes, and not be so "here and there" with all the things that must be done. But my pleasure and relaxation come when I have everything clean. Then I can sit down and enjoy my home. The rugs are clean; the walls are clean; the books have all been taken out and wiped. Fresh paint is where it should be, and the pictures are washed and new looking.

Wouldn't it be wonderful if all the troubles of the world could be ironed out as easily as our linens. If only we could wash the world in hot water and rich suds and hang it up on a line all clean and shining!

Vacuum Cleaners

WE must take intelligent care of our cleaning equipment, for it must last longer now. If taken care of, it will operate more efficiently. Here are some pointers on the care of vacuum cleaners and carpet sweepers from Miss Lenore Sater of the Bureau of Home Economics of our United States Department of Agriculture:

Get Acquainted With Your Cleaner

Find out first of all what makes your vacuum cleaner "tick." Read the directions that came with it. Turn the cleaner upside down and look at the nozzle and its parts. By examining them closely, you can tell whether your cleaner is the type that cleans by suction alone—or whether

it has a sweeping and beating action as well. The type of the vacuum cleaner makes a difference in the way you care for it.

If your vacuum cleaner is what is known as the "suction" type, it will have no movable parts inside the nozzle. The nozzle, of course, is the part of the cleaner that contacts the rug. Since all the cleaning is done by suction, to operate successfully, the nozzle must at all times make a close seal with the rug.

If your vacuum cleaner does not depend on suction alone for cleaning, it will have inside the nozzle some kind of rotating part that sweeps and beats the rug. This part may be a brush that goes round and round, or a cylinder that rotates and has attached to it both brushes and rubber vibrators, or one that combines a smooth metal beater bar and brushes. Although having the right adjustment of the nozzle is important in these cleaners, too, it is even more important to keep the rotating parts in good order. In this type of cleaner, the suction as a rule is not so high as in the straight suction cleaner; and if the beating and sweeping action decreases, the cleaning ability of the cleaner is impaired.

How to Adjust the Nozzle

If your cleaner has an adjustable nozzle and if your rugs are of different thicknesses, you may have to adjust the nozzle from room to room to get effective cleaning. You can adjust the nozzle in the following way with the aid of a quarter or a half dollar.

If your cleaner is of the upright, suction type, hold the handle as you do when you clean. Then raise the nozzle until a quarter slides under easily. For other types of cleaners, raise (the nozzle a little higher—until a half dollar slides under easily. Start the motor to test the nozzle height. The carpet should pull up against the bottom of the cleaner.

Some nozzles adjust themselves automatically; others you adjust by stepping on a pedal; still others you adjust by hand by turning a small screw at the side of the nozzle.

Watch the Brushes

Keep all brushes free from hair and threads. Be sure brushes on rotating parts inside the nozzle extend slightly below the lip of the nozzle. They wear off in

time and need to be lowered. You can lower some of them by a screw, a lever, or a pin located at the end of each brush roll; others require the attention of a serviceman. When you can no longer lower the brush the proper amount, you need a new one.

Here's how to judge how far the brush should extend over the lip of the nozzle: Turn the machine upside down and place a stiff piece of cardboard across the opening in the bottom. The bristle tufts should come just above the edge of the card.

Keep the Dirt Container Clean

No matter how hard the motor and the fan of the cleaner may work, a good cleaning job cannot be done unless the dirt container is emptied at least once a week—and oftener if you do much cleaning. In most vacuum cleaners the bag itself acts as a filter and catches the dirt. In other types a separate filter and dirt container are provided. Both should be kept clean.

If the dirt container is the bag, take it out and empty it—and occasionally brush it gently but thoroughly. Some manufacturers advise that bags be dry-cleaned twice a year. If the dirt container is a pan of water, throw out the water, wash the container, and dry it thoroughly.

Keeping the container clean makes for stronger suction and hence better cleaning.

Clean and Oil From Time to Time

The motor needs to be cleaned and oiled according to the manufacturer's directions. For some cleaners this can be done at home. Others need to be sent to an expert. If you have any doubts about it, call a repairman. All cleaners should be checked occasionally by a factory representative. If yours has not been checked recently, now is a good time to have that done.

Whatever you do—don't use too much oil.

When You Use the Cleaner

Pick up pins, nails, coins, and any other metal objects before you run the cleaner over the rug. These can nick the fan and throw it off balance and also can nick the belt of the motor-driven vacuum cleaners.

Use a wall plug for a vacuum—don't use the light socket. Pull the plug—not

(Continued on page 27)

This is part of a series on matters of professional, educational and public interest, primarily related to nutrition and the scientific approach to the food problem, and giving the background of the

products of General Mills. These messages are being disseminated through a number of professional and specialized publications . . . in the hope of providing material useful for the readers.

The Food and Nutrition Board OF THE National Research Council

WHAT IS IT? WHAT PURPOSES IS IT DESIGNED TO
SERVE? HOW IS IT IN THE PUBLIC INTEREST?
IMPORTANT FACTS YOU SHOULD KNOW ABOUT THIS
QUASI-GOVERNMENTAL BODY

1. Why was the Board formed?

(Answer) This country learned a health lesson as a result of the draft in World War I. Of the first 10,000,000 men examined, 2,510,706 had to be rejected on physical grounds.



Accordingly, when our Selective Service program began in 1940, a group of prominent medical men were called to Washington to study the problem. Their studies high-lighted the importance of better nutrition as a corrective of the underlying conditions behind this high percentage of rejections, showed the need of a basic "better nutrition" program for the country at large.

As a result, a committee was formed now known as the Food and Nutrition Board of the National Research Council.

2. Who are members of the Board?

(Answer) The Food and Nutrition Board includes leading authorities in the medical, nutritional and biological sciences, many of them famous for their original

researches. The Board also includes representatives of certain government services concerned with military and civilian health. It is virtually a "Who's Who" of authorities on food and nutrition problems.



3. What are its principal functions?

(Answer) The underlying purpose of the Food and Nutrition Board is to assist in the formulation of policies that shall lead to better national nutrition.

Its actual functions may be classified as: (1) advice on the best feeding of our armed forces; (2) counsel to all government agencies on matters pertaining to good health through food; (3) advice on the physiological values of foods and diets of other peoples and nations, as related to the war and postwar problems; (4) stimulation of food and nutritional research.

Briefly, the Board is our quasi-governmental "steering committee" on problems of food as related to health.

4. What is our country's immediate nutrition problem?

(Answer) War requires "all-out" production; maximum production calls for maximum morale and health. This in turn calls for immediate improvement in our country's nutrition level. Illness, absenteeism and such factors as "fighting spirit" and resistance to the stress of war are closely related to the nutrition problem.



5. How has this problem been approached?

(Answer) Obviously, one important task is to educate Americans to choose their diets more wisely. This educational task was begun with a National Nutrition Conference in Washington in May, 1941.

A further step—of far-reaching practical importance—was in addition recommended, viz.: the voluntary vitamin-and-mineral enrichment, by millers and bakers, of all white family flour and bread.

6. Why was enrichment recommended?

(Answer) White flour and bread contribute more calories to the diet than any other class of foodstuffs. Our cheapest source of food energy, they are consumed by almost everybody every day. At one stroke, their enrichment benefits the entire American diet.

The majority of all white flour, and all white bread,* is now vitamin-and-mineral enriched, significantly increasing America's intake of Vitamin B₁ (thiamine), niacin (another vitamin of the B complex), and iron—elements widely deficient in the American diet.

Through the leadership of the Food and Nutrition Board of the National Research Council, this major contribution has been made to America's health.



Another advertisement on the work of the Food and Nutrition Board of the National Research Council will be published in a forthcoming issue.

*The enrichment of white bread is now compulsory.

General Mills, Inc., of Minneapolis, Minn., the country's largest processor of basic cereal grains, construes it as a social responsibility to keep abreast of the thinking of bodies such as the Food and Nutrition Board of the National Research Council, which are working in the public interest. General Mills has accordingly taken a leading position in bringing the benefits of enrichment and restoration of cereal products to the public. Some of General Mills' leading products are illustrated here.



All brands of family flour sold by General Mills have been enriched since June 1, 1942, or longer, including DRIFTED SNOW "Home-Perfected" Flour—also all flour in Sperry Pancake and Waffle Flour. Sperry Wheat Hearts also contain whole grain values of wheat's im-

portant vitamins and minerals.

The enrichment of bakers' white bread can be accomplished through the use of Enriched Flour, high potency enriched yeast, or by adding nutrients to bread doughs. General Mills has consistently urged bakers to enrich their white bread.

"Kitchen-tested" and "Home-Perfected" are reg. trade marks of General Mills, Inc.

the FAMILY PHYSICIAN *Answers Questions*

We do not diagnose or treat disease by mail. Enclose stamped, addressed reply envelope. Services of Query Editor are restricted to bona fide subscribers. Because of the heavy volume of correspondence, we cannot assure an immediate reply. Address Query Editor, LIFE AND HEALTH, Takoma Park, Washington, D. C.

Thickened Skin

"On the back of my hands are thickened scablike growths, rather hard and horny. I can get them almost cured only to have them appear again if allowed to become dry. What causes these?"

The thickened spots you mention are probably keratoses, or horny thickenings of the skin, the cause of which is not understood. They appear in some people, but not in others. They are more likely to show up on persons whose complexion is fair and whose skin is rather thin. They can generally be most satisfactorily removed by the use of X rays locally. Chemical preparations have been used, but there is chance of irritating the surrounding skin when using them.

Poor Circulation

"I have some trouble with my leg from what the doctor says is poor circulation. How can I improve the circulation?"

Is the poor circulation in your leg caused by thrombosis or other injury to the blood vessels, or is it due to arterial changes taking place with advancing years? An answer to these questions would determine to some extent the treatment to be given. Placing the legs in a deep vessel containing warm water, as warm as can be comfortably borne, for perhaps one to two minutes, then plunging them into a similar vessel containing cold water, for a few seconds, often affords a valuable means of improving circulation. Whether rubbing should be resorted to depends upon the fundamental cause back of the condition. Massage is usually not indicated if the blood vessels are involved, but may be very helpful in some instances of weak heart, etc.

Spastic Colitis

"Can spastic colitis be cured at home? When X ray shows several bad strictures, is it necessary to operate and cut them out, or will they go away? Is the condition serious, or is it caused just from nerves?"

Spastic colitis usually follows a period of intestinal irritation. Often the unwise use of cathartics or a period of acute colitis will bring it on. The constrictions present are transitory. In one minute they may be in one portion of the bowel, and then in a few minutes they may change to an entirely different location. To us it seems it would be unwise to at-

tempt or consider operation. Undoubtedly a nervous temperament or tendency will aggravate a condition of this kind. It may not be that the individual feels particularly nervous, but a nervous system which responds to slight irritations may indicate fundamental instability. Generally, in treating this condition, it is best to be under the care of a doctor. It can be cured by a rational regime including rest, the application of heat externally to the abdomen, the selection of a suitable diet, and the selection of proper medicines.

Commonly, spastic colitis responds well to a bland diet, even when there is a relative degree of constipation. If constipation is marked, we would recommend the injection of two to six ounces of mineral oil or other bland oil by rectum in the evening, retaining the same overnight. This will usually lead in a few days to a very satisfactory morning movement.

Citrus Fruit Skins

"Are dried and grated citrus fruit skins all right to use as flavoring?"

The skins of citrus fruits contain certain volatile oils which contribute to their flavor and to a degree make them irritating. When they are dried, however, many of these oily substances are lost so that the grated skin would serve chiefly as a flavoring substance without as much irritation to the mucous membranes as the fresh skins. We see no real objection to using them for flavoring purposes.

Dry Skin

"My three-year-old son has a very dry skin, especially during the winter months. I massage his body with olive oil at times and the skin improves for a little while, but in a few days the dryness appears. My father had a dry, scaly skin."

It is rather difficult to make a definite statement about your son's condition. There are certain states of dry skin which appear in alternate generations. Possibly your little boy inherits something through you from your father, although I would not want to go on record as making this statement definitely. We would recommend the use of olive oil or a similar preparation on the skin during the winter months. It is quite likely that during the summer the skin will be softer and will produce more of its own natural oils, which will keep it in a better condition.

St. Vitus's Dance

"Please tell me the symptoms of chorea minor, or St. Vitus's dance? Is rheumatic fever very much the same thing? The doctor says my fourteen-year-old son is bordering on chorea."

Chorea minor, or St. Vitus's dance, is an unstable condition of the nervous system, usually following an acute infection or injury to the central nervous system. Streptococcal infection is one of the most common causes. The cure includes the removal of such infection, of course, and the selection of a suitable program of rest and quiet for the afflicted child. Sometimes several years are necessary to overcome the disturbed and irregular responses. The effect is seen in spasmodic, almost uncontrolled, actions, which make the child unusually nervous, causing him to jerk or jump at very slight causes and often making it impossible for him to apply himself to reading, studying, playing, or any other occupations requiring attention.

Rheumatic fever is a disease of unknown origin. In some instances streptococcal and other similar organisms seem to play a part in it, but just what role they fill is not understood. We would recommend that your son be kept under the observation of a physician who can watch his symptoms and prescribe for his treatment as needs arise.

Fecaliths

"An X-ray report says, 'The appendix is long, fills well, and shows numerous fecaliths.' What is a fecalith?"

Fecaliths are hard nodules of fecal material. Frequently we find small nodules of this type in the appendix. They may remain there and cause irritation, or they may pass into or out of the appendix from time to time. If you are having symptoms of inflammation about the appendix, or acute appendicitis, we would favor operation as the safest method of treatment. We do not think diet can be depended upon in conditions of this kind. However, persons have been known to go along for years without distress following the presence of fecaliths. If the fecalith is small and does not entirely obstruct the lumen of the appendix, the organ can drain naturally without serious harm. It is only when the fecalith is large and obstructs the lumen of the appendix that danger is imminent.

Water Treatments for Nervousness and Sleeplessness

(Continued from page 11)

ration covers should be placed flat on the table close to the pail of boiling water. Just before the fomentation is needed, one grasps the dry ends of the insert and twists and wrings the cloth well. To aid in this process, it is well to twist the cloth partly before submersing it in the water. After wringing the insert, quickly lay it flat on the middle of the fomentation cover. Then wrap it in the dry cover and place it on the part of the body being treated, having previously covered that area with one or two layers of toweling, as suggested.

Immediate, careful attention must be given the patient to avoid burning him. Unless the skin is numb under the application, the patient should take the treatment as hot as possible, short of a burning sensation. As soon as the skin becomes too warm, the fomentation may be lifted off the person for a moment, or the dry hand may be placed next to the skin until the fomentation begins to feel comfortable.

Meanwhile a new fomentation should have been soaking in hot water. Prepare it while the patient is still benefiting from the first application. As soon as the fomentation begins to cool remove it, dry the skin quickly with a towel, and apply the new fomentation. Make several applications in this manner.

For quieting treatments to induce sleep, the patient may be given mild fomentations to the spine. The water employed for heating is quite hot but not boiling. These treatments should be just warm enough to produce a comfortably warm skin, without perspiration. Administer the fomentations after the patient has gone to bed, and disturb him as little as possible both during and after the treatment. The fomentations may be followed by a soothing stroking of the spine. It might be well to place a hot-water bottle at the foot of the bed if the feet tend to be cold during the night.

If the house is furnished with a tub large enough for the patient to recline in, the neutral bath may be used with definite advantage. Since it requires little attention, the patient may even go to sleep while taking it. The disadvantage of a bath, however, is that the patient must get up and be dried before going to bed. There is, of course, some remote danger of accident connected with this form of treatment.

+ + +

Oh to be strong! Each morn to feel
A fresh delight to wake to life.
To spring with bounding pulse to meet
Whate'er of work, or joy or strife
Day brings to me. Each night to sleep
The dreamless sleep that health can give.

—John Dryden.



RATIONING or no rationing, indulgence in coffee can still be a problem for people to contend with.

For, while many people can drink coffee without *apparent* ill effect, many others cannot indulge in even a cup a day without penalty.

If *you* are one of these people and your doctor says: "No coffee whatsoever," you'll find it worthwhile to try Postum as your hot mealtime drink. Postum has a rich, robust, and full-

bodied flavor that has won the approval of millions of people. Yet Postum contains no caffeine, no stimulant of any kind. It is made simply of American grains, roasted to the peak of flavorful perfection.

Postum comes in two delicious forms: Postum Cereal, the kind you percolate, drip, or boil; and Instant Postum, made instantly in the cup simply by adding hot water. You'll find that Postum is very economical, too. (Costs less than 1½ cent a cup.)

POSTUM

ONE OF AMERICA'S GREAT MEALTIME DRINKS

the MOTHER'S COUNSELOR

CONDUCTED BY
BELLE WOOD-COMSTOCK, M.D.

Questions for this department should be addressed to the Mother's Counselor, LIFE AND HEALTH, Takoma Park, Washington, D. C. Always enclose stamped, addressed reply envelope.

Appetite Problem With Fourteen-Month-Old Boy

"My boy will be fourteen months old in a few days. He drinks his milk from a cup and has done so since he was a year old. He has never had a big appetite, but has eaten enough most of the time until now. He weighs almost twenty-two pounds, but weighed twenty-one at one year. He doesn't seem to be gaining much. However, he seems taller and has eight teeth. He gets the juice of an orange every day, in addition to his fruit and vegetables. Lately, however, he doesn't seem to eat his food as well as he should. He drinks his milk, taking about a quart a day. He also sleeps well. He says several words and tries to say more.

"Is it possible in some way for me to get him to eat more? What should he weigh? He creeps well, but seems afraid and nervous when he tries to walk. Would the hot weather affect his appetite? Are graham crackers good for the baby? He likes them.

"When I feed him eggs they cause him to break out in a fine rash on his legs and stomach. It doesn't stay long however, unless I keep feeding him eggs. Should I go ahead feeding them to him now and then, or should I leave them out of his diet altogether? What would be good to take the place of the eggs?"

You seem to have a very fine baby boy, and his weight seems about normal for his age. Babies do not gain so rapidly after the first year. Sometimes they apparently remain stationary for a while. As long as he seems well and happy, therefore, I don't think this need be a problem.

Be careful that you do not urge him to eat. You may develop in him an antagonism toward food that will give you even greater worry. And do not be anxious about his walking. Let nature take care of that. He will be less nervous if you will let him learn to walk in his own way. If he doesn't seem to react well to eggs, just omit them from his diet. You might try the yolk of an egg alone and see if that is what gives the reaction, but his diet without the eggs, can be quite sufficient. He may be an allergic type of child. If he continues to have this tendency toward "breaking out" try giving him a panteric capsule after each meal.

These capsules are put out by Parke, Davis and Company. You may open the capsule and put the contents into his food. It will be good for his digestion and also for his nervous system. It is important that you do not show anxiety, because this attitude is so easily transmitted to a child. Just be happy with him and cultivate serenity, poise, and a relaxed spirit.

At the present time he should be on three meals a day. For breakfast he may have fruit, cereal in some form with milk, and boiled milk to drink. At midday he may have puréed or tender vegetables, boiled milk, cottage cheese or egg yolk, and hard bread crust. To this you may add a little honey from a spoon, some mashed bananas, or two or three dates. For supper he may have the same as for breakfast, or he may have dry bread in place of the cereal. He should have orange juice between meals, four to eight ounces daily.

Apparently Backward Ten-Year-Old

"I am worried about my ten-year-old boy. I am sure that he is not stupid or lazy, but his grades at school are not satisfactory. He is a very poor reader, saying so many little words wrong. I know he understands his arithmetic and can add, subtract, and multiply as accurately as any child of his age that I ever knew; yet he makes some little mistakes in almost every problem.

"In his language he is the same way, leaving out periods, commas, and capital letters. He feels bad about his shortcomings and really seems to try, but apparently he just can't put his whole mind on his work.

"He isn't a very nervous child, but is quite sensitive. He responds to praise and feels bad if scolded. I try always to encourage him about his lessons by telling him I am sure he can overcome his trouble. He has a mechanical turn of mind and can almost always think of a good way to fix anything that needs repairing.

"He has had quite a bit of eye trouble and complains that his eyes hurt, especially his right eye, even when he wears his glasses. I plan to have his eyes tested again. He also complains of toothache almost every day. We have taken him to several dentists, who say that his jaw isn't

large enough and that the teeth are crowding. He has no cavities, but his lower teeth are crooked. Dentists say that there is nothing that can be done about the condition.

"He has always been small, but seemed well. He has a good appetite and I am always careful that my children get plenty of fruit, vegetables, milk, and whole-wheat bread every day, even though we do have to live on a small income."

I believe you have a nervous child, more so than may be apparent in his personality. In your effort to make him overcome certain shortcomings in reading, arithmetic, etc., you have made him more nervous. It is important that his nervous system should have a chance to develop normally and that he should be free from continued strain.

If the work that he does is too difficult for him, he should have more simple mathematical problems; he should not be pressed or urged, but should be allowed to do them so that he will receive only commendation for doing them right. You say he is of a mechanical turn. See that he has interesting tools and mechanisms to enjoy and don't give him an inferiority complex by comparing him with other children who can do arithmetic better than he. He must have commendation instead of criticism. You must have a serene atmosphere in your home and show no anxiety because of his apparent deficiencies. This is the way to help him outgrow these very things that worry you. I note that he "feels bad about it." He is too young a child to be permitted to feel bad about anything, especially something due to a weakness in his nervous system. I feel that he should be dealt with affectionately and that very little stress should be laid on the things that seem difficult.

He should, of course, have his eyes tested. His nervous strain may be the cause of the eye trouble and the pain in his teeth. He may be a little underdeveloped mentally, but the right kind of program would give him a chance to outgrow this retardation. From what you tell me, I think he is a very fine little boy, and you should be proud of him.

An attitude of worry in the home is the very worst possible contribution to a child's environment. Affection, love, a bit of gaiety, and happiness will give your child his best chance to develop normally.

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Covering more than twenty years of experimental study, Miller's Laboratory, the originators and inventors of a balanced vegetable milk derived from the soya bean, have perfected a tasty, wholesome milk, nutritionally complete. A perfect milk for infant feeding. Delicious also as a beverage. Suitable in every way for cooking and baking.

Miller's processed soya milk is not a gruel made from flour, but a true solution milk, with physical characteristics similar to animal milk, is hypoallergenic, and—remember—besides its high protein food value it contains the standard milk requirements of sugar, oil, and calcium, and is rich in all the essential vitamins, except vitamin C.



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This is the only highly refined, modified, powdered soya milk on the market for infants. Compounded as a food especially for infants, in cases

where cow's milk is unacceptable because of weak digestion or allergy. This milk is *vitamin* reinforced and contains adequate *calcium*, *iron*, and other minerals. Hundreds of babies are being reared from birth on Miller's Soyalac, because Soyalac is a pure milk with no bacterial count or contamination.



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INTERNATIONAL NUTRITION LABORATORY / MT. VERNON, OHIO



By Franke Cobban, R. N.

OUR patient has passed the acute stage of his illness. The doctor says he may now be removed from isolation and may again associate with his family, but the isolation must be terminated in such a way that the patient and his surroundings will be free from germs that will endanger others.

If the bathroom is conveniently near, the patient may be wrapped in a clean sheet and taken to the tub for a cleansing bath and shampoo. Then with clean clothes he can be taken to a clean room. The sheet in which he was wrapped should be folded inside in and disinfected or boiled. The bathtub should be washed out with a 1 per cent Lysol solution (1 teaspoonful of Lysol to 1 quart of water). If the bathroom is not convenient, the bath and shampoo are given in bed. For this, move the patient to the near side of the bed, give the bath and shampoo, spread a clean sheet on the far side of the bed, turn the patient onto the clean sheet, put clean clothes on him and remove him to a clean room. In either case the attendant should remove her coverall apron before handling the clean clothes of the patient.

The cleaning of the room is the next step. Protected with the coverall apron and cap to cover the hair, gather up all linen and disinfect by boiling, or soak in 1 per cent Lysol solution preparatory to sending to the laundry. Blankets can safely be soaked in this solution also. Wrap and burn all waste

food and paper. It is hoped that no books have been in the room, for they are difficult to disinfect. The best that can be done with books which are too valuable to burn is to put them for several days in the sunshine, opened so that the air and sun can get to the leaves of the book.

The mattress, draperies, rugs, and any clothing which cannot be disinfected like the linens, should be placed out of doors in the direct sunlight for at least six hours, and turned occasionally so that each part is exposed.

Unless the walls have actually been contaminated, dusting in the usual, thorough housecleaning way is sufficient. The bedpan, basins, and other utensils should be put in a tub or other large container and boiled for twenty minutes, or soaked in 1 per cent Lysol solution for one hour. Wash the furniture and floor with soap and water. Then open the room to the sun and air for two days if possible. The room is now ready to be made up for use.

Important points in the care of contagious diseases:

Have a distinct idea as to contaminated area and clean area.

Remove nothing from the contaminated area to the clean area unless it is wrapped for burning or has been disinfected.

Use 1 per cent Lysol solution for linens, dishes, and utensils.

Use 3 per cent Lysol solution (1 tablespoonful of Lysol to a quart of water) for excreta and waste liquids.

Wash the hands thoroughly before leaving the room.

Always keep the hands away from the face while in the sickroom.

Do not allow the patient to breathe, cough, or sneeze into your face.

Remember that sunshine and fresh air are among our best disinfectants and that they should be used freely both during the illness and for the terminal disinfection.

no sedatives; but the third night he slept six hours and was quite calm during the waking hours. Again the psychiatrist pointed out to him the need of looking at sleep in a proper way. He became panicky when he had no sleep or only a little sleep, and felt sure his case was hopeless. His fear of not sleeping was keeping him from sleeping and was contributing to his general depression. He was told that a person could go without sleep for several weeks and not lose his mind or be a physical wreck. As he had faith in the psychiatrist, he tried to follow his suggestions to relax, believing that if he could relax well, he was bound to sleep.

Since this patient was very co-operative and conscientious, his efforts brought results. His groaning gradually decreased, and he did not mention the trembling sensation in the chest. His sleep varied from night to night. There were times when he did not sleep many hours, but he reported that he was calm and felt relaxed during the night. Naturally his spirits improved.

He had another mild setback at the end of about four more weeks, when he became impatient with his progress and felt that he would never be rid of his nervous condition. However, with further assurance, this soon disappeared. His fatigue, which had been marked at times of greatest depression, was lifting, and he found a new interest in living. He was advised that he would probably not have a good night's sleep every night when he returned home but that he would not be any different from the average person. Many people are light sleepers and for no apparent reason may not be able to sleep at times. He was told further that some of the same symptoms might return for a few minutes even after he went home from the sanitarium but that their recurrence would not be serious; that he should take it lightly and do just what he did while at the sanitarium. He realized that his habit of worrying was no asset to him. Although he had had this habit all his life, he learned that he could modify it if he really wanted to.

He returned to his work, gradually picking it up where he had left it rather abruptly several weeks before, but he followed the psychiatrist's directions explicitly. He worked only a few hours at first, taking time for his exercise, of course relaxing during the day, and allowing ample time for sleep at night. He did everything he could to develop hobbies and have an interest in things and people other than himself. Even at his age he finally made a remarkable recovery and continued to work for several years before he retired.

This lawyer, who is also a judge, is a highly respected citizen in his community. However, there are some traits in his personality—the habit of worrying and making mountains out of molehills and the fact that his emotions were too easily ef-

The Man Who Could Not Sleep

(Continued from page 19)

In addition to the hydrotherapy and the electrical treatments, he had regular, nourishing meals, and a neutral tub bath at night, followed by a glass of hot milk. He was encouraged to take regular walks and to enter into light games in an effort to make him physically tired and thus help him sleep. He was taught how to relax—something he had never done in his entire life. Above all, he was assured that even if he did not sleep for several nights, he would live. He had remarked to the physician that if he did not get his sleep, he would lose his mind.

After a few days the patient decided he had made a mistake in following the psychiatrist's direction by going to a sanitarium, and he thought he should go home. After a thorough discussion, he changed his mind, however, and decided to remain; but he thought he was not making any progress and was certain he should be sleeping after having been treated for one week. One night out of the seven he had been given a sedative. Each night he had to fight the inclination to moan and groan if he were not immediately successful in securing sleep, and

often he was heard crying, "Oh dear! Oh dear!" over and over.

There were times when he declared that he could not get out of bed in the morning. When he saw the physician, he wanted to remain in bed, claiming he was so weak from lack of sleep that he could not follow his routine. He was never allowed to remain in bed, but was encouraged to dress and follow his schedule. Every time he followed directions, he felt better for having done so. Later when he was tempted to remain in his room, he would say to the doctor, "But I always feel better when I have those treatments or go for a walk, so I will get up."

As the days passed, he did not complain of the trembling sensation in the chest and admitted that his back did not trouble him at all on his "good days." He was no longer given sedatives, and although he was not sleeping well every night, he was not nearly so concerned about his condition as he had been.

When for no apparent reason, however, the trembling sensation in his chest and the moaning returned one night, he was very much depressed the next morning. He had not slept well, of course. He begged the physician to give him a sedative that night, but was refused. The next night was almost as bad, with still

fect, as shown by the feeling of depression when the weather was bad—which predisposed him to an illness of this kind when the stress and strain of life became too great. The extra burden which contributed much toward his illness was the difficult work he had done for three years preceding his break, without letup for vacation, and at which he worked from five or six in the morning to eleven or twelve o'clock at night. There were many problems to be surmounted in this work.

Fatigue, as well as worry over his wife's health, began to play a part. It is not difficult to explain, therefore, why he was tense, jittery, restless, and sleepless before he left for his vacation. Naturally his hopes were high in anticipation of relief from conflicts and frustrations, but the accident dashed his hopes to the ground and only added another anxiety.

There is no mystery to these conditions if the facts are all known, but a complete and truthful history must be had before anything definite can be done. This patient had developed a vicious habit of fearing he could not sleep. This habit is not easy to break, but it can be broken, as shown by what this elderly man did. Many people begin to worry if they cannot sleep, and the more they worry the less sleep they have. One must realize that relaxation is more important than sleep. When one is relaxed, he will often sleep, for a sound, restful sleep is preceded by complete relaxation. Tense, worrying persons, who sleep lightly and awake in the morning unrefreshed, should learn how to relax.

+ + +

The Housewife's Corner

(Continued from page 20)

the cord—when you disconnect the cleaner.

When you put the cleaner away, wrap the cord loosely around the hooks provided for that purpose. Never wrap the cord tightly, or you may break wires and damage the covering. Avoid kinking, twisting, or straining the cord, and don't step on it or push the cleaner over it.

Carpet Sweepers

COMPARED with vacuum cleaners, carpet sweepers are simple mechanisms—and are simpler to care for.

Empty the pan after each use. Remove hair and ravelings, by clipping them with scissors first; then you can pull them out without injuring the brush. Wipe the brush occasionally with a dry-cleaning fluid to take off oil and wax.

Oil the sweeper once each month. When you are not using it, let it stand on its side or hang by its handle.

+ + +

CIVILIZATION begins with soap.—*Galveston Times*.

APRIL, 1943

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PAGE 27



By Veda S. Marsh, R. N.

Tony Takes a Bath

MOTHER, O Mother, where are you?" called the Little Jays as they came hurrying in from school. "Mudder's in kitchen; Mudder's in kitchen," said Tommy as he came rushing to meet them. Tommy could hardly wait for the Little Jays to return from school each day.

"Mother, we saw such an interesting nature film at school today. It was called 'Cleanliness Among Animals,'" said Joan.

"Mother, we saw the sweetest family of kittens. There was the mother cat with three fluffy kittens. I wanted to pick one up and squeeze it. You should have seen mother Tabby wash those baby kittens!

"Sometimes she rubbed them so hard I know they were miaowing, by the expression on their faces. But they did seem to feel frisky when she was through.

"They showed a close-up of Tabby's tongue. My, it was rough-looking and bumpy. I know our kitty's tongue feels like sandpaper, and it sticks and pulls as she licks my finger."

Then John continued, "Mother, the film showed an elephant standing in a river on a very hot day and giving himself a shower bath. He would draw the water up and then, bending his big trunk up and back over his head, he would spray the water on his back. That must make him feel good on a hot day."

"Do you remember Aunt Sue's dog, Comrade? That beautiful black-and-white collie?" asked Joan. "When they would start driving down a certain road, Comrade would have a special funny little bark. He would keep barking all the time. It was more than two miles to the river, but he knew when they started down that road that he was to have a swim in the river.

"He would keep getting more excited all the time, the closer they got to the river. You could hardly keep him in the car the last few rods. How he did enjoy those swims on a hot summer day! He would wear himself out chasing sticks thrown into the river, if they did not stop him and bring him home. Most animals seem to like that kind of bath.

"We saw several pictures of cows and horses in water. It seems that tropical animals especially enjoy bathing and standing in rivers.

"I want to tell you about one of the

other animals we saw," continued Joan. "It was a raccoon. He was an interesting little animal with bright beady eyes. He looked really intelligent.

"Do you know, Mother, Tony Raccoon will not eat anything you give him unless he can first wash it. If he has no other water, he uses his drinking water. We watched him take one article of food after another and wash it. He was so cute.

"Miss Russell said that should teach us to wash our hands before we touch anything to eat. We would not be nearly so likely to take colds and other diseases if we were always careful to touch no food unless we had just washed our hands."

"She suggested we wash all our fruit carefully before eating it," said John. "We do not always know who has handled it, especially as we take it from a store."

"That is right," said mother; and she added, "another good idea is this: always wash the top of a milk bottle before pouring out milk. Many dairies now have paper caps over the tops of milk bottles. They are for protection so that cats cannot come along and lick up any drop of milk that has oozed up. The tops can get dusty even in a kitchen if the paper 'extra caps' are not returned to place."

"One time," continued mother, "when I was at a California beach, we tried to feed some dry bread to the sea gulls. Those gulls invariably took the morsel of tough bread down to the ocean, and as they skimmed along on the waves they would dip it in the water. In a short time it would become moist, and then they would eat it. I am sure they did not do it to cleanse the bread, but they showed they knew how to soften the bread."

"Pigeons are exceptionally clean. They enjoy bathing and keep themselves immaculate and their feathers well preened. They are also particular about what they eat. A pigeon will starve before it will eat moldy grain or garbage. They want only the very best wheat and corn. Sometimes they will eat a little rye or barley, but they like wheat and corn better. If the grain has weed seeds in it, they will pick out the good grain and leave the weed seeds."

"Bedtime!" announced mother.

"Thanks for the stories," said Joan. "I

believe I like animal stories almost best of all."

"So do I," said John, throwing kisses to mother, as they started up the stairs.

Suggestions to Teachers

1. Find pictures of different animals taking baths, for example, kittens, rabbits, dogs, elephants, cows, and horses in rivers, tropical animals in rivers.

2. Emphasize washing hands before eating meals at school and at home.

3. Plan the best and quickest way to wash before meals in your particular school. Let the children help plan.

4. Demonstrate how to clean different fruits and vegetables.

5. Bring some fruits from a store, wash them, and examine the water.

6. Suggest that the person who prepares food should wear a mask if she has a cold, so that the germs will not get onto the food.

7. Stress not sharing lollipops, apples, ice cream, or other tidbits unless properly divided.

+ + +

Is There Relief for High Blood Pressure?

(Continued from page 7)

Dr. Arthur M. Fishberg reported a case of high blood pressure caused by the presence of a clot in the main kidney artery.

Within the past few months several cases have been reported in which high blood pressure apparently resulted from a slightly twisted kidney, a condition which caused an obstruction of the blood flow to the kidney. When the twist was corrected by surgical means or by remedial corsets, the blood pressure came down to more nearly normal levels.

Since scientists can now produce experimentally in animals high blood pressure that corresponds to human high blood pressure, doctors now have at their disposal a fairly reliable method of testing various drugs and medicines commonly employed in the treatment of this disease.

Up to the present time various sedatives, nitrites, and other chemicals have been subjected to experimental investigation. Other popular remedies, such as extracts of garlic, mistletoe, and watermelon seeds, have also been studied critically. The diet has been altered experimentally in animals in order to find out what relationship, if any, diet has to high blood pressure. Even some kidney extracts have been used experimentally in a few carefully selected human cases.

As yet there is no reliable kidney extract that is entirely free from danger; however, work with some enzymes has been fairly encouraging in some instances, and further progress is expected.

Scientists hope that a substance or substances will be available before too long that will control high blood pressure in a way similar to the control of diabetes by insulin. Since blood pressure in human beings is probably influenced by many factors, such as heredity, constitution, and emotional status, too much optimism about the discovery of a universally successful medicine or treatment is still impossible.



By Edyth Terrill James, R. N., M. S.

This material is prepared as an adjunct in high-school, college, and nurses' training classes in Health Education, Anatomy, Physiology, Hygiene, General Science, etc. The page reference at the end of each question, or group of questions, indicates the page on which the article that contains the answer begins.

Do We Need Meat for Good Health?

(Continued from page 9)

dietary, an adult will secure sufficient protein of high quality from two glasses of cow's milk, buttermilk, or soybean milk, one egg, a serving of almonds or soybeans or nutmeat or cottage cheese, along with the whole-grain bread, breakfast cereal, and vegetables ordinarily included in the average diet.

A quart of milk or its full equivalent, with whole-grain cereals and the liberal use of vegetables and legumes, will meet the requirements of the growing child.

The following approximate protein values in household measurements of protein-rich foods will be helpful in making provision for the day's ration.

Protein Content in Average Servings of Foods

		Grams
Soybeans, cooked	1 cup	26
Cottage cheese	1/2 "	15
Lima beans, cooked	1 "	12
Nutmeat	2 ounces	11
Navy beans, cooked	1 cup	10
Milk	1 glass	7
Buttermilk	1 "	7
Peas, fresh	3/4 cup	7
Eggs	1 "	6
Peanuts	15 nuts	6
Almonds	10 "	3
Walnuts	10 "	5
Whole-wheat bread	1 slice	2
Potato	1 (small)	1
Oatmeal, cooked	3/4 cup	4

The conservation of food is desirable at all times, but is imperative just now. It is thus a patriotic duty to become well informed in all matters that make for health and efficiency, of which correct diet is the keystone. The thorough study of the problem of proper food for the individual and for the family will remove all fear and disappointment about meals without meat and will enable one to prepare Victory meals that are appetizing, satisfying, economical, and healthful.

ARE YOU MOVING?

You should notify us in advance of any change of address, as the post office will not forward your papers to you even if you leave a forwarding address. Your compliance in this matter will save delay and expense.

Objective Type Quiz

Check the best answers:

- Experimenting with the circulation of blood in the kidneys has revealed that—
— kidney disease is produced by high blood pressure.
— high blood pressure is influenced by the individual's emotional status.
— many cases of high blood pressure can be cured by improving the circulation of blood through the kidneys.
— high blood pressure cannot be experimentally produced in animals. (P. 6.)
- Of the three major classes of energy-producing foods, protein is most important because it is—
— the most suitable source of heat.
— the chief source of energy for body activity.
— an essential constituent of every cell in the body.
— usually associated with starches in natural foods.
— that factor which enters largely into the composition of flesh foods. (P. 8.)
- Check those of the following foods which furnish complete proteins:
— almonds — milk — corn
— navy beans — carrots — soybeans
— cottage cheese — spinach — peanuts
— potatoes — wheat — beef (P. 8.)
- An excess of protein in the diet is undesirable because—
— it overworks and wears out the kidneys.
— it produces irreparable growth defects.
— it causes one to lack energy and feel weak.
— it lessens the efficient working of the mind.
— it increases the amount of heat produced in the body. (P. 8.)
- The best way to relieve insomnia, weakness, and nervousness is to—
— use either stimulating or sleep-producing drugs.
— live hygienically.
— seek the aid of a physician in determining the cause.
— take neutral baths.
— use cold, stimulating treatments. (P. 10.)
- The use of such body-injuring drugs as are found in the following beverages is spoken of as a pleasant vice:
— alcohol — limeade — hot chocolate
— cocoa — root beer — cola drinks
— coffee — ginger ale — cherry smash
— tea (P. 12.)
- Alcohol may affect the body in the following ways:
— lower the moral tone
— stimulate the body cells
— depress the vital functions
— lessen the stability and vitality of reproductive cells
— hasten degenerative processes (P. 12.)
- Check the diseases listed below that can be results of the tobacco habit:
— ulcer of the stomach — rheumatism
— Bright's disease — diabetes
— spasm of tiny blood vessels — indigestion
— arteriosclerosis — tuberculosis
— coronary heart disease — gastritis (P. 12.)
- The best way to relieve constipation in a child is by—
— five minutes of abdominal massage night and morning.
— the use of a soap stick or glycerin suppository.
— an enema of plain warm water.
— an enema of warm olive oil.
— regulation of diet and habits.
— frequent doses of castor oil. (P. 14.)

Discussion

- Experimenting with the circulation of blood through the kidneys has revealed what information of value to the high blood pressure victim? (P. 6.)
- Explain the difference between complete and inadequate proteins. (P. 8.)
- Why should the protein intake of a child receive very careful consideration? (P. 8.)
- Why is a water-treatment tonic preferable to a drug tonic for the nervously fatigued? (P. 10.)
- Explain how caffeine releases energy which it cannot rebuild. (P. 12.)

- What goes to make up a margin of safety for the body? Why is there such a margin? How is it decreased? (P. 12.)
- List the direct causes of constipation among children. (P. 14.)
- What constitutes good care of the teeth? (P. 17.)
- What caused the development of sleeplessness in the individual described on page 19?

Projects and Problems

- List animal experiments performed to improve the health of individuals. Why are animals used? Why not use individuals? (P. 6.)
- Keep a record of the various foods that you eat for one week. Look up the protein composition of each food. Determine which represent complete proteins and which do not. Approximate the number of grams of protein eaten daily. Were both complete and incomplete taken each day? Hand in a full report on this activity. (P. 8.)
- Plan a miniature demonstration of the making, preparing, and administering of a fomentation to the back. (P. 10.)
- "The basis of intemperance is to secure through drugs the feeling of happiness when happiness does not exist." Explain this statement. Apply it to the use of alcohol. (P. 12.)
- A one-year-old child is constipated. Plan a diet for it which should relieve the condition. (P. 14.)
- A four-year-old child. His diet is largely milk and ready-cooked cereals. Suggest changes in diet and habits that should relieve the situation. (P. 14.)
- Make a list of the items which made Doctor Jones think that his clients were not good patients. What are the characteristics of the one good patient? (P. 17.)
- Make a list of the personality defects of the man who had difficulty in sleeping. How can you live so as to prevent the development of such defects? (P. 19.)

True-False Questions

Circle the T, if true; the F, if false.

- A kidney extract has been isolated which will lower blood pressure. (P. 6.) T F
- High blood pressure is often caused by faulty circulation of blood through the kidneys. (P. 6.) T F
- Flesh foods represent adequate complete proteins. (P. 8.) T F
- Lentils and beans furnish adequate proteins for vegetarians. (P. 8.) T F
- Mutton and beef represent the most wholesome source of complete proteins. (P. 8.) T F
- Excess proteins are stored as an important reserve source of energy. (P. 8.) T F
- One half the total food eaten should be in the form of protein. (P. 8.) T F
- More than 10 per cent of a child's diet should be composed of protein. (P. 8.) T F
- It is a patriotic duty to know what to eat and to eat it. (P. 8.) T F
- Proteins are simple substances easily analyzed in a laboratory. (P. 8.) T F
- Substances as universally used as coffee are not harmful to the body. (P. 12.) T F
- Tobacco is a greater physical hazard to health than alcohol. (P. 12.) T F
- Alcohol is a narcotic. (P. 12.) T F
- Peristaltic movements of the intestines are more active in children than in adults. (P. 14.) T F
- Constipation is a rare condition among infants and little children. (P. 14.) T F
- Old-fashioned castor oil is the best remedy for constipation. (P. 14.) T F
- Cold feet frequently produce sleeplessness. (P. 19.) T F
- The easiest way to relieve sleeplessness is to cultivate good health habits. (P. 19.) T F

Vocabulary

- biologic
- amino acid
- optimal
- unaninimity
- specific
- dynamic
- physiological
- spasm
- degenerative
- peristalsis
- theory
- role
- renin
- enzyme
- enigma
- narcotic
- filtration
- potent
- gastritis
- secretion
- delusion
- contention
- prehypertension



By Merwin R. Thurber

ONE of the country's largest and most popular growers of garden seeds this year has changed the order of presentation in his annual catalogue. Heretofore flowers appeared first in its pages, with vegetables last. This year vegetables are first. The significance is not lost upon the customers. With canned goods for civilian consumption sharply curtailed, home-grown and home-canned fruits and vegetables assume sudden importance.

Last year the Government suggested that the average city dweller would do better not to dig up the front lawn in order to plant a vegetable garden. That is still sound advice. But everybody who can should raise vegetables for home consumption. If you can raise flowers, you can raise vegetables—and in the same places, too.

Well, let's plan a vegetable garden. First, the staples. Since mashed potatoes are the national dish, the garden tubers should perhaps head the list. To strictly flower gardeners and to the uninitiated we may say that potatoes come in two classifications, early and late—not including sweet potatoes, which of course are not potatoes anyway. Early potatoes are for summer use, and late potatoes are the main crop for winter storage. If you have room in your garden and proper storage space in your basement, a good potato crop this summer will go a long way toward keeping starvation from the family, and it will help considerably in the matter of national transportation. The potato, like the other root crops (so called), needs a deep loam, preferably on the sandy side. This is so that the young potatoes do not have to push aside rocks and heavy lumps of clay in order to find growing room.

Tomatoes are next. Perhaps they should be first. For one thing, they are not quite so particular as to soil, and they provide much of the protective food elements so widely discussed today. By the way, our ancestors just ate the foods and got the food elements without discussing them. In order to be available during the nonproductive winter months, tomatoes must be canned. Fortunately they do not require sugar—just salt. And there you have one of the most useful foods in the family storage cellar.

From the garden viewpoint, I'd put beans next. What a variety we have to choose from—string beans, bush beans, pole beans, Lima beans, soybeans. They grow well everywhere in the United States,

some kinds doing better in some localities or climates and others doing better elsewhere. Limas have always been favorites—partly, perhaps, because good pole Limas produce enormous beans and bountiful crops. Pole beans have the advantage of good results on a small area and are popular with the home gardeners.

This would be a good year for many new gardeners to become acquainted with soybeans. They are not difficult to grow, and they are an agreeable change from the beans which have been standard in our diet for years. By the way, soybeans are one of the few foods which contain a complete protein—complete in that it has all the elements necessary to make body tissue.

While we are on the subject of legumes, we must not forget peas. Up North, that means early garden peas. And fortunate is the community that can grow them. Down South, that means black-eyed peas—cow peas to you. But just because certain varieties of black-eyed peas make good hay when grown as a field crop, that is no reason for scorning a perfectly good garden vegetable as human food. Black-eyed peas have the advantage of growing where many other crops won't.

If you live in a cooler climate, you are sure to include cabbage as one of your staples. Cabbage can be stored to provide a succulent raw vegetable for winter use. Our fathers depended more on cabbage for winter use than we do now, for we can obtain more delicate winter greens. We may go back to the lowly cabbage—and like it.

Corn—sweet corn—has always been one of America's favorite staples. In the days when even city dwellers lived far enough apart so that the family garden was no luxury, sweet corn might have been listed first. Corn is so distinctively American that one might arouse a bit of nationalism in discussing it. Corn takes room in the garden. It does best when at least three rows are grown together, for corn is wind pollinated, and the stalks need to be grouped to develop the best ears. Whether we like white corn—down South—or yellow corn—up North, therefore, let's all have more corn in the garden if we have room for it.

Root crops are next. First—well, first in the spring, anyway—are radishes. First in importance, perhaps, are carrots. Grown commercially during past years, they have found a year-round market. Those of us who have been depending entirely on commercial growers will be surprised to learn how hard it is to have some vegetables at all seasons when we grow them ourselves. Carrots can be stored, but not so easily as some types of produce. Beets, which are easily grown in most localities, deserve a place in the garden. Onions, not exactly a root crop, will be popular in many gardens.

Lettuce stands by itself—in popularity and in many other ways. Lettuce prefers

cool weather. The grower can choose between butterhead, crisp head, and leaf varieties. The home grower will like butterhead varieties for their fine leaves even when they do not head.

If—a big IF—you have room and the right kind of soil and the right kind of neighborhood (not too many small boys), you may allow yourself the luxury of melons. But melons are a luxury, especially in these days of food shortages. A good many bushels of potatoes could grow in a melon patch.

The editor of LIFE AND HEALTH likes some hint on health in this garden column. The hint this month is so obvious it hardly needs to be expressed, but here it is: *Eat the vegetables.*



By William G. Wirth, Ph. D.

DURING the past few weeks I have been scurrying around to various food markets to see whether I could get some butter. When I persuaded—I was going to say charmed—some storekeeper to sell me a precious quarter-pound stick, a sense of smug satisfaction took hold of me. I felt I was rich and possessed with goods. I even had the same experience, to a lesser degree, with eggs, though I am finding them more plentiful now.

Yes, we all have come to know what rationing means, what it is to do without certain foods that at one time we never gave thought to, because they were so common and easy to be obtained. What a lesson all this should have for us! We have exploited the resources of earth, in agriculture, in industry, in mining, and in numerous other ways, so that our civilization has become the richest the world has seen; yet here we are often doing without the common necessities of life.

What's wrong? Is it that these resources have given out, that Mother Earth has decided to stage a "sit-down strike," refusing to give her children their physical needs? To suggest that is to be ridiculous; for as we have just stated, she has yielded more than ever before. The wrong lies within ourselves, morally, spiritually, in that our selfish and sinful characters have produced greed, hatred, war, with the result that bounty has surrendered to destruction and production cannot keep pace with the demands of a Gargantuan international struggle.

The very purpose of our civilized effort has been to make a world in which there would be plenty of food for all; but lo, we are facing rationing, with mil-

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Just enclose your check, money order, or two one-dollar bills in an envelope and tell us to ship this special offer.

If you, like a great many adults, are constipated, then what you probably need is the addition of soft, emollient bulkage in your diet. Many have found E-Z-LAX the answer to this irritating problem of constipation. If you are like many persons who have become dependent for relief on harsh laxatives, stop at once and begin immediately helping yourself the E-Z-LAX way.

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You are invited to write for descriptive booklet "A"
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Overlooking Beautiful Spot Pond, the Sanitarium Is Eight Miles From Boston

Forty-three Years of Health Building



Throughout the United States, and in many other countries, is found a distinctive chain of medical institutions known as Sanitariums. To the many thousands who have been guests in these unique health institutions, the name Sanitarium describes not merely a hospital, though the best of medical care is given; nor does it describe simply a rest home, though many come primarily for rest. Rather, it denotes a unique combination of both. The word Sanitarium also carries with it the idea of health education and disease prevention, for those who come to these health centers receive instruction in the principles of healthful living.

In addition to the Sanitariums whose announcements appear here, the following belong to this distinctive chain of health institutions:

Boulder-Colorado Sanitarium, Boulder, Colorado
Florida Sanitarium, Orlando, Florida
Glendale Sanitarium, Glendale, California
Iowa Sanitarium, Nevada, Iowa
Loma Linda Sanitarium, Loma Linda, California
Madison Rural Sanitarium, Madison College, Tennessee
Mount Vernon Sanitarium, Mount Vernon, Ohio
Paradise Valley Sanitarium, National City, California
Pisgah Sanitarium, Box 1331, Asheville, North Carolina
Porter Sanitarium, 2525 S. Downing Street, Denver, Colorado
Portland Sanitarium, 932 S. E. 60th Avenue, Portland, Oregon
Resthaven Sanitarium, Sidney, British Columbia, Canada
St. Helena Sanitarium, Sanitarium, California
Walla Walla Sanitarium, Walla Walla, Washington
White Memorial Hospital, 312 N. Boyle Avenue, Los Angeles California

lions in different parts of the world starving, or on the verge of starvation, because of our human waywardness and wickedness. This is not owing to our lack of capability, but to our lack of character. It may be that through bitter suffering we shall all learn the profound truthfulness of the Saviour's words, "Seek ye first the kingdom of God, and His righteousness; and all these things shall be added unto you." Matt. 6:33.

Our arithmetic has been wrong. We have calculated that by our absorption in the material and secular, "all these things" would be "added" unto us. We are learning that selfishness is the way of subtraction, not addition. In our greed after "these things" that minister to our physical and mental well-being we have deceived ourselves into putting concerns that are purely secondary in the real values of life in the place of that which is "first"—character, righteousness, that which builds up to man's being created in "the image of God."

When shall we have the good sense to listen to this advice of the Master of men: "Take heed, and beware of covetousness; for a man's life consisteth not in the abundance of the things which he possesseth." Luke 12:15. Rationing in the bosom of abundance, severe limitation and doing without in a time when we never

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The Hinsdale Sanitarium provides for those who are tired or worn out physically, an atmosphere conducive to the rebuilding of health. Thoroughly equipped diagnostic facilities, including laboratory, X-ray, etc., for making special examinations. Physiotherapy in its various forms: hydrotherapy, massage, mechanotherapy, etc. Nourishing diet, scientifically prescribed by a graduate dietitian, as indicated by laboratory tests. A modern health institution, beautifully located amid fifteen acres of beautifully shaded lawns. Quiet rest assisted by nature's remedies. Chronic invalids welcome.

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NESTLED amidst one hundred and forty-five acres of virgin forest, and only eight miles from the heart of Atlanta.

A homelike institution equipped to care for medical, obstetrical, and minor surgical cases. Resident physician and surgeon in charge.

An elevation of from 925 to 1,000 feet above sea level makes for an equable temperature throughout the year.

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had such production and exploitation of natural resources!

Do not blame the Government. Our leaders in State and nation are doing their best, and they deserve our co-operation as loyal, patriotic citizens. They are trying to help us out of difficulties that we ourselves have produced. We may dislike to admit an individual responsibility like that expressed by the prophet Isaiah, but it is true—"Woe is me! for I am undone; because I am a man of unclean lips, and I dwell in the midst of a people of unclean lips." Isaiah 6:5.



Don't Wait Too Long Before You Visit Your Dentist

(Continued from page 17)

Doctor Jones was frank with him. He told him that the bony understructures were literally eaten away by pyorrhea in the first place, and that he waited so long for his first impression that what little gum tissue he had left was so shrunk that his mouth was nearly "flat." Then, too, he gave the other dentists little if any co-operation, making little attempt to wear the first two sets of dentures. If Mr. Jacobs gets 25 per cent service from the ones he now asks to be made, he'll be lucky.

Good, co-operative patient? I'm afraid not.

Just at twelve a woman rushes in to see whether Doctor Jones, who had had a bad night and not the most pleasant forenoon, would fill a few teeth for her even though she had no appointment. She was due at a golf meet at one and had just an hour. The assistant says that it is Doctor Jones' lunch hour, and asks if she can't come at some other time. "Oh, does Doctor Jones take time to eat at noon?" the woman asks.

Doctor Jones does! He has a sandwich and a glass of milk sent up; then he manages a few winks of sleep in the back room until Bobby Green comes at one-thirty.

Bobby is twelve, and his mother thinks it time for him to have his teeth looked at. They have never bothered him much, except that when he was about eight he kept his parents awake two nights with a toothache; but since he was afraid to come to the dentist, they put some drops in the tooth, and it got all right. Doctor Jones' examination reveals that two of Bobby's six-year molars will have to be extracted, and large fillings must be placed in three teeth, one of which he may still lose. His teeth are badly stained, and the enamel on the anterior ones is etched through the acid reaction of the green stain present. Doubtless he'll develop more cavities in a few years. A check with his mother about his diet reveals more interest in candy and pop than in vegetables and milk.

Is it Bobby's fault that he isn't the

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The Best of Hospital Service Combined With Special Sanitarium Features

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For Sandwiches—

Patties—Roasts

3 one-lb. cans for \$1.00
postpaid (or 2 cans and
1 lb. Superior Wheat
Germ) \$1.30 west of
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Free with order: Alka-
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VIVI-Ta Wheat Germ
Sucker. Dealers write.

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VIVI-Ta
"HEALTH
Full"
FOODS

Superior 99% Pure WHEAT GERM

Natural Source of Vitamins B and E. Adequate
Vit. B-1 is necessary for Normal Nerves, Digestion,
and Energy. 3 lbs. \$1 (west of Miss. \$1.30).
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Wheat Germ Sucker. Dealers Write

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480 E. Main St., Rochester, N. Y.

Recipe for Long Life

WORRY less and work more,
Ride less and walk more,
Frown less and smile more,
Preach less and practice more.

—Wisconsin Health Bulletin.

"MAN shall not live by bread alone."

good patient? Children should visit the dentist twice yearly, too, from the time the first set of teeth is in place at approximately two and one-half years. Bobby is just ten years late for his first appointment!

After a rather depressing half hour with Bobby, who has another appointment next week, Miss Lester comes in.

"Hello, Doctor, here I am again! The months do fly, but the time I spend here with you I don't regret. My fiancé says he's marrying me for my teeth!"

"Well, congratulations to the lucky fellow!" beams Doctor Jones. "Now let's see. M-m-m-m, good! Only one tiny cavity, which won't hurt you nor your purse, and a prophylaxis. It's good for a change to see a mouth that's given good attention!"

Doctor Jones even hums a tune as he works. Miss Lester is a patient above price!

Mr. Martin is next. He lost several teeth through neglect. His bridge is difficult to make because the remaining teeth have drifted out of alignment, for he waited five years after the extractions before having the bridge made. His doctor urged it because his impaired mastication was causing a stomach ailment.

By four-thirty Doctor Jones is a very tired man. He hopes that some of his lectures on diet and periodic dental check-ups have had some effect. Then he recalls Miss Lester's visit, and he feels that at least some of his patients are striving to be good patients, not for his sake, but because they realize that only by their full co-operation can they achieve good health in a painless way.

Common Habits That Cut Down Your Safety

(Continued from page 13)

birth is bigger than it needs to be for the work assigned to it. The filtration carried on by the kidneys can be done easily by about two thirds of one kidney. The liver is oversize, and we can get along very well with somewhat less than one lung.

This provision is for a purpose. It is meant to allow for the wearing-out processes that are the inevitable accompaniment of the passing years. The better made you are, the more hard work and wanton abuse you can absorb. If you have had second-grade tissue passed on to you by an overworked mother or a hard-drinking grandfather, you may find yourself with a big family and wretched health at forty. There is normally a certain tissue reserve for the usual wear and tear of ordinary living throughout the anticipated span of life. It is expected that we must and will burn out a certain amount of liver, pancreas, and adrenals in ordinary living. But how much do we

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ALL OUR PRODUCTS ARE CORRECTLY
ENGINEERED AND PRICED AS LOW AS
QUALITY ALLOWS

have beyond that requirement for reckless living that will take a toll in excess of that which nature has provided? And who knows how much nature has provided—the state of the germ cells that started you on your way?

The margin of safety is an unknown quantity. At least we know it decreases with every passing year, even with the greatest care of our bodies. Add to this expected shrinking of your life expectancy, damage that must come from bad personal hygiene, and you are certain to cut into your heritage of healthy years. Tobacco, condiments, caffeine, and alcohol may not initiate degenerative disease according to the arguments of some; but who can deny that they hasten degenerative processes—cut down that margin of safety?

YET this is health: To have a body functioning so perfectly that when its few simple needs are met it never calls attention to its own existence. . . . If the machine is going to work over a long period of time at maximum efficiency, it must receive intelligent care.—Bertha Stuart Dymont.

Wake up America!

ZOY-KOFF FOR BREAKFAST



FOR—
Steady Nerves
Good Digestion
Satisfying Flavor

Who said it was a headache to get along without coffee?

Well, you never know what you have missed until you try Zoy-Koff. It's easy to make, easy to buy, for you need **NO COUPONS** for Zoy-Koff, and they're all saying it wins top place for flavor.

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Available at health-food stores and specialty groceries. If not obtainable locally, write Madison Foods.

Prepare Zoy-Koff
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● Your life may seem brown and dry and drab! You are worth a checkup to determine what promise you hold. A scientific study of your health, with rest, medicine, and tonic treatments, will fit you to respond radiantly to the task of life. Not only will you appear at your best, but you will cheer the pathway of your fellow men.



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tagious Cases Not Accepted

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