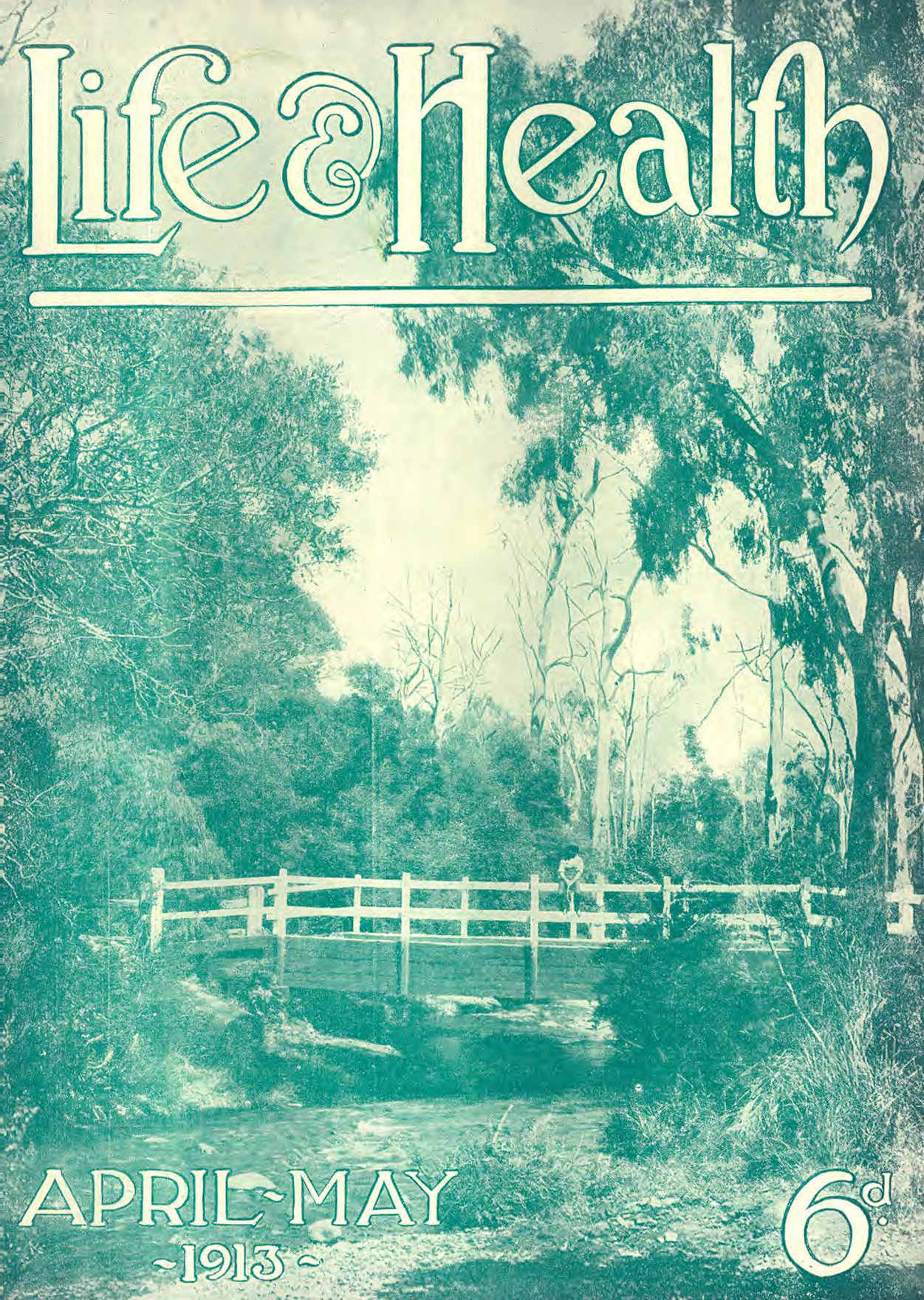
Life & Health



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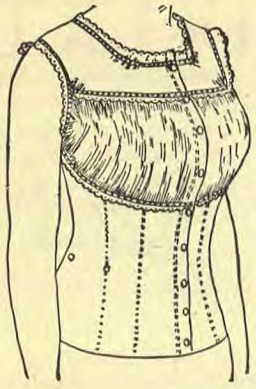

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MILFORD SOUND, NEW ZEALAND

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Vol. 3 April-May, 1913 No. 2

Diabetes

BY W. HOWARD JAMES, M.B., B.S.

OUR food when digested and assimilated is either built up into the tissues, or by oxygenation converted into heat and the various energies of the body. Recent experiments and observations have clearly shown that the wear and tear of the body is very small, and thus by far the greatest part of our food is utilised for the production of heat, muscular, digestive, nerve, and other energies. In growing children a larger proportion of the food is converted into tissue than in the adult. As the essential part of the tissues of the body are all nitrogenous, it follows that nitrogenous food is necessary for repair of wear and tear and for growth.

All classes of foods, the proteids, carbohydrates and fats, can be utilised for the production of the necessary heat and the energies of the system, but the most economical foods in these respects are the carbohydrates and fats. The proteids, the nitrogenous elements of our food, are not so completely oxidised (burnt up) as the other two forms of food. They are like fuel in a fire that leaves a great residue of ashes, and these physiological ashes do a great amount of harm if not excreted from the system. The food of the adult, therefore, should be chiefly made up of the other two classes of foods, the carbohydrates (sugars and starches) and fats. These foods are burnt up readily in the system, and the waste products are quickly got rid of. This burning up of our food maintains our life; the assimilated food is stored up in the various tissues for the production of energies, and is oxidised whenever energy is required. Muscular action, secretion of various digestive and other fluids, and every mental phenomena, depend for their motor power entirely on this production of energy.

Fully one-half, and probably two-thirds, of the average dietary consists of sugars and starches, and, consequently, if these have to be eliminated from our dietary the loss is keenly felt. This is the case with the diabetic, for his tissues have to a greater or less extent lost the power of burning up the starches and sugars of the food. They are digested in the alimentary canal as usual, passed through the liver and other organs, and are circulated in the blood, but the tissues will not assimilate them and utilise them for energy. Consequently in the diabetic all the cir-

culating fluids of the body contain a great excess of sugar, and this sugar is continually being excreted by the kidneys. The sufferer consequently experiences great thirst, dryness of skin, and many other troublesome symptoms. There is often a voracious appetite, especially in the early stages, due, undoubtedly, to the fact that the tissues are not satisfied, for they are not incorporating into their minute meshes the food supplied.

The diabetic is consequently forced to largely eliminate from his foods all sugars and foods which by digestion are converted into sugar, and these include such important foods as bread, potatoes, rice, sago, tapioca, macaroni, vermicelli, carrots, parsnips, beetroot, peas, Spanish onions, pastry, and puddings of all kinds, and sweet fruits (fresh or preserved), and also milk. There is quite a diversity of opinion as to the place which milk should supply in the dietary of diabetics. The real question is whether or not milk-sugar is capable of assimilation by diabetics. Donkin in his work "On the Relation between Diabetes and Food" recommends a purely skim milk diet in diabetes, and has recorded some excellent results from that plan of treatment. If, however, cream or butter or any nitrogenous food is taken at the same time, one does not get these effects. The maximum quantity allowed was twelve pints a day, and Donkin insists that the milk should be fresh, not boiled. There is a pretty general agreement, however, that the addition of milk to an ordinary dietary in diabetes causes a considerable increase in the amount of sugar excreted. An exclusive skim milk diet may be tried for a time, but it becomes very monotonous. The physician, however, is not guided altogether by the amount of sugar in the urine, often the patient feels better and weight rises when milk is allowed, and under these circumstances it is a desirable addition to the diet. There are several ways, however, of removing the sugar from milk, and then milk can be freely used. Dr. Robert Hutchison gives a method for removing the milk sugar. The directions are complex, and can only be carried out under the supervision of a reliable chemist, but as the results are so invaluable we will give them:—

Sugar-Free Milk for Diabetic Feeding

Take 1 litre (1¾ pints) of skim milk, heat to the temperature of 38 deg. C (100 deg. F.), and add 10 cc (⅓ oz. about) of glacial acetic acid, diluted with 100 cc of water. Mix, and allow the mixture to stand for about fifteen minutes. Collect the separated casein, and let it drain on very fine muslin, using no pressure.

Remove the casein to a mortar, rub into a smooth paste, add ½ litre of distilled water, and strain as before. Repeat this washing of the casein twice. Transfer to a mortar, rub until quite smooth, and add 2.5 grammes (38 grains) of potassium hydrate dissolved in 100 cc of water (or as much of the potassium hydrate as is necessary to make the product just alkaline to phenolphthalein).

Add 100 grammes (3 oz.) of ordinary Devonshire clotted cream, 5 grammes of gelatine previously dissolved, 1 grain of saccharin, and water, at about 38 deg. C up to 1 litre. Lastly strain through fine muslin.

Dr. Hutchison states that in some cases as much as five pints of this sugar-free milk have been taken in one day without any appreciable effect in increasing the output of sugar, and that "the use of such a milk will be found to be a very great aid in feeding diabetics, especially when they are unable to take much meat."

We are frequently asked for a dietary for diabetes, but, unfortunately, a general dietary cannot be given, every case requiring special treatment. One important item is to find how much of the carbohydrates can be given without materially increasing the amount of sugar in the urine, or injuring the general health of the patient. The best starchy foods are, undoubtedly, bread and potatoes. The granose biscuit is a good form of bread, as it contains all the ingredients of the wheat, and is consequently more nutritious. It should be remembered that potatoes contain only about one-third as much starch as bread, and, consequently, may be given more freely than the latter. If two ounces of bread can be taken daily without inconvenience, six ounces of cooked potatoes may be allowed instead, if the patient prefers it. In every case the diet of the diabetic has to be governed by the amount of sugar excreted and the state of the general health.

The general diet must consist chiefly of proteids (nitrogenous foods) and fat. Fat is a compact source of energy, and yields for a given weight two and a quarter times as many calories as proteid. Proteid is more bulky, and unlike fat it certainly does produce sugar. The best sources of fat are butter or margarine, olive oil, eggs, cheese, and thick cream. Butter (sterilised) should be largely used, four to six ounces or more can often be taken in the day. As the diet of the diabetic is so restricted, we do not think it advisable to exclude altogether the flesh foods; the best forms, and those most free from uric acid and other poisons, are fish and poultry. Much harm, however, has been done by the free use of flesh foods in diabetes, as they frequently result in kidney, liver, and other troubles, and undoubtedly hasten the diabetic coma which so frequently terminates the life of the patient. It should also be remembered that oysters, liver, and sausages, may all contain some carbohydrate, and that all proteids break up to some extent into sugar.

There are many substitutes for ordinary bread on the market. They are very expensive, extremely unpalatable, and the patients quickly tire of them. Perhaps the most serious objection to them is that they (mostly) are composed of wholly non-nutritive matter. Nuts form an excellent food, as they are practically devoid of carbohydrates, and are rich in proteid and fat. Green vegetables contain so little carbohydrates that they may be allowed in every case, and where bread or potato cannot be used they form an excellent vehicle for giving fat. They in this case should be freed from as much water as possible, and then freely mashed with sterilised butter.

The best form of sugar for the diabetic is undoubtedly that found in fruit (lævulose). Sweet fruits must certainly be avoided. Early sour oranges contain only two to three per cent of carbohydrate altogether, of which lævulose is the chief, and even sweet oranges have not more than five to seven per cent. Strawberries, gooseberries, apricots, and melons contain but little sugar, and may be taken in moderation.

The treatment of the diabetic should not be wholly dietetic. The non-oxidation of food, we have seen, is a great defect, and consequently more oxygen is required than in ordinary health. Gentle exercise in the open air and well-ventilated bedrooms are essential. As the blood is loaded with impurities due to the greater amount of the nitrogenous elements in the food, the excretory organs, the skin and the kidneys, must be kept in a healthy condition. Various hydropathic measures, those causing slight perspiration, are helpful as long as they do not debilitate. The great thirst is best relieved by pure water, not taken in large draughts, but in small quantities at frequent intervals. Pure water helps the action of the kidneys better than any drug.

Cancer: What Is the Cause?

Testimony Against Use of Flesh Foods

By P. M. Keller, M.D.

RECENTLY in my own practice I have often been impressed with the rapid increase of cancer cases coming under observation. In New Zealand in 1910 in every thirteen deaths one death was due to cancer; in five years' time in Auckland alone the number of deaths from this cause was doubled. The majority of people little realise that within the last ten years cancer has become the most menacing disease on record—that of those who live to thirty-five years, one in every eight women, and one in every eleven men, die of cancer. For the age between fifty and sixty cancer is surpassed by no other disease as a cause of death in women.

That this is a real and not an apparent increase, uniform over the whole world, recorded during a long succession of years, and entirely out of proportion to the increase in population, improved methods of diagnosis, or improved conditions of hygiene allowing more young

persons to live to the "cancer age," is effectually proved by vital statistics and insurance records in practically every civilised country.

The census reports of Great Britain show that, while population in that country doubled between 1850 and 1905, cancer mortality increased six times. The records for one century of the little town of Fellingsbro in Sweden, compiled by Eckblom, show that in that locality cancer mortality has multiplied fifty-nine times since 1800.

In the United States, the mortality rate from the disease has risen steadily, systematically, continuously—

1850	...	...	9	per 100,000
1880	....	...	36.1	,,
1890	...	...	49.1	,,
1900	...	...	60.0	,,
1907	...	...	73.1	,,
1908	...	...	74.3	,,
1909	...	...	77.0	,,

There were seventy-five thousand registered deaths from cancer in 1909, representing, it is said, but two-thirds of the actual number of deaths,—many having been assigned to secondary causes to save the feelings of the victims' families,—and indicating the existence of three times as many more still surviving cases.

The medical profession to-day find they must take an active interest in preventive medicine as well as curative. The patient coming to the office is always asked as to occupation, diet, and habits of life. For example, a man comes with rheumatism; in treating the case he must have the great cause removed—the uric acid forming foods. An anodyne or pain reducer might be given, but the cause remains.

The waste of human life in the United States from maladies not due to germ life has become so great that the government has taken it in hand, appointing Professor Irving Fisher of Yale University to devote his time to "the waste and conservation of life."

His report commences with the statement that over 600,000 human lives are needlessly sacrificed in the United States every year. He also states that there are always about three million persons seriously ill in the United States, one-half of these cases being preventable. It is quite evident from Professor Irving's report that each day in the United States there is a loss of life from preventable causes equivalent to the sinking of a *Titanic*.

Cancer may be classed among the causes for such a loss to the State. Dr. Robert Bell, of England, makes the following statement:—

"When we are aware that 30,000 people die of cancer every year in England and Wales, while a proportionate number also succumb to it in Scotland and Ireland, and that 25,000,000 of the inhabitants of the globe, at present, are doomed to be cut off by this terrible scourge, all of which deaths are preventable, is it not a matter for wonder that the public remain indifferent to the safety within reach of all, if only a little commonsense were exercised?

"That cancer is nature's protest against over-indulgence of the appetite and the persistent neglect of or disobedience to those hygienic laws which she has enacted, becomes more evident the longer one pursues the study of this dreadful scourge. It is imperative, therefore, that dietetics in relation to both the causation and treatment of this disease, also to its prophylaxis, receive the most unremitting attention.

"I have no hesitation whatever in asserting that cancer is a preventable disease, and I am sanguine enough to predict that before ten years are over our heads it will be as rare as it is prevalent to-day." Dr. Bell advocates abstinence from flesh foods as the remedy.

Dr. Roger Williams in the *British Medical Journal* of Sept. 20, 1902, writes as follows:—

"Of 19,529 deaths among natives in Cairo during 1891 only nineteen were returned as due to cancer,—females ten, males nine,—or one in 1,028. In England during the same year I have ascertained that the proportion of cancer deaths was one in twenty-nine.

"From these data it appears that the reputation of Egypt for comparative immunity from cancer is well founded. In Tunis, Algeria, and Morocco cancer is almost as rare among the natives as in Egypt. It is a curious fact that the lowest European cancer death-rates are to be found in just those parts of the continent that are contiguous to the North African littoral. Thus the Sardinian cancer mortality for 1889 was only 1.7 per 10,000 living, that of Calabria 2.4, and Sicily 2.8. The Corsican cancer mortality is almost equally low, and along the Spanish Mediterranean littoral cancer is very rare.

"In these parts of the world, as in Northern Africa, the conditions of existence are unfavourable to the development of cancer. If I am asked to define these conditions, it may be answered that they comprise extreme frugality in living, open-air existence, and last, but not least, an alimentation which includes *but little animal food*."

The recent death of Anna White, the head of the largest remaining family of Shakers at Mount Lebanon, New York, has led to the publication of many interesting facts concerning this peculiar people. Dr. Buckley, editor of the *Christian Advocate*, tells of a visit to the colony a few years ago, and describes the simple life of the Shakers. Says Dr. Buckley: "They will not eat meat or fish. They will not use alcohol except as medicine. They taboo tobacco. They have generally had excellent health, and lived to an advanced age, and not one of them has suffered from cancer."

Street Scene in Tangiers, Morocco

Père Debreyne, physician to La-Grand-Trappe, states that the regime of the Trappist monks, erroneously believed to be detrimental to health and longevity, is, on the contrary, most beneficial in its effects. During a period of twenty-seven years he had not, in this community, met with a single case of apoplexy, aneurism, dropsy, gout, gravel, or cancer, and this on a non-flesh diet.

Dr. J. H. Kellogg gives a similar report from the Battle Creek Sanitarium, a vege-

tarian hospital: "For more than forty years this institution has discarded flesh foods. Among the many thousands of employees who have come in contact with this hospital in the forty years, and who have adhered to the diet, cancer has occurred but rarely, if at all. Dr. Kellogg also speaks of the Doukhobors in Canada, followers of Tolstoi, who exclude flesh foods. Cancer, he says, is rarely reported as a cause of death in their number.

In an article in McClures magazine, "Paul Ehrlich, the Man and His Work," we find the following:—

A recent piece of work under his observation showed that the tumor growth in mice would be controlled by diet, whereas the tumor grew at once on mice whose diet consisted of meats and fats. It did not grow on those fed with some of the cereals, such as rice. Professor Ehrlich received the Nobel prize for medical research. It is evident that his work is taken as an authority.

From all the foregoing testimony it is quite apparent that to avoid cancer it is advisable to dispense with the use of flesh foods.

Lysol Poisoning and Treatment

By Florence Keller, M.D.

ONE day a bridge tender and two stalwart police officers fished from the murky waters of the Chicago River the body of a well-dressed man. The remains were conveyed to the morgue, were never identified, and went finally to the potter's field, or to the dissecting room of some medical college. In the pocket of the coat found on the corpse was a stained and crumpled paper upon which the following was scrawled in lead pencil:—

CAUSE UNKNOWN

I am standing on the threshold of eternity at last,
As reckless of the future as I have been of the past.
I am void of all ambition, I am dead to every hope,
The coil of life is ended, and I'm letting go the rope.
I have drifted down the stream of life, till weary, sore oppressed,
And I'm tired of the motion, and I simply want to rest.

I have tasted all the pleasures life can hold for man,
I have scanned the whole world over till there's nothing left to scan.
I have heard the finest music, I have read the rarest books,
I have drunk purest vintage, and tasted all he cooks.
I have run the scale of living, and sounded every tone,
So there's nothing to live for, and I long to be alone.

Alone and unmolested, where the vultures do not rave,
And the only refuge left me is the placid, quiet grave.
I am judge and jury mingled, and the verdict that I give
Is that minus friends and money, it is foolishness to live.
In a day or two my body will be found out on the lake,
The coroner will get a fee, the jury get a take.

The casual verdict: "Suicide for cause unknown,"
And Golgotha draws another blank, a mound without a stone.
To change the usual verdict, I will give the reason now
Before the rigid seal of death is stamped upon my brow.
'Tis the old familiar story of passion, love, and crime
Repeated through the ages since Cleopatra's time.

A woman's eyes, a siren all and all;
A modern Circe, fit to cause the strongest man to fall.
A wedded life, some blissful years, and poverty drops in
With care and doubt and liquor, from whisky down to gin.
The story told by Tolstoi in comparison with mine
Is moonlight unto sunlight, as water unto wine.

The jealous pangs I suffered, the hideous nights of woe,
I pray no other mortal may ever undergo.
But I've said enough I fancy to make the reason plain
Enough to show the cause of a shattered heart and brain.
What wonder that life holds not a single thread to bind
A wish or hope to live for, or an interest in mankind.

Already dead, but breathing,—a fact that I regret,—
A man without desire, excepting to forget.
And since there is denied me one, why should I linger here
A dead leaf from the forest of a long forgotten year?
So, "Au revoir" old cronies, if there's a meeting place beyond
I'll let you know in spirit, and I hope you will respond.

I am going, old comrades, to heaven or to hell,
I'll let you know which shortly—farewell,
A LONG FAREWELL.

Swifter than a weaver's shuttle
Pass our days in rapid flight,
Soon will come the day unnumbered
When we'll know no more of night.
There is a little time to labour,
Just a little time to pray,
Then the Master comes in beauty
And begins the endless day.

One often sees in the daily paper "Suicide." There are various causes and various means used. Too often the title "Lysol Poisoning" or "Another Lysol Poisoning." A history similar to the above has often been the cause, a misused life. Those with which I have come in contact have been the neurotic lives, unable to stand the strain of the present-day intensity, a history of nerves, nervines, and depression. City life is also a factor with its incessant clamour of human voices, vague ramblings and thunderings, the hiss of steam, the vibration of moving trams and the clanging of their danger signals, the hoot and rattle of motor cars, and partly heard clatter of horses' hoofs, late hours and loss of sleep. These all make up a being of feeling rather than thought.

In recent years over 100 cases of lysol poisoning have taken place annually in Berlin. In New York city during the year 1900, out of a total of 622 suicides due to poison no less than 292 were due to carbolic acid and its derivatives.

Lysol is a solution of cresol in soap. It is produced by mixing oil of tar with linseed oil, or with a fat, and saponifying the mixture with caustic potash and alcohol.

The principal poisonous action is accepted to be caustic, and the second action is that of a nerve poison. In one case to which I was called there was extensive ulcerative destruction in the œsophagus, stomach, and intestines. As a rule there is only a hyperæmia (intense reddening). Lysol may be regarded chiefly as a nerve and heart poison. It is not always the amount *taken*, but the amount *absorbed* into the system which decides the issue.

Treatment should be prompt. Stomach washing is the most advisable treatment. Obtain the nearest physician, and let him know the class of case to which he is called. The stomach should be washed out within two or three hours of swallowing, and as soon as possible. The stomach may be washed until there is no longer an odour of lysol, then pour in about one and a quarter pints of milk. Cresol contained in the lysol has an affinity for fats. It is better to use cream. Early in washing the stomach see that the patient is warm, and apply hot water bottle to heart. Before the doctor's arrival milk could be given, beaten up eggs, olive oil, and gruels. Fluid magnesia is also useful.

Epsom or Glauber's salts may be given in sips, in the proportion of a tablespoonful of the salt to a tumblerful of warm water.

The number of deaths produced by lysol makes the subject of its free sale worthy of the attention of lawmakers.

Prayer an Antidote for Insomnia

PROFESSOR JAMES, the great American psychologist, and probably the greatest of living psychologists, has declared unreservedly that if any medical fact can be considered to stand firm it is that prayer may often contribute to restoration to health, and should be encouraged as a therapeutic measure.

Dr. Richard C. Cabot, of the Harvard Medical School, expresses the same view, and adds that every man who prays sincerely will thereby open to himself powers which he might otherwise never be able to draw upon.

Another physician of note, Dr. Thomas Hyslop, an English psychiatrist, specifically recommends prayer as an aid to the conquest of insomnia. In an address delivered before the British Medical Association, Dr. Hyslop, speaking from the experience of many years, affirmed that he knew of nothing so well calculated as prayer to pacify the mind, and bring about the mental passivity indispensable to the return of regular, natural sleep.

By this, however, Dr. Hyslop meant true prayer—the kind of prayer that Jonathan Edwards had in mind when he wrote:—

"Resolved, never to count that a prayer, nor to let that pass as a prayer, nor that as a petition of a prayer, which is so made that I cannot hope that God will answer it."—*The Circle and Success Magazine.*

What Shall We Eat and Drink?

BY ETHEL HEYNEMANN, L.R.C.P. and S., EDIN.

THE subject of foods is a difficult one, and probably there is no greater field for faddists than in the field of dietetics. There is the "one-meal-a-day" plan, and the "two meals" and "no breakfast" plan. Then there are the various food cures—the "grape cure," "the apple cure," and somebody's cure. We drink too much water, or we don't drink enough; and the one who is being led in dietetic paths finds himself tortured by conflicting ideas, all of which are backed up by more or less sensible argument.

It is true that many erroneous ideas concerning diet have been upset, particularly that of the daily protein requirement, and thousands of individuals who have adopted the low standard have been rewarded with good results.

The majority of people eat too much meat, eggs, peas, beans, and lentils. The idea that one must have meat to gain strength is wrong, so also is the notion that large quantities of eggs, peas, beans, and lentils must be taken as substitute if meat is discarded. Many vegetarians today are using as much, if not more, protein through the use of these foods than they formerly did on a meat diet.

The question is often asked, "What shall we eat, and how can we make a choice of foods so that the daily menu is properly balanced?"

Let us see what we can have for breakfast from the usual foods available:—

Eggs boiled, or poached on toast; scrambled in tomato juice or milk.

Rice cooked in a variety of ways with or without legumes or potatoes, and served with gravy.

Cereals or other "breakfast foods" for porridge. (Granose biscuits or granola are ideal if obtainable.)

Savoury toasts (in place of eggs), such as lentil gravy toast, creamed onion toast, tomato toast, celery toast, creamed carrot toast. (See vegetarian cookery books.)

Breads, especially brown, oven toast.

Fresh fruit, or stewed fruit toast made from almost all kinds of fruits.

Butter, jam, honey, dried fruits, dates, prunes, figs, raisins.

Milk, cereal coffee.

For dinner we can choose from the following:—

Soups

Made from rice, or barley, or potatoes, or vegetables of all kinds, or tomatoes, or legumes. These contain more nourishment than the average meat stock soup. (See vegetarian cookery books for recipes.)

Savouries

Roasts made from all kinds of legumes—haricot bean, Canadian wonder bean, lima bean, split peas, minced nuts. To keep the protein element low they can be combined with rice, or potatoes, or breadcrumbs, or macaroni.

Vegetables

Potatoes may be cooked in a variety of ways. Baked in their skins they are most wholesome. By vegetarian recipes vegetables are served in endless variety, and their food value is increased by the addition of milk, flour, eggs, butter, or cream used in preparation.

Macaroni

Baked with tomatoes or legumes.

Desserts

Those commonly used. Dates or raisins make a nice combination with rice or barley pudding.

Fruits

Fresh or stewed. The housekeeper will be wise to bottle summer fruits so that a liberal supply can be on the table during the winter.

For tea we can have a choice of salads, fresh or stewed fruit, biscuits, sandwiches made of egg or tomato, or minced nuts,

or dates; bread and butter, jam or honey; fresh tomatoes.

It is not expected that an ordinary household can keep such a variety of articles on hand. The list is a suggestive one, which permits of a wide range of choice of foods which can be procured anywhere.

The next question is to select articles which will make a properly balanced daily ration for an average *healthy* man.

A few sample menus have been obtained from a home where the low protein dietary is used with the exception of one member who preferred the ordinary meat diet, which he was allowed to have. Space will not permit of making comparisons, but to the most prejudiced it could be clearly seen the advantages of the low protein regime.

Breakfast

Poached egg on toast. One slice bread.
Half cubic inch butter.
Seven stewed prunes with juice.

Dinner

Eight tablespoonfuls legume soup.
Two tablespoonfuls macaroni with tomato.
Two tablespoonfuls mashed potato with gravy.
Two tablespoonfuls creamed parsnips.
One slice brown bread. Half cubic inch butter.

Tea

Two slices bread. One cubic inch butter.
Honey or jam.
Four heaping tablespoonfuls stewed fruit.

Breakfast

Four heaping tablespoonfuls rolled oats.
Half glass milk. Seven dates.
Two slices bread. One cubic inch butter.

Dinner

Two tablespoonfuls peas purée.
Two medium baked potatoes. Two slices bread.
One cubic inch butter.
Two tablespoonfuls creamed carrots. Gravy.
Three tablespoonfuls rice with raisins.

Tea

Two medium-sized tomatoes.
Two slices brown bread. One cubic inch butter.
Four heaping tablespoonfuls stewed fruit.

Some of the members were satisfied with less than is given on the menu. At times another member would take in addition a small piece of cake, or a biscuit, or a glass of lemonade. No tea or coffee is used except home-made cereal coffee,—recipe for which will be given to any reader who desires,—which is partaken of at breakfast and tea.

Soup is not served every day. If a large soup plate, say, of split pea or other legume soup is used, then the savoury dish is omitted, and potatoes or cauliflower, or other vegetable cooked in an appetising way will suffice. A legume soup and a legume savoury is never used at the same meal.

If the savoury dish consists chiefly of starchy element, then the dessert can be milk and egg pudding, and brown bread can be used instead of white.

When legumes are left over from dinner they can be combined with potatoes or rice for patties next morning. Butter is used at each meal or sterilised cream, or olive oil if obtainable.

Tomato juice makes a nice flavouring for a variety of dishes. The pure juice cooked without water, salt, or any condiments can be bottled for winter use. (Directions will be given to those who desire same.)

Factors which cause failure in the preparation of good food:—

Insufficient Cooking. Vegetables and potatoes with "bones" in the middle. Thickenings for gravies having a starchy taste.

Serving of lentils or Canadian wonder beans too often with their hulls on. It is better to cook them until very soft, and put them through a colander.

Savoury dishes are served too moist. A little longer baking will remedy this, or add less moisture.

In the Park

Here beauty reigns where'er we go.
Brightly coloured flowers grow
'Mid lawns of loveliest green.
Trees and shrubs from every clime
Whisper faintly how sublime
Must Paradise have been.

In pond's dark depths the goldfish hide,
Or 'neath the roots that fringe the side
They bask in peace serene;
Now 'midst the water-lily stems
Their scales like precious sparkling gems
A moment's space are seen.

Upon the edges of the lake
Little wavelets gently break
Begotten by the breeze.
The swan here floating gracefully
Its native haunts no more will see
Far o'er the raging seas.

Beneath the trees, upon the seats,
Many a heart with rapture beats
At fond love's sweet caresses.
While in the leafy bowers above
The wild bird's mellow song of love
The God of nature blesses.

Amid such scenes, who would not raise
His voice to join the song of praise
That birds and nature sing?
What man is there 'twould not inspire
To form ideals nobler, higher
Than carnal pleasures bring?

—E. A. Robinson.

Hints to the Housewife

BY EULALIA S. RICHARDS, M.D.

TEN hundred and ninety-five meals a year! Ten hundred and ninety-five meals to be planned, prepared, and served by the busy mother between January first and December thirty-first. The family who three times a day for three hundred and sixty-five successive days partake of well-served meals scarcely realise what it means to the careworn mother to think out and work out these meals. Fortunate it is that only one day has to be lived at a time, and that there is a promise particularly applicable to busy mothers, "As thy day so shall thy strength be."

The accompanying suggestions are given in the hope of assisting some perplexed housewife to solve the problem, What shall I cook to-day?

The Possibilities of Macaroni

Macaroni is an article of food too little appreciated by the majority of people. It is economical, nutritious, easily digested, and withal palatable if properly cooked. It is always best to purchase the best quality of Italian macaroni, as other makes will usually be found to be inferior both in flavour and in the manner of cooking. Poor macaroni is likely to taste slightly sour, and in spite of careful cooking it remains tough and leathery.

Macaroni should be cooked as follows: Break into short lengths, drop into boiling water slightly salted, and keep boiling vigorously for about an hour, or until the tubes are swollen and very tender. It is necessary to use a good quantity of water, and more may be added from time to time. It must, however, be boiling. When the macaroni is quite tender, the fluid may be drained off and kept for soup-stock. At once pour a little cold water over the cooked macaroni to prevent its sticking together, and drain again. The macaroni is now ready for its final preparation, as very few persons care for it quite plain.

Macaroni with Cream

The farmer's wife may make a delicious dish by pouring a little thin cream over cooked macaroni and heating it in the oven for half an hour.

Macaroni with Hard-Boiled Egg

Place well cooked macaroni in a serving dish, and cover the top with slices of hard-boiled egg. Serve hot.

Macaroni with Egg Sauce or Tomato Sauce

Cover cooked macaroni with milk sauce to which one or more beaten eggs are added just before serving. A tomato sauce made by thickening tomato juice with cornflour may be used in the same way. This sauce should of course be nicely seasoned.

Macaroni with Legumes

Macaroni may be combined in a variety of ways with the purée of legumes, as beans, peas, or lentils. To prepare the purée, soak the legumes overnight, and in the morning put on to cook in cold water. Stew slowly for about two hours, add salt, and an onion if desired. When tender, press through a colander to remove the skins. This purée is now ready to combine with cooked macaroni. It is well to arrange the two in layers in an enamelled pie dish. Bake for half an hour, or until nicely browned on top.

Macaroni with Nut Meats

Protose, nuttose, and the other nut meats combine very well with cooked macaroni. Slice or dice the nut meat and mix with the macaroni, or arrange in layers. The mixture may be covered with a brown sauce and baked in a pie dish, or it may be formed into patties with an egg to bind, and be browned in the oven. This macaroni and nut meat mixture nicely seasoned with onion and a little tomato makes an excellent filling for picnic turnovers or pasties.

Macaroni may also be used in the preparation of milk puddings.

A FEW GOOD SOUPS

Tomato Soup

A delicious soup which is a boon to the sick and a luxury to the well is made as follows: If a quart of soup is required, prepare about a pint and a half of milk sauce. To do this, bring the milk to the boiling point and stir in slowly sufficient cornflour, braided in cold water, to make the sauce fairly thick. Boil for about five minutes. Now add slowly one cupful of strained tomato juice. Season with salt, and serve with squares of zwieback. A larger proportion of tomato may be used if desired.

Celery and Potato Soup

Cut in short lengths the outer stalks of two bunches of celery, cover with a small amount of water, and stew for half an hour. Strain out the celery, and add to the liquid about a pint of water in which peeled potatoes have been boiled. Add a cupful of rich milk, season with salt, add a little butter, and thicken slightly with cornflour. This is a remarkably tasty soup.

Brown Lentil Broth

A broth which is quite as tasty as beef broth, and much more wholesome, is made by stewing for two or more hours two cupfuls of brown or German lentils. When they are quite tender, drain off the liquid, saving the lentils for purée. Season the broth with salt, a scraping of onion if desired, a little butter or oil, and a little tomato juice. (Tinned tomatoes will serve in all of these recipes in which tomato juice is required.) A small amount of boiled rice may be added just before serving, or if preferred noodles may be added to the broth and boiled in it for about fifteen minutes before serving.

To Make Noodles

Beat one egg until light, add a pinch of salt, and stir into it slowly enough flour to make a soft dough. Roll this out quite thin upon a well-floured pasteboard. Leave it to dry for a half hour or more, then roll it up lightly, and with a sharp knife cut it into slices about one-fourth of an inch thick. Unroll these slices and cut into short lengths. The noodles are now ready to drop into the boiling broth.

ONE OR TWO GOOD BREAKFAST DISHES

Scrambled Eggs

Who does not tire of porridge for breakfast? Try scrambling eggs in a little strained tomato juice. Season with salt, and serve hot on slices of buttered toast or zwieback.

Nut Butter Crispies

Another tasty dish is nut butter crispies. Mix a heaping dessertspoonful of peanut butter with water to the consistency of thin cream, and add a little salt. Now dip into this nut cream slices of white bread. Be sure that both sides of the bread are covered with the nut cream. Place on oiled tins and bake in a moderate oven until nicely browned and crisp. The quantity of nut butter mentioned is sufficient for five or six persons.

Rice Balls

Still another dish which affords a change from porridge is rice balls. Have ready some well-boiled rice. Season this with salt and a little butter. Add a small amount of milk and one or two eggs according to the amount of rice used. Shape into balls, sprinkle with zwieback crumbs, and bake until lightly browned.

Cereal Cutlets

If porridge there must be, let it be served occasionally as cutlets. Cook maize meal, germea, or any desired porridge meal the day before. Make the porridge rather thick, and after it is well cooked turn it out into an oiled bread tin or other suitable dish. The next morning cut the moulded porridge into slices about one-third of an inch thick, brush with beaten egg, and sprinkle with zwieback crumbs. Bake in an oiled tin until nicely browned.

Drugs versus Nature's Remedies

BY DAVID PAULSON, M.D.

JUST as the clock-maker sends along a key with the clock wherewith to wind it up whenever it runs down, so likewise God has furnished in the remedies of nature the means that He intends to be applied to the human machine when it is run down.

We now know that the *same* principles are at work in sickness as in health. We no longer believe that the symptoms of disease are something that has come in and taken possession of the individual, and which can be driven out of the man just as you might drive a squalling cat out of a room. And hence the doctor no longer gives horrible tasting medicines to "drive out" the disease.

A Simple Illustration

You swallow a mouthful of wholesome food, and the healthy stomach responds by pouring out normal digestive juice. That is a condition of health. But if instead one should eat some poisonous substance then the stomach, instead of sweating out gastric juice, contracts violently, and the substance is expelled by vomiting. Anyone looking on would truthfully say such a person was sick. Yet those very disagreeable symptoms were nature's *efforts* to save the life of the man; and instead of paralysing this effort of nature by administering some stupefying drug, the modern physician *co-operates* by washing out the stomach, thus *removing* the cause instead of smothering the symptoms.

The Curative Purpose of Fever

An abnormal rise of temperature, or fever, as we call it, is another common illustration of the same principle. The human body ordinarily succeeds admirably at 98.6 degrees temperature in burning up and destroying the various poisons that are constantly being manufactured within.

But suppose one sleeps night after night during the winter in a bedroom that is almost as poorly ventilated as a cave, eats freely of juicy beefsteaks, drinks strong tea and coffee, and otherwise attempts to subsist upon an unwholesome dietary, and perhaps at the same time lives a more or less sedentary life; then the normal poisons will accumulate in the body, and various disease germs will find it a favourable opportunity to establish themselves within, and produce additional virulent poisons.

God in His wisdom has arranged for the body to fire up more vigorously to enable it more effectively to destroy these toxins, and then the patient has a "spring fever." The purpose of this rise of temperature is just as curative under such

conditions as the vomiting was under the other. But the old-fashioned doctor, not appreciating this fact, used to give antipyrine and other coal-tar remedies which simply depressed the body, including the heart, to such an extent that it simply *ceased* its struggles to cure itself. Hence the temperature went down, and the patient was frequently so overwhelmed by the introduction of this second poison that nature simply gave up its struggles, and the patient was "cured to death."

The modern doctor deals with the fever just as he does with the vomiting: he endeavours as speedily as possible to *remove the cause.* He immediately suspects that a large portion of this poison is being absorbed from the alimentary canal, hence he gives the patient one or two thorough colon flushings a day, and perhaps in addition a liberal dose of castor oil or some other harmless but efficient laxative. He persuades the patient to drink a glass of water every hour so as to encourage the kidneys to carry off more than their usual share of poisons. If possible he moves the sick bed out on the verandah, knowing that abundance of air is just as essential for oxidation within the body as a good draught is for the kitchen stove.

Human Intelligence Superior to Bodily Reactions

But some will ask, Is not a temperature of 103, 104, or 105° extremely dangerous for the body? Yes, for exactly the same reason that too vigorous vomiting might burst a blood vessel in the brain. So although the higher the temperature the more vigorous the destruction of poisons in the body, yet we now know that the liver, the kidneys, and even the heart, cannot endure to be bathed for any great length of time in blood at such a high temperature without starting degenerative changes. But the modern doctor, instead of smothering this human excessive fire by coal-tar remedies, draws off the *excessive* heat by cool baths, cool sponging, cool enemas, or by encouraging gentle perspiration, which accomplishes the same thing by evaporation.

We may represent those healing reactions in the human body by a team of horses, and let the doctor or nurse be represented by the driver. The intelligent driver in troublesome driving does not kill his horses; he simply guides, restrains, or urges them forward, as in his judgment the case may demand. It is an inspiring thought that God has put more intelligence into the brain of a truth-loving, intelligent physician than He has into even the instinctive healing reactions within the body.

An Example of Nature's Oversight

In diphtheria the germs generally establish their headquarters in the throat. They then begin to make a deadly poison, one part of which can destroy ten million parts of human flesh. Nature immediately begins to make a false membrane or a patch as it is commonly called. The purpose of this is to *prevent* the absorption of this poison. As the germs continue to make poison, nature often continues to increase the thickness of the patch. It is a curative process just as the vomiting was. But nature seems to forget that there is only a limited space in the child's throat, and it may continue to increase this false membrane until the child is actually smothered. Here is where God has left room for the intelligence that He has put in the physician's brain, and it is his duty to *restrain* this reaction, not to destroy it; just as the driver would hold in the frisky horses, not kill them.

I again call attention to the fact that the old-fashioned doctor made it his business to scrape off that membrane, thus permitting the system to be speedily overwhelmed with toxins, so the child frequently died; and the only satisfaction the parents had was that the doctor "had done everything he could." While the modern doctor does not interfere with the membrane until it threatens to choke the child, he of course does another thing which modern science has perfected; he administers antitoxin from the horse to supplement the antitoxin which is already

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FRESH AIR IS ONE OF NATURE'S REMEDIES.—AVON RIVER, CHRISTCHURCH, N.Z.

being made in the child's blood; just as a mother resorts to cow's milk when she has not herself sufficient nourishment for her own babe.

Healing within the Man Rather than in a Bottle

From what has already been written it must be evident to the thoughtful reader that God has put the healing reactions all within the man. All we can expect to do with our various remedies, real or unreal, natural or artificial, is simply to arouse, to guide, or to restrain these healing reactions. Hence the doctor and nurse may do anyone of three things: First, they may *co-operate* with nature's healing agencies; second, they may work directly *against* the efforts of the body to heal itself; or, third, they may do absolutely *nothing*.

God's remedies in a pre-eminent sense are the simple agencies of nature, such as wholesome diet, fresh air, hydrotherapy, curative exercises, including massage and medical gymnastics, electricity, and Christian psychotherapy, which in the last analysis is simply a firm and childlike trust in the great Healer who Himself gave us these remedies.

There are many drugs that also arouse healing reactions, but unfortunately they generally charge an enormous toll for the good they do. It is like borrowing money at forty per cent interest; and we are gradually learning better and better that much of their supposed benefits are really delusive. For instance, the exhilaration caused by a dose of alcohol is followed by a corresponding depression. Hence it is a stubborn truth, which most of our greatest physicians now recognise, that many of the so-called powerful drug remedies instead of belonging to the first class, and co-operating with nature's forces, actually belong to the second class, and work directly *against* nature's curative efforts. So when the patient recovers while taking these remedies, it is in spite of the drug rather than because of any beneficial help it affords the patient. Fortunately, many of the commonly used drugs have little or no effect upon the human system. They are about as harmless to the patient as stroking the cat's back would be to the cat. The agitated patient feels that he must have something done for him. The physician administers a harmless drug, and the patient, feeling that he is having something done for him, is at rest, and *nature* heals him; but the drug gets the credit.

Again there is another class of drug remedies that protect either the skin or the mucous membrane of the alimentary canal from various irritations or germs, thus helping the body by crippling its enemies. But their number at best is very limited, and it is undoubtedly as true to-day as it was a generation ago, when a great physician said in substance that if all the drugs in the world were thrown into the sea, it would be good for the world and bad for the fishes.

The era of physiological remedies has arrived, and every mother should prepare herself so she can treat intelligently the simple, common, every-day ailments of her child without the necessity of calling in a doctor, for the same reason that she should be able to administer to his spiritual wants and necessities without sending for a preacher. She should endeavour to acquaint herself with the pain-relieving possibilities that are hidden away in a hot fomentation, so that she should never be tempted to dope the child with soothing syrups, or similar remedies which only stop the pain by poisoning the child.

A Treatment Chest instead of a Medicine Shelf

It is more important for the health and future happiness of a growing family to have a treatment closet in the home than to have a medicine shelf in the pantry. I would suggest that such a treatment chest be stocked with :—

Two fomentation cloths; a rubber spine bag; a combination hot water bag (which can be purchased at any drug store, and may not only be used as a hot water bottle, but when desired can also take the place of an enema can); a rubber

ice bag; a foot-bath tub; a clinical thermometer; a water thermometer; three Turkish towels; a fomentation pail; a friction mitt.

The Bath—a Necessity

By P. M. Keller, M.D.

JOHN WESLEY, the founder of the Methodist Church, coined a proverb which is quoted—

"Cleanliness is next to godliness."

There can be no doubt that the proverb is true. We do not look upon a dirty house as a desirable home, nor do we regard a dirty person as a human being who lives properly.

Health is largely a matter of cleanliness. While cleanliness of air is a necessity for healthful living, we also require pure water and clean foods. This house, or body, in which we live, must also be clean, with perfect drainage or powers of elimination and no filth left around.

Recently at Washington City, U.S.A., an International Congress of Hygiene was held. The various matters which enter into hygiene were discussed by men from all parts of the world. One of the subjects discussed at length was the value of bathing.

It is a melancholy fact that a very large proportion of humanity does not bathe at all. The average Russian peasant is charged with taking only three baths during his lifetime, and this is said to be the reason that Russia was so easily overcome by the Japs, who bathe all the time. It is also maintained that the Romans conquered the world because they were given to immoderate bathing compared with the practices of other nations.

We are told that bathing is good for the nerves, and that it probably helps us more in this respect than any other. It also is good because of its intellectual stimulus, and because it gives a feeling of decency and respectability, which are important factors in success. One scientist went so far as to say that he would rather see a public bathhouse than a library if the choice were restricted to one of them. He declared that the moral and intellectual results of bathing could hardly be over-estimated, and that the notion that we bathe simply to open our pores to permit the exudation of useless matter is not true.

Finally, the advice is given to take a shower bath if possible every morning rather than one in the tub. This does not mean the erection of an elaborate affair in the bathroom. For a small sum one can buy a rubber tube and spray, which is entirely adequate. These hygienists insist that as we use more soap and water we shall grow in strength and mental vigour.

"IF you wish to stand uneven weather well, treat your stomach well."

Conjunctivitis (Sandy Blight) and Treatment

THE eye might be called a picture-making instrument, very much like an ordinary photographic camera, only more delicately and perfectly constructed. The eyeball consists of a spherical ball about one inch in diameter, protected by the bones of the orbit except in front, where it is covered by the eyelids.

When looking at the eye, a coloured part (iris) is seen occupying the centre of the globe, and a white part (sclerotic coat) all around. In the centre of the coloured iris is seen a small black rounded aperture (the pupil) by which the rays of light reach the interior of the eyeball. Over the iris is a clear, tough tissue (the cornea), which covers the eyeball as a glass covers the dial of a watch. Within the eyelids and over the white (sclerotic coat) part of the eyeball and cornea is a mucous membrane (the conjunctiva), which serves to keep the surface of the eye moist, and allows of the easy movement of the eyelids upon the front of eyeball.

When this membrane (the conjunctiva) becomes inflamed, we have what is called conjunctivitis, or what is commonly called in Australia, "sandy blight." The other symptoms associated with this are the sensation of sand under the eyelids, burning sensation, redness, and slight swelling of conjunctiva and eyelids, increased formation of tears, inability to appear in the light and use the eyes. There may also be the presence of a muco-purulent secretion, and the eyelids have a tendency to become adherent to each other.

Frequently one eye only may be affected. This implies often a foreign body in the eye. The treatment consists in seeking for the cause and removing if possible. Place the patient away from the light—a dark room or using dark glasses for the eyes. Cleanse the eye frequently with pure, warm water, followed by using an eye wash—fifteen grains of boracic acid to an ounce of water.

Compresses may be used to remove the congestion. A small cold compress placed over the eye may be made by means of four thicknesses of gauze wrung out in cold water. Short fomentation may be applied over eye, forehead, and cheeks. Renew the compresses frequently, and alternate with the heat—the hot fomentations must always be a very short application.

Three times daily the following ointment may be used by applying to edges of the eyelids:—

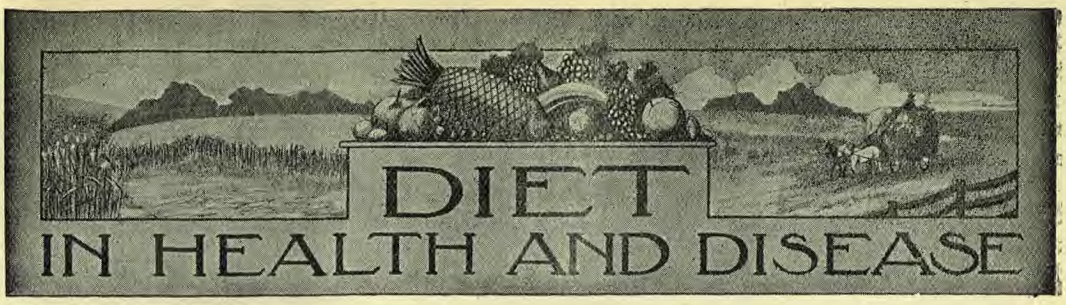
℞

Hydrarg. ox. flav. gn ½
Ungt. aqua rosea ad ʒ 1

Misce, fiat ungt.

The eye has such an important part to play in life's work that we should expect an early response to our treatment; otherwise place yourself under the observation of your medical adviser, as in conjunctivitis complications may arise.

P. M. K.



The Scientific Use of Albuminous Foods

IT is very desirable to know which of our common articles of food contain a sufficient quantity of albumen in proportion to fats and carbohydrates, which articles of food are too poor, and which are too rich in albumen. This knowledge will help us to avoid the use of too much food which is extra rich in carbohydrates, for, as we shall see later, to do so invariably gives rise to more or less inconvenience and ill-health.

If, for instance, we take some of our common kinds of fruits,—fresh fruits such as apples, pears, cherries, plums, strawberries, raspberries, blackberries, red currants, gooseberries, grapes, peaches, apricots, and bananas,—we find that they contain, on an average, nine per cent of albumen in proportion to the amount of grape-sugar and other carbohydrates found in these fruits, so that they may be described as normal, which is also entirely in harmony with the actual experience of those who make fruits a large item of their diet.

If we take dried fruits, such as prunes, cherries, raisins, figs, and dates, we find that, on account of the large quantity of sugar they contain, they are somewhat deficient in albumen, containing only about eight per cent in proportion to sugar and other carbohydrates.

The same is true of rice and of potatoes, which contain nine per cent. Carrots, beetroots, parsnips, and other similar roots contain the necessary quantity, about ten per cent, whereas other vegetables, such as melons, pumpkins, and onions, contain an excess of albumen, about fifteen per cent. Red, white, and green cabbage contain about twenty-five per cent, which, in proportion, is altogether too large a quantity of albumen.

Cucumbers, cauliflowers, tomatoes, and green peas contain about thirty-three per cent, while spinach and asparagus contain about forty per cent in proportion to their contents of carbohydrates. They are therefore, in comparison, altogether too rich in albumen.

The same is true of eggs and milk, as well as of all kinds of flesh and fish foods. Seeing that they contain altogether too much albumen they should never be used as articles of food by themselves. In fact they are not at all necessary as was once believed, and as there is a danger of over-loading the system with albumen, it is best to curtail the use of these articles of food which are so strong in albumen.

Especially is it well to be careful in the use of flesh and fish foods, which contain waste products, and which can just as well be dispensed with to give place to a health-giving diet.

Legumes should also be mentioned amongst the foods which contain proportionately too much albumen; they should therefore be used sparingly, especially as they are not perfectly free from waste products, although they contain much less than we find in flesh foods.

Another group of articles of food strong in albumen is nuts. They also contain

much fat, as from one-half to two-thirds of the nut is pure fat. As they also contain too much albumen they should be used sparingly, but they have the advantage of flesh foods, fish, and ripe legumes, in that they do not contain waste products.

Finally, let us look at the most common articles of food—grains and the various kinds of breads. Taken on an average they contain all the albumen that is needed, as the rate is about two per cent more than has been found to be necessary. to increase the diet because less albumen is used. On the contrary, it has been demonstrated that the proportionate quantity of food consumed may be less than usual, while under these conditions it has been shown by an analysis of the waste portions that the body economised, and that the quantity of undigested particles was less. This is a great improvement, as all the surplus food taken into the body is only the cause of clogging the system.

It has also been found that the greatest

An Excellent, Nutritious Diet

It is therefore a great mistake to think that in using bread and cereal foods it is needful in order to make the diet sufficiently nourishing, to use flesh foods and fish. On the contrary, we have in bread and fruit an excellent, nutritious diet, which contains all the elements needed by the human body in order to maintain it in full strength and vitality.

In view of this it is an excellent plan to add nuts and fruits to a diet of bread and other dishes made from cereals.

In this connection it is important to remember that it is not at all necessary and best economy in regard to the articles of food taken gives also the best results. This was demonstrated by an experiment which added strength, improved blood, and improved muscle, so much so that many of the individuals who undertook the experiment recovered from various complaints, while at the same time their courage, self-control, and self-confidence increased to a degree which was particularly noticeable to those who had them under observation.

In some cases, ailments which had before troubled them disappeared entirely.

This is easily explained by the fact that the quantity of waste products formerly in the body became less as the quantity of food used was reduced, thus enabling the various organs in the body to work with greater ease. Uric acid and other poisons were found in much less quantity, which resulted in the feeling of increased strength and greater energy and well-being.

Therefore of all the results which have cently been brought to light by science, the one here mentioned is by no means the least important. This is not to say that men should seek to be satisfied with the smallest quantity of food possible, but it has been made clear by science and by the personal experience of many—

1. That most people living in the towns eat too much albumen, as they have not only about 118 to 120 grammes, as advocated by Voit, but have often used as much as 200 grammes of albumen per day. Science has demonstrated that the daily use of 183 grammes of albumen per day is not only much more than is necessary, but is positively injurious.

2. That as it is difficult to find a diet which is sufficiently nourishing on account of this lack of albumen, which it was thought could only be secured by the monotonous diet of rice, potatoes, and the fruits and vegetables, which are specially rich in albumen, and legumes, there is no danger of not getting sufficient albumen by making an absolute change in diet. If we only use the proper quantities of grains, such as breads and other cereal foods, fresh fruits, and nuts, we are always on the safe side. And we shall be safer still if, at the same time, we frequently use dishes prepared from articles of food which contain more albumen, such as milk, eggs, cream, and legumes.

3. That the articles of food which are still richer in albumen, such as flesh foods and fish, are not by any means as necessary as some have hitherto believed; so that we must advise against the free use of flesh and fish foods, which contain waste products.

It will be seen, therefore, that while albumen is an absolutely essential part of the human dietary, yet we do not need as much of it per day as hitherto has been taken for granted.

But there is another question which may be raised. Is it not considered that animal albumen is much preferable to plant albumen, especially as it is considered that the former is much more digestible? This question must be answered with a decided NO. For as we have already seen by using most animal foods the albumen can only be obtained in an unclean condition, that is, filled with waste products. Moreover, the greater digestibility of animal albumen against plant albumen, which has hitherto been taken for granted, may readily be overcome by exercising more care in the preparation of the latter.

But even if some special form of animal albumen digests more readily and more completely than plant albumen, it is not by any means proved that animal food is the best. We are therefore certainly correct when we state that plant albumen is the best and purest.—*J. Ottosen, in Rationel Ernäring, translated for Life and Health.*

Foes of Beauty

IF I were asked what is the greatest foe to beauty in both man and woman, I would say, not errors in diet, not lack of exercise, not overwork, nor any one of these, but bad mental states. What do I mean by bad mental states? I mean anger, fear, worry, anxiety, irritability, regret, envy, jealousy, lack of trust in the great God—all these are bad mental states; and all these destroy beauty, not only by interfering with the action of the vital organs, but by directly disfiguring the expression on the face.—*Outing.*

"FRUITS may be taken with benefit at the close of most of the meals. The fruits contain a liquid which is not only nutritious, but which acts as an antiseptic and aids the digestion."

Diet: Its Relation to Endurance and Health

W. A. RUBLE, M.D.

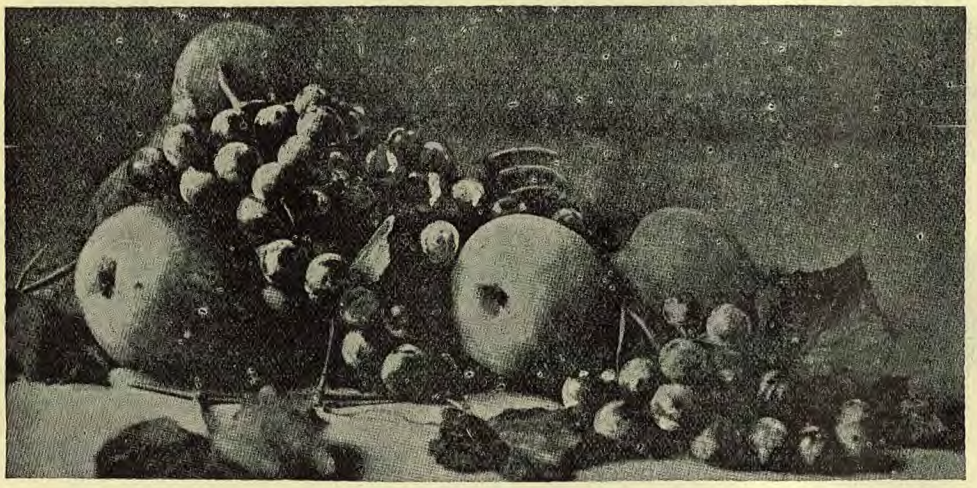
ONE of the most important matters for consideration by every person desiring health is that of diet. Only within the past few years has this subject received the attention that it deserves. The increase of disease has recently so impressed medical men, scientists, and the people at large that much thought has been given to the matter of health and endurance.

Dr. Haig, a well-known English physician, says, "In diet lies the key to nine-tenths of the social and political problems that vex our nation and time." Much more does it lie at the foundation of health and strength.

The elements of food are principally carbohydrates (comprising starches and sugars), fats, and protein. Of these, carbohydrates compose the greater part of the diet. This element comes from grains, fruits, vegetables, and nuts. The fats are derived from the fats of animals, as butter and cream, and from olives, cottonseed, and nuts. The protein part of the food is derived from muscles of animals, milk, eggs, beans, peas, lentils, nuts, and grains.

Errors in diet are responsible for a great deal of sickness. These errors are principally rapid eating, over-eating, and an excess of the protein element in the food. It is to this latter point that we shall confine our attention.

The body may be likened to an engine. In fact it is the most perfect piece of apparatus in existence for transforming fuel into energy. The different foods furnish heat, energy, and the structure of the engine. The carbohydrates and fats produce heat and energy. They correspond to the fuel used in an engine. The protein produces muscular tissue, and furnishes some energy. It is the iron work of the engine. While in an engine tons of coal are used to produce energy, but little iron is necessary in the way of repairs after the engine is first perfected. So in the body, an abundance of fat and

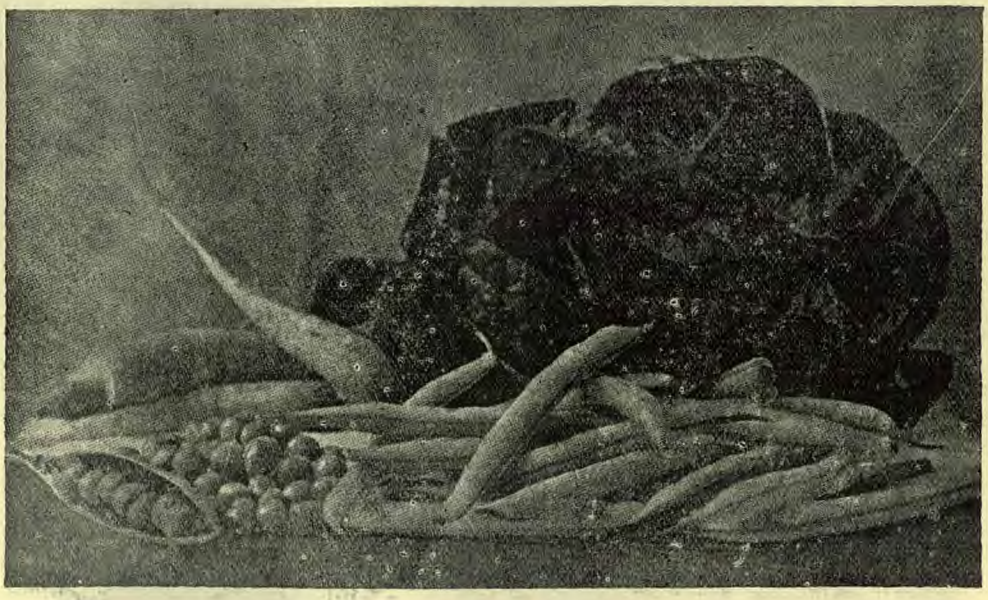


Fruits Supply Carbohydrates

starches and sugar is necessary for heat and energy, but little protein is needed for repairs.

In the combustion that takes place in the body, fats, starches, and sugars are almost entirely burned up, with the liberation of heat and energy, the end products being carbonic acid gas that passes off in the breath, and water. The protein, if eaten in greater amount than is needed to rebuild muscle tissue, results in waste material, which must be thrown off by certain organs or it will clog the system, just as iron fed to a furnace would result in clinkers and waste. The body partly changes this excess of protein into substances that can be excreted, but the excretory organs can dispose of only a limited amount of waste, and all above that amount may remain in the tissues as uric acid or other waste products. Provision is made in the body for storing fat and carbohydrates for use in emergency, but there is no provision for storing protein. Continuing the simile, the engine carries coal, but not repairs. An excess of protein therefore results in waste materials, which may obstruct the working of the body. This brings us to the consideration of endurance as modified by diet.

It has been generally believed that a high protein diet is necessary to enable one to endure hard work, but it has recently been demonstrated that a high protein diet produces early fatigue. Muscle-cells and nerve-cells which respectively produce and liberate energy are surrounded in their work by the body fluids from which they generate the energy they produce. If these fluids contain an excess of waste material, heavier work is thrown upon these structures, and nourishment will be received with greater difficulty. Hence, fatigue comes earlier and with less exertion where excess of wastes accumulate in the system.



Foods Containing Protein

Another factor entering into the problem of a high-protein dietary is its source. Flesh-meat is the usual source of protein, and with many people it is the principal article of diet. In the activity of every animal cell there is a production of waste material. Each animal, human or otherwise, produces as much waste in its own body as it can easily care for. When,

however, the extra amount of waste material, as uric acid, produced in one animal is eaten by another, as is done when flesh-meat is taken, there is evidently a double proportion of waste material to be excreted or to clog the system. This actually takes place in the tissue, forming what is sometimes called a uric-acid diathesis.

Writing on the matter of fatigue, Dr. Haig gives two tests between flesh-eaters and non-flesh-eaters: "Fourteen meat-eaters and eight vegetarians started on a seventy-mile walking match. All the vegetarians reached the goal in splendid condition, the first covering the distance in fourteen and a quarter hours. An hour after the last vegetarian, came the first meat-eater, and he was completely exhausted. He was also the last meat-eater, for all the rest had dropped off after thirty-five miles of endeavour."

"More recently in a walking match (Dresden to Berlin, 125 miles), six vegetarians again came in first, and the then champion walker of Germany was among those who gave up the contest." In summing up, Dr. Haig says: "In my opinion a few more hard facts like these will dispel the delusion that strength and endurance can be attained only on flesh food. The truth is that fifty per cent more endurance and strength can be obtained from many other foods."

American scientists are not behind in observations along this line, nor do their conclusions differ from scientists across the water. Some very interesting experiments have been performed and recorded by Prof. Russell H. Chittenden, president of the American Physiological Society and director of the Sheffield Scientific School of Yale. He took twenty soldiers of the United States Army, and placed them on a diet containing about one-third of the protein food to which they were accustomed. Reporting this experiment, Professor Chittenden says: "The experiment results presented afford very convincing proof that the needs of the body are fully met by a consumption of protein food far below the fixed dietary standard, and still farther below the amount called for by the recorded habits of mankind. General health is equally well maintained. Most conspicuous was the effect observed on the muscular strength of the subjects. Without exception we note with all of the men a phenomenal gain in strength." The total strength in almost every case more than doubled in six months, according to his reports.

Other tests were made with members of the athletic clubs of Yale, with similar results. In writing of this latter test, Professor Chittenden says: "The main lesson from the experiment was that the men improved in health and physical endurance. By actual gymnasium tests it was found that the physical endurance of the men was approximately doubled in five months.

Diet and Disease

As before, the special point under consideration is a high protein diet, including a flesh diet, and its relation to disease. There are two classes of disease. One results from excess in protein waste products, and includes those diseases referable to the central nervous system, as headaches, nervousness, insomnia, and such abnormal conditions due to irritation caused by waste material in the blood and nerve-tissues. The other class results from deposits of uric acid and other waste products in the muscles and less delicate tissues, and produces rheumatism, gout, and kindred diseases. One of the first things a physician does for a patient suffering from rheumatism is to restrict the amount of flesh-meat and other protein used. If this is necessary to cure the disease, why not adopt the plan in order to prevent the disease?

The kidneys are the organs which eliminate the waste products. When overworked by excess of this waste in the blood, the kidneys fail, and kidney disease results. This, of course, is not the only cause for this disease, but is one important cause. More or less obstruction to blood-flow is offered by the waste matter in the system, and the small arteries are hard-

ened, making greater blood pressure necessary in order to force the blood through the tissues. There is some evidence that the blood-vessels are hardened and rendered brittle by the same waste material.

Apoplexy is a rather common disease. It is due to this hardening of the vessels and high blood pressure, which result in rupture of a blood-vessel in the brain. Other serious diseases result from this same cause.

There are two important features of a flesh diet that are often overlooked. These should especially appeal to those who are interested in intemperance. A flesh diet is quickly digested, the nourishment readily reaches the blood, and is exhausted in a much shorter time than that from another diet. This calls for frequent meals, or for some kind of stimulant "to keep up the strength." Tobacco, tea, and coffee, and even alcohol are resorted to.

The waste products in the flesh are stimulating, and as soon as their stimulating effect has passed off, other stimulants are needed. This also leads to intemperance.

To sum up:—

1. A high protein diet results in waste material, which clogs the system, rendering the muscles and nerve-cells less free to act, thus causing early fatigue.

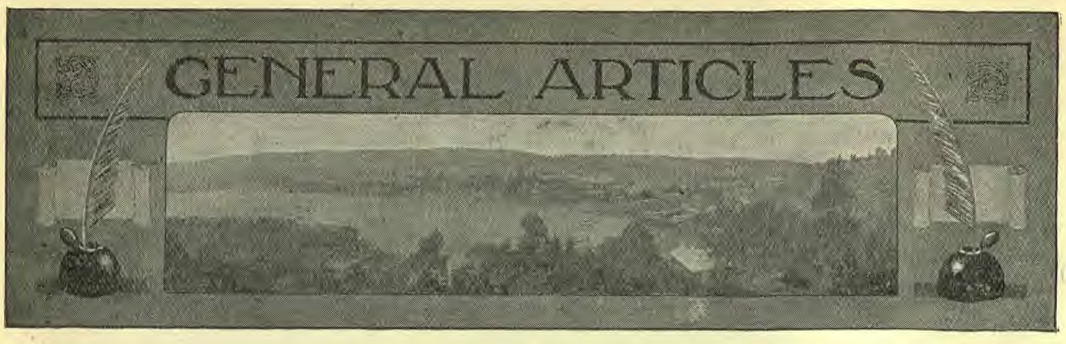
2. Such diet, especially where it comes from flesh, readily gives up nourishment to the blood, which nourishment is early exhausted, also producing fatigue and a demand for stimulants.

3. Waste material from such diet obstructs the circulation and hardens the arteries, leading to apoplexy, kidney disease, early senility, and other disorders.

4. Diseases, such as many nervous disorders, rheumatism, and gout, result from the same cause.

Raisins

ACCORDING to Sir William Gull, physician to the late Queen Victoria, and, of course, eminent in his profession, it is better, in case of fatigue from overwork, to eat raisins than to resort to alcohol. In his testimony before the Lords' Commission in London he affirmed "that instead of flying to alcohol, as many people do when exhausted, they might very well drink water, or that they might very well take food, and they would be very much better without the alcohol." He added, as to the form of food he himself resorts to: "In case of fatigue from overwork, I would say that if I am thus fatigued my food is very simple; I eat the raisins instead of drinking the wine. For thirty years I have had large experience in this practice. I have recommended it to my personal friends. It is a limited experience, but I believe it is a very good and true experience." We commend this testimony in favour of raisins as better than wine to the thoughtful consideration of all those who are in the habit, with or without professional prescription, of resorting to "a little wine for the stomach's sake and thine often infirmities." And raisins, we believe, have never been known to intoxicate.—*Selected.*



The Fly Our Most Dangerous Pest, and How to Get Rid of It

D. H. KRESS, M.D.

DURING the civil war, four men died of germ diseases to every one killed by the bullet.

During the first five months of the Spanish-American war, there were one hundred and fifty-eight thousand admissions to the hospitals, and thirteen died to one man killed by the enemy.

A few years ago conditions were such at Panama that when a man from the North went there to work he was given an affectionate farewell by friends and relatives. They never expected his return. Death was almost a certainty.

Throughout the Middle Ages whole nations were stricken with epidemics of disease, and half of the population were frequently laid low. Cholera, yellow fever, bubonic plague, smallpox, and other messengers of death waged a relentless warfare upon the race.

To-day these things are possible only where ignorance exists. Unable at that time to discover the causes of these epidemics, the people resorted to fasting and prayer. Their prayers were heard. The epidemics have been stayed—not miraculously however, but through an increase of knowledge. "The people were destroyed for a lack of knowledge."

The bubonic plague is due to a germ which is spread through the medium of the flea, often using the rat as a vehicle. The relentless warfare against the rat has aided in suppressing this epidemic.

Yellow fever, it was found, was communicated by means of the mosquito. By wiping out the mosquito, yellow fever has practically been wiped out.

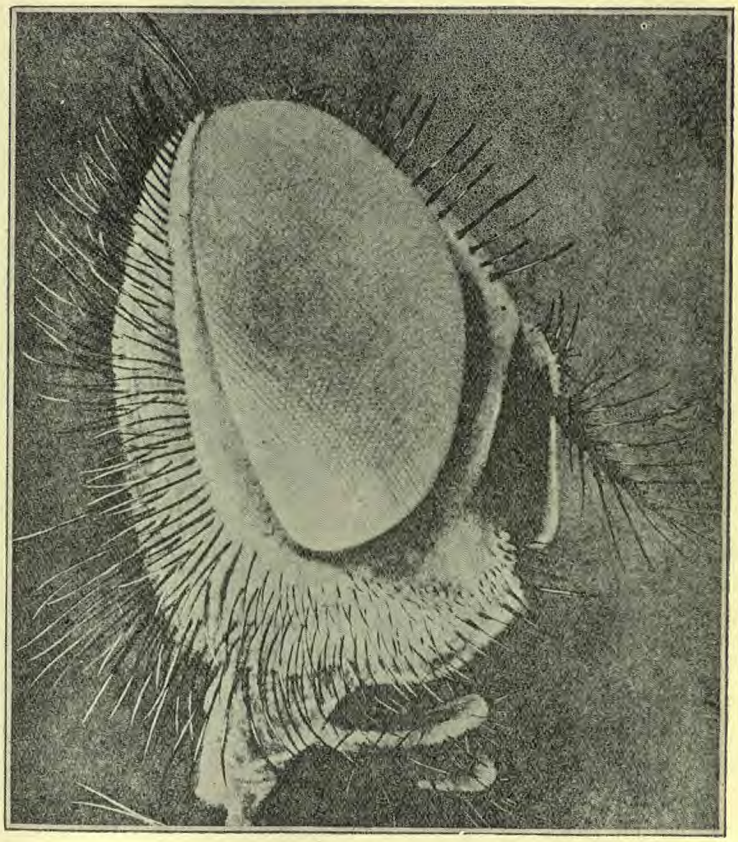
The mosquito and the flea are not our most deadly enemies. The ordinary house-fly is probably responsible for a greater number of deaths than the mosquito. The deaths during the civil and Spanish-American wars were chiefly due to the fly. It indirectly is responsible for most of the deaths in infancy, and for many of the deaths in adult life. During the summer months especially, thousands of little innocents fall victims to diseases spread by it.

For its size the fly is probably the dirtiest creature that exists. It is bred in filth, it lives in filth, and feeds on filth. In fact it cannot exist without filth. Wherever filth is, the fly is. Where filth is not, the fly is seldom found. Improvement in sanitation would almost eliminate the fly.

The fly comes from the barnyard, from the cesspool, or from a feed on tubercular sputum. Unceremoniously it enters our homes, without even wiping its feet. Other visitors prefer the sitting-room or

parlour. It prefers to remain in the kitchen, pantry, or dining-room. While there it may plunge into the dish of milk, or alight on the butter or cake. It may carry anywhere from fifty thousand to fifty millions of bacteria on its legs and back. Germs of disease are in this way planted in these foods, and under favourable conditions they multiply with enormous and almost unbelievable rapidity. The milk in a few homes, containing millions instead of a few bacteria, is fed to the innocent child. It sickens and dies. Parents wonder why. Lack of knowledge is the cause of death.

The few seeds of tuberculosis or typhoid planted in the milk pail, or in other suitable soil, in a few short hours produce an entire crop of their kind. Then we wonder why one-fourth of our young men and women die of tuberculosis, and why typhoid fever so mysteriously enters our homes. The fly is undoubtedly the chief agency through which germs of disease are conveyed from places of filth to man, and from man to man.



Profile of a Fly's Head "Scientific American"

The large area studded with thousands of facets is one of the fly's compound eyes. A fly sees you not once but hundreds of times in all angular directions. That is why he so readily escapes your downward travelling hand. In addition to the facets he has three simple eyes at the top of his head in the middle, not visible in this picture.

How to Get Rid of the Fly

To keep the fly out of the house, it is necessary to screen the windows and doors. It is possible for a fly to carry infectious diseases from one person to another on the outside. Epidemics of sore eyes are frequently due to the fly. It seems to have a special preference for this delicate member, and may carry infection from one child to many others. In West Australia where sore eyes seem to be endemic, the fly is the real source of infection. The fly there seems to have a special mission to select the eye as its resting place.

Even syphilis may be conveyed from man to man in this way. I have seen flies gather round syphilitic sores when exposed; they may then light in an eye or an innocent sore.

The aim should be, not merely to shut flies out of our homes, but to get rid of them. That this cannot be accomplished by the ordinary means we have thus far employed, is evident.

At Panama they could not get rid of the mosquito by the ordinary means of killing them. While they were killing a dozen mosquitoes, a million were cultivated in breeding-beds to take their place. There is truth in the saying, "Kill one mosquito, and a dozen will come to the funeral." At Panama and in Cuba they got rid of mosquitoes by getting rid of their breeding-places. The mosquito needs warm, stagnant water, in which there is dead organic matter, for the purpose of propagation.

Flies may be gotten rid of in the same manner. It is not so difficult a problem, in fact, to get rid of them as it was to get rid of mosquitoes. The former are cultivated chiefly in manure heaps, around stables, in garbage tins, and in outhouses. A proper disposal of manure and garbage will go a long way toward getting rid of the fly. Clean premises and proper sanitary conditions will almost eliminate them.

Garbage cans should be kept covered or screened, to prevent breeding. So long as the kitchen is kept scrupulously clean, cleaner than the outside, the fly prefers to remain on the outside. The cooking of meats and animal fats attracts them. Those who subsist upon grains, breads, fruits, and nuts chiefly during the summer months will not find it so difficult to keep flies on the outside of their dwellings.

So long as the ideal in public sanitation cannot be carried out in our cities and on the farms flies will be with us. The destruction of one fly in the spring means the destruction of millions, for flies cannot be accused of the sin of race suicide, they are prolific propagators. The success in such a campaign depends on starting in early.

A PERFECT bodily development brings with it a realisation of the best delights of life. With every part of your body tingling with virility, you taste sweets unknown to you before you gave it a chance to develop as nature intended it to.—*Macfadden.*

Pure Air

By W. A. Ruble, M.D.

THE importance of air in the body is demonstrated by the fact that without it the body cannot live more than a few minutes. Life can continue for weeks without food, days without water, but only a few minutes without air. The fact that air is necessary to keep a fire burning is a familiar one. If air is excluded from a common lamp, it burns very dimly and produces a great deal of smoke. If the draught of a furnace or stove be closed the fire will soon burn less brightly. So it is in the human body. Combustion is the same everywhere. The use of air in the body is to produce combustion, and this furnishes the power and heat of the body. If sufficient air is not received the vital flame slowly but surely goes out.

The lungs are the means through which the furnace of the body secures its supply of air. They must be used properly in order to supply sufficient oxygen to burn up the food which is used. Then, too, one of the products of combustion is carbonic acid gas; another is water. Carbonic acid gas is poisonous to the system if present in large quantities. This poisonous substance is removed from the lungs with the air. This is another reason why it is necessary to breathe plenty of fresh air.

All are more or less familiar with the common ailment, a cold. Many imagine that colds are contracted by exposing the body to fresh air. This is not true. Dr. Peary, the great Arctic explorer, spent many months in the frigid north, sleeping most of the time exposed to the cold air, and never was troubled with a cold; but when he returned to civilisation and partook of the common foods which are served at our tables and slept in a closed room, he contracted a very severe cold. Thousands of people are now learning to sleep out of doors for their health. In a popular magazine of recent date there is an article entitled, "The Passing of Indoors," in which the writer claims that in

YOUR ENEMY THE FLY "Scientific American"

In addition to two claws, each of the six feet is supplied with two light-coloured sticky pads. Germs and spores adhere to these pads, and are thus carried from place to place with great rapidity; for the fly travels fast and far on its wings. The fly cleans its feet carefully whenever they become contaminated, thus removing many of the germs that would otherwise be spread. Unfortunately the cleansing operation is not thorough enough.

a few years all will be living out of doors almost altogether. When that time comes there will be much less sickness; and tuberculosis, pneumonia, and other throat and lung diseases will almost entirely disappear.

The past quarter of a century has demonstrated conclusively that the great remedy for tuberculosis is fresh air. How long will it be before almost all of the diseases from which mankind is suffering at present will be greatly diminished by a proper use of fresh air? The question may be asked, if fresh air is so necessary, and a lack of it so detrimental to health, why a person can live so long in a room with little ventilation. There is a wonderful provision in the body by nature which meets all such requirements. When any kind of poison is introduced into the body gradually, the body produces a substance to counteract that, which is called "antibody." This may be illustrated upon two sparrows. Take one of these and place it within an air-tight jar and allow it to remain for half an hour. At the end of that time take the second one, which has been exposed to fresh air all the time, and place it in the jar. The new sparrow will readily become dizzy and fall over because of the impurity of the air, while the sparrow which has remained in the impure air and has gradually become used to it, will survive for a much longer time. The amount of poison in the air, when taken suddenly by the sparrow that has been breathing pure air, immediately overpowers this second sparrow. This same thing is true of a person who remains for a long time in a room that is improperly ventilated. The body gradually becomes accustomed to it; but the evil effect is no less sure than if it experienced this suddenly as did the sparrow.

Great care is exercised in keeping a supply of fresh air in the modern torpedo boats. These boats are entirely under water a large portion of the time, and consequently shut away from fresh air. A novel method is practised in ascertaining the point at which the confined air, through rebreathing, becomes unfit for use. White mice are very susceptible to the influence of impure air. A cage of these animals is kept on the floor of the submarine boat, and when the air becomes impure, the mice fall over because overcome by the impure air. Then the commander of the ship knows he must go to the surface for fresh air. Impure air falls to the floor because it is heavier than pure air; hence the danger in the practice of having small children sleep on trundle beds and low cradles in a room with other people.

The symptoms of poisoning by impure air are a tired, languid feeling, headache, drowsiness, nausea, restlessness, insomnia, bad taste in the mouth in the morning. Many a tired mother might receive much more benefit from a night's rest if she would take it in a room flooded continuously with fresh air. Her headache would soon disappear if she would accustom herself to sleeping with the windows well open. All know too well the experience of becoming sleepy, either in church service or while listening to a lecture in a crowded hall. Drowsiness comes on, and it is almost impossible to combat it. On the other hand, with some people the effect of impure air is to keep them from sleeping, and because of this a great many people suffer to-day from insomnia. They will lie awake almost all night, become restless, and secure little or no refreshing from a night's attempted rest. If these people would accustom themselves to pure, fresh air, they would find this symptom would disappear. Many seem to fear the night air. They think it is injurious; but the question might be asked, What kind of air can we breathe at night but night air? There is no injury from night air any more than in the air of the day time if we do not allow too strong a draught on the exposed body.

FOR the mind and the soul, as well as for the body it is God's law that strength is acquired by effort.—*Education.*

Outdoor Sleeping

BERTHA BELLOWS STREETER

Do you remember the time, when you were a little girl, that the boys begged leave to sleep out of doors? They had built themselves a hut down in the pasture and had cooked their own dinner over a crazy open fireplace built of stones. Late in the afternoon Johnny and George burst into the kitchen demanding that mother and you come down immediately to see what a fine hut they had made. George snatched your sunbonnet from its hook on the door and threw it toward you as he rushed from the house, bellowing for you both to "come on and hurry up."

As you and mother leisurely crossed the yard, feeling the spongy earth give at every step, luxuriating in the warm sunshine and catching whiffs of sweet spring fragrance, mother smiled and said, more to herself than to you:—

"I know what the boys want. I don't blame them a bit. I'd like to do it myself!"

And you danced in front of her where you could look up into her lovely face shaded by the familiar blue sunbonnet, and you asked:—

"What is it, mother? Tell me what the boys want."

And she patted your rosy cheeks softly, and there was a sweet light in her eyes when she spoke.

"They want to sleep all night in the open. If they had their way they would get out those old quilts in the attic and roll up in them and sleep to-night under the stars."

You wondered how it was that mother had known before the boys said a word about it; then, as they plead so hard and mother shook her head, you, too, thought that it would be splendid to sleep out all night on the soft, warm spring earth.

But, you remember, in mother's time they did not know what we do now about the advantages of out-of-door sleeping. If people slept outside or in draughty bedrooms it was because they had to, not because they wanted to. As they grew more prosperous they spent more for making their bedrooms "comfortable," in other words, as near being air tight as they could. Here is a quotation from an article published less than two years ago which reflects in a single sentence the sleeping habits of hundreds of thousands of families:—

> The window left open an inch at the top will do wonders toward keeping the air pure, for the foul air thus escapes.

"Open an inch at the top!" Well, that is certainly better than half an inch or no part of an inch at all. But how different is the rest of a creature who sleeps in such lifeless atmosphere from that of one whose cheek is caressed all night long by the cool, invigorating night air!

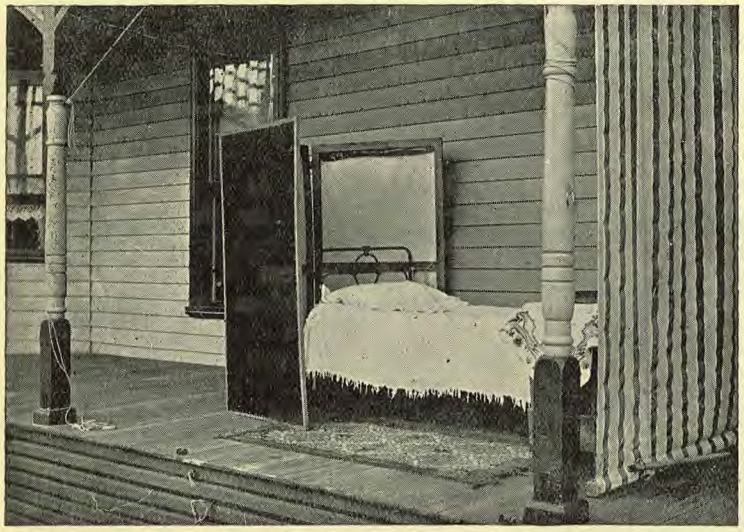
Morning headaches and dullness are never experienced by those who sleep out in the open, and they are almost entirely free from colds. Scientists estimate that convalescents regain their health in one-half the usual time if they can sleep out of doors.

As a preventive of nervous disorders, there is nothing better known to-day, and that is the reason that out-of-door sleeping is recommended for children in school and for busy men and women. Even the month-old baby can be put outside if the change from the sleeping room is made on a warm summer night.

Any family, no matter in what manner it is housed, can have the benefit of sleeping out of doors, for there are many ways of overcoming every difficulty known to home makers. Some people are so fortunate as to possess porches built solely for this purpose; some utilise the porch that during the day serves as an outdoor living room; those who have no porch at all use the fire escape, or fix a cot so that it will slide a couple of feet out over the

window sill, allowing the head of the sleeper to be out of doors, or else have what is called a window canopy that fits around the open window inside, preventing the cold air from entering the bedroom, giving the owner's lungs the benefit of all the oxygen they can accommodate.

In cold weather it is well to lay several thicknesses of newspaper or heavy wrapping paper over the bed springs before putting the mattress on. This will help



"The fresh, clear air that a person breathes while sleeping out of doors is splendid for physical health"

greatly in keeping out wind and moisture, and, consequently, makes the bed much more comfortable. A sleeping bag made of blankets or other warm material is splendid for the grown-ups as well as for the children. Fold the blanket crosswise and stitch it along one end only, thus leaving one long side and one end open. This long opening makes it an easy matter to get in and out of the bag. Loops sewed along the edge through which a tape passes will furnish an easy method of closing the bag—and opening it, as well.

On very cold nights a hot-water bag warms it very agreeably. On top are put two or more quilts that fall down at the front and are securely tucked in at the back and foot. The sleeper is clad in a long flannel gown or kimono, bed shoes, and a night cap that buttons close under the chin and has a cape fastened to each shoulder of his gown with button and button hole. He gets into the sleeping bag, slips off his shoes and puts them where they will keep dry through the night, fastens the bag, tucks the covers well around his neck, and settles down for a dreamless, restful, invigorating sleep.

In warm weather, of course, a cotton gown of figured cotton material fashioned like a bath robe is substituted for the flannel, and the night cap is frequently dispensed with. Going without one entirely is splendid treatment for thickening the hair, and can be done without injury if a person begins in the summer and thus becomes used to very cold air gradually.

Screens to insure privacy and keep out the rain are necessary. One of the best protections is a curtain made of oilcloth. A shade can be removed from its roller, and a strip of oilcloth of the same width tacked on instead. Fastened to the lower porch rail so that the cloth side of the screen is toward the house and so that the cord will pull the curtain up instead of down, a person has a convenient adjustible screen. Another good one, though not as easy to manage nor as advantageously placed, is a roll of oilcloth tacked by one end at the lowest part of the ceiling. The screen unrolls in such a manner as to leave the rolled cloth protected from the rain and is held at the desired height by a loop or knot of heavy braid. If you cannot get oilcloth, canvas or heavy ducking will do.

A window through whose aperature a

cot extends at night should be provided with an awning to shelter the sleeper from rain. In the cold weather a strip of navy cloth is tacked to the bottom of the lower sash. Hanging down as it does over the bed, the opening of the window over the sleeper does not chill the room.

The fresh, clear air that a person breathes while sleeping out of doors is splendid for physical health, but there is far more than that to be gained, it seems to me. Out under the stars that are millions of miles away and night after night silently remind one of the great Creator who holds them in place in their magnificent courses, one can hardly fall asleep with anxious thoughts of the morrow and petty prejudices. The healing attitudes of the mind always claim us when under the spell of the unfathomable universe. Habitually dropping to sleep impressed with the greatness and the goodness of God leads to inspiration, peace, and love to God and man in daily life. And dominated by such thoughts as these, one easily develops more and more into the spiritual likeness of the Master.

"MANY men have lived and died without giving to their kind anything of value, not because they wanted physical and mental gifts, but because they lacked a woman's influence to vitalise them."

Exercise for Brain Workers

SHOULD a tired man tire himself out further with muscular exercise? To make the question practical: Is it good for a business man to leave his desk to play tennis? Argument seems good on either side. Those who say "yes," say that tennis will exercise his muscles, make him perspire, improve his digestion, and quiet his nerves. Those who say "no" declare that he is already tired, and that exercise will weary him still further.

The real truth seems to lie between the two extremes—exercise and no exercise. If a man has been working with his mind, he had better not exercise in a difficult game which requires judgment, memory, comparison, and will—especially if long continued and very interesting. Interest, for instance, gets a man to play tennis for two hours to win back lost honours when his physical condition suggests thirty minutes. The excitement ended exhaustion comes, and this man "puts more into the game than he gets out of it."

A good authority says that boxing and fencing are not good exercise for hard brain workers; they should select long walks, swimming, or something of a similar nature where, after the movements are once learned, the direction is governed by the spinal nervous system.—*The Bush-whacker.*

On the Use of Soothing Syrups

BY W. C. WOODWARD, M.D.

CRYING is a perfectly natural occurrence. On it the very preservation of the life of the individual and of the race depends. Back through untold generations of human beings the cry of pain and of anguish has been a signal of danger. Sometimes it has served to warn others to escape; sometimes to bring aid to the sufferer. Always it has had, and still it has, a very definite purpose; and to silence the cry before its purpose has been accomplished is to do violence to nature.

An outcry of some kind results from pain quite as naturally as does hunger result from lack of food, thirst from lack of water, and nervous exhaustion from lack of sleep. True, as we pass from infancy to childhood, and from childhood into youth, and thence on into manhood and womanhood, crying as the result of pain occurs less and less frequently. But this is merely because physiological and social necessity for crying disappears. The infant cries to bring help. The adult has learned to help himself, or to find help in ways much more effectual and prompt than by crying, or to determine for himself that help is impossible and crying is useless. Therefore the infant cries and the adult does not.

But although crying is a signal of possible danger and a call for help, yet it is quite possible to still the cry without either removing the danger or affording the help called for; just as the engineer may extinguish the burning torch on the track without seeing that the wreck ahead has been cleared away or the bridge rebuilt before he proceeds. And if an engineer who did so extinguish the warning blaze would be regarded as worthy of punishment, what shall be thought of the mother who stills the warning cry of her babe without paving the way to safety for it?

Yet this is nothing more nor less than what the mother does when she gives her little one soothing syrup or paregoric to quieten it; for the chief property of all these substances is to deaden the nervous system, not even to soothe the tortured nerve that is carrying the message for relief, but merely to stupefy the brain so that the message cannot be perceived. And the mother who uses such a mixture merely stills the alarm; she does nothing to avert the danger there may be ahead, of the nature and extent of which she knows nothing. It may be the little one is suffering with indigestion, but possibly with meningitis, earache perhaps, may be an infected mastoid. The mother does violence to nature by stilling nature's cry for help. She puts into the baby's system a poisonous drug of which she knows nothing; a drug of whose very name she may be ignorant; a drug that is bound to act upon the heart and lungs, to influence digestion and assimilation of food, and to benumb brain and nerves, in ways too subtle for her to understand. And then, if nature, despite such meddlesome interference, restores the child to apparent

health the mother is proud of what she has accomplished. And the process is repeated, and repeated again each time the baby cries. But if outraged nature fails to make the child well again, and perhaps after medical aid has been summoned too late, the little one is numbered among those who have passed beyond, the mother is fortunate in her grief if she does not speculate upon the part that her own hand has played in the outcome. And if, though death may not mark the end, the mother finds some day that her baby is a victim of a drug habit, the situation is not much better. The sallow skin, disordered digestion, the failure of growth, the fretfulness when not under the influence of the drug—all these remind the mother of her folly; and the patient care necessary to restore the baby to health and vigour and a normal existence will prove ample penance for her indiscretion.

Children and Danger Signals

Mary L. Cook

"MOTHER, what does the 'toot, toot' mean?" My little son was listening to the incoming train. It had never occurred to him before to find out the meaning. He was three years old.

"It is a warning, my son, to keep off the line as the train is coming. If my little boy would not listen to the 'toot toot' he might get run over by the train." I had tried to impress upon him the importance of looking out for vehicles, tram-cars, trains, etc., and thought it wise to instruct him to be on the lookout for the signals, as well as to observe the signs of danger with his eyes. I explained to him the way in which the fire engine gave its signal, and told him whenever he heard *that*, he must not try to cross the street, and must keep out of the way so he would not get run over.

Then I told him about the tram-car bell, and how it was given as a danger signal to keep little boys off the track. I told him about the "honk, honk," of the automobile, and if the little boys and girls would not listen to it and keep out of the way, they might get run over, and we would never have our little children any more. I have always tried to teach them when small to hold to my hands when going on the street, and insisted on them doing this until they were old enough to be trusted to walk by my side. Once when my little daughter was with me on a crowded street we started to cross to the other side. She looked one way and saw quite a little ways down the street an automobile coming toward her. Thinking that she could escape the danger and get safely across, before I could even think she darted suddenly across the street, and was almost to the other side when an automobile, coming from the other way, just barely had time to stop before running her down. I was terribly frightened, as was every one near, and she certainly remembered from that time on to beware of such things and listen to mother's warning.

It is a common occurrence for children to lose their lives in just such a manner.

It is a great mistake to allow children to play in the street, to run back and forth, and dodge carts, automobiles, etc. They sometimes get so absorbed in their play that they do not hear the signals. Sometimes it is no fault whatever of the owner of the vehicle, but purely the carelessness of the child. Children should be taught to heed the danger signals of all kinds in the city, or country either, for that matter, and there will be fewer deaths from such causes.

City children have few places to play, except on the street, but they should have certain limits as to where they shall play, and should not be allowed to cross the street and play carelessly wherever they wish. If we as parents would try to impress the dangers of such avoidable accidents, we would have less reason to reproach ourselves for our carelessness.

Another thing I have tried to impress upon the mind of the children is the danger of stepping on tram-car or railroad lines. The foot might slip into the crevice between the rails and become fast. Once

ONE OF MELBOURNE'S BUSY THOROUGHFARES

Sears, Photo., Melbourne

when my little sister spent the winter with us, she had to cross the railroad line to get to school. She was going to school one day and started to cross the street at the railroad crossing. We never knew how it happened, but supposed she must have been walking the rail. She said, however, that she just stepped on it, when her foot slipped into the switch and she could not get it out. Other children were going to school and saw her plight. Some of them tried to help her. A woman living near by tried to help her, but none of them could free her foot. Suddenly they heard the whistle of the fast train. They looked up and saw it coming around the curve in the track a short distance away. Just then a big girl saw her, ran to her, unbuttoned her shoe, and jerked her foot out as the train went flying past.

A boy at Ohio was crossing the line. His foot slipped into the opening, and he was held fast. He tried in vain to get his foot out, but when the train was seen to be approaching he fell over to the side of the line as far as he could, and let the train crush his foot! A friend of mine and his teacher asked him why he did not remove his shoe. He said he did not have time, and knew he could not save his foot, so only tried to save his body.

Such terrible accidents as this should teach every boy and girl to be careful and step *over* rather than *on* the line.

There are so many accidents that are unavoidable, but such as the above could be avoided. Teach the children the "danger signals," and impress upon them strongly the result of neglect.

THE self-made man is never finished until some woman gets busy and polishes off the rough edges.—*Farm Journal.*

"THE deeper you breathe, the more of the lungs that you expand, the more oxygen is absorbed; and, consequently, the finer your complexion, and the more powerful your personal magnetism will become."

The Preservation of the Temporary Teeth

"WHY go to the trouble and expense of having the temporary teeth filled, when they will be replaced in two or three years by the permanent teeth?"

Unfortunately, the above expresses the attitude a great many well-meaning parents take with reference to their children's temporary teeth. The result is the temporary tooth is allowed to decay until the pulp becomes exposed, and the tooth begins to ache. After days and nights of suffering on the part of the child, the pulp dies, and the tooth abscesses, causing a flow of pus in the little sufferer's mouth —a very unhealthy condition. As a final and deplorable result, the tooth is lost.

But the trouble does not end here. The temporary teeth preserve the contour of the jaws. Premature loss of the temporary teeth almost invariably causes the permanent teeth to come in unevenly, thus resulting in an unsightly mouth and improper mastication of food.

Have the little ones teeth filled while the cavities are small, and avoid future suffering.

Save the Child's First Permanent Molars

The most important teeth in the mouth are the first permanent molars. They regulate the position of all the rest of the permanent teeth. Their extraction is a frequent cause of irregularities of the teeth.

There are four first permanent molars—two above and two below. They make their appearance about the sixth year, and are often called sixth-year molars. Coming, as they do, immediately behind the last temporary teeth, and before any of the temporary teeth have been lost, they are frequently mistaken by the child's parents for temporary teeth. It therefore comes about, in many cases, that these permanent teeth become deplorably decayed before the services of a dentist are sought.

If you value your child's health and appearance, do not neglect the first permanent molars.—*A. E. Converse, D.D.S*

WHAT TO DO TILL THE DOCTOR COMES

BY MARY W. PAULSON, M.D.

MANY lives are saved by knowing what to do in case of emergency. One must have cool head and quick action to make use of this knowledge. Many persons know what to do, but at the necessary moment they "lose their heads," and hence their knowledge is absolutely useless.

There are many emergencies continually arising in every-day life the results of which are serious. We may first consider that of hemorrhage. Someone has cut his finger, or toe, or some portion of the arm or leg, and the result is a severe hemorrhage. Often a physician could not reach the place in time to save the life. What are you going to do?

If the hemorrhage is coming from some portion of the hand or arm, a handkerchief, or any piece of cloth that can be got hold of, or possibly a piece of rope, can be tied around the upper arm, and a pencil or stick placed in the double knot that is used in tying, and the knot twisted by this pencil. In this manner the blood supply will be shut off in the arteries going down the arm, and thus the hemorrhage will be stopped.

If the hemorrhage is from the foot or the lower limb, the same should be done as on the upper arm, excepting that the handkerchief should be tied around the upper thigh. If the thigh is very fleshy, place in the handkerchief a small stone or piece of wood on the upper inner surface of the thigh. This will make greater pressure upon the blood-vessel. The lives of children oftentimes can be saved in this way, as they frequently so injure themselves as to cause serious hemorrhage. Any mother can save the life of her child by these simple means.

A hemorrhage from the lungs is very alarming when it comes suddenly. The patient coughs up bright red, frothy blood. Immediately his strength seems to go. Have the patient lie down with the head and shoulders up. Get your patient quiet as soon as possible. Keep your own nerve steady. If there are any uncontrollably nervous persons in the room, put them out.

Have the patient take small lumps of ice. Put cold cloths on the chest. Ice is better if you can get it, otherwise the coldest water you can get should be used. Keep changing these cloths, keeping the chest cool. Also put a cold compress or an ice-bag on the back, between the shoulders. Notify a physician at once, but above all things keep the patient quiet, and do not alarm him in any way.

While a hemorrhage from the lungs alarms us, a hemorrhage from the nose is not usually so alarming. This is because we do not realise the seriousness of nose-bleed. It can become very serious and needs attention. Loosen the clothing about the neck of the patient. Place him on his back, with the head elevated, and apply cold cloths over the bridge of the nose and also to the back of the neck. Firm pressure may be made on the nose by the thumb and finger. If this does not stop the hemorrhage, pieces of gauze may be pushed up and back in the nose, so as to stop up the nasal passage. If

clots form in the nose, leave them alone; they of themselves will stop the hemorrhage.

As to Burns

Another common accident is that of burns. One of the first principles in the treatment of a burn is to protect the tissues from the air, and this should be done by some material that is non-irritating to the tissue. In the first place if the burned portion is covered with clothing this should be removed. But the clothing should not be rapidly torn off. It should be cut open, and taken off very cautiously, care being exercised not to pull off any of the tissue. Better soak off the clothing that is on the burn with oil, such as sweet oil. Then place over the burn a piece of soft cloth that is thoroughly saturated with an oil—olive-oil, or sweet-oil, or equal parts of linseed-oil and lime water or picric acid. If you cannot get hold of any of these quickly, then use wet starch, or the white of an egg, or wet flour, or cloths soaked in soda water. Do not use vinegar or acids of any kind, and do not cover the burn with absorbent cotton, as the cotton will stick to the flesh. It is important that all of these articles used should be clean, in order that the burn may not become infected with germs.

When burns are very severe, covering a large part of the body, the patient has to be put in a bath the temperature of the body, about ninety-eight degrees. This relieves greatly the shock of the burn to the nervous system.

The Clothing on Fire

In case the clothing gets on fire, an effort should not be made to run away from the fire, but rather lie down at once and roll the fire out, or to lay the body down and throw on to it a coat, or blanket, or something of that kind which can be quickly got hold of to put out the fire. Do not try to find water, but instead use a rug, a table-cover, or anything else of that nature which can be found. Care should be taken to place the rug or blanket over the chest first to protect the face from fire.

Something in the Windpipe

Another accident that frequently happens to children, and sometimes to adults, is that of swallowing into the air-passages some foreign body, thus producing choking. Immediately the head should be lowered—in fact the victim should be stood on his head—with sharp slapping or percussion upon the back. Oftentimes the foreign body can be dislodged by running the finger down the throat and pulling it out.

THE DATE TREE

LITTLE HELPERS

WASHING and wiping the dishes,
Bringing in wood from the shed,
Ironing, sweeping, and dusting,
Trying to make well our bed.
Taking good care of the baby,
Watching her lest she might fall,
We little children are busy,
For there is work for us all.

Reading the paper for grandma,
Who sits by the fire busy knitting,
Setting the table for supper,
Or on errands fast we're flitting;
Driving the cows to the pasture,
Feeding the horse in the stall,
We little children are busy—
Yes, there is work for us all.

—*Housekeeper.*

The Date Tree

TO the Arab mind the date tree is the perfection of beauty and utility. Every part of this wonderful tree has its use to the Arab. The pistils of the date blossom contain a fine curly fibre, which is beaten out and used in all Eastern baths as a sponge for soaping the body. At the extremity of the trunk is a terminal bud containing a white substance resembling an almond in consistency and taste, but a hundred times as large. This is a great table delicacy.

There are said to be more than one hundred varieties of date palm, all distinguished by their fruit, and the Arabs say that a good housewife can furnish her husband with a dish of dates differently prepared every day for a month.

Dates form the staple food of the Arabs in a large part of Arabia, and are served in some form at every meal. Syrup and vinegar are made from old dates: and by those who disregard the teachings of the Koran a kind of brandy is distilled from them. The date-stone is ground and fed to cows and sheep, so that nothing of the precious fruit may be lost. Whole stones are used as beads and counters for the Arab children in their games on the desert sand.

The branches, or palms, are stripped of their leaves, and then used like rattan for the making of beds, tables, chairs, cradles, bird-cages, boats, etc. The leaves are made into baskets, fans, and string, and the outer trunk furnishes fibre for rope of many sizes and qualities.

The wood of the trunk, although light and porous, is much used in bridge-building and architecture, and is quite durable.

In short, when a date palm is cut down, there is not a particle of it that is wasted. This tree has been called the "poorhouse" and asylum for all Arabia; without it millions would have neither food nor shelter. One-half of the population of Mesopotamia, it is estimated, lives in date mat dwellings.—*Harper's Weekly.*

A Boy with Nothing to Do

DID you ever see a boy who had nothing to do? I will tell you about one. He was the son of a rich man who had a great many servants about the house. Willie —for that was the boy's name—had no work to do. The fire was always made for him in winter, and his shoes were polished by a servant every morning while he was asleep. Willie had a pony, but he was never allowed to saddle it himself.

He had a little dog-cart, but he was not allowed to hitch the pony to it. This work had to be done for Willie by one of the many servants about the great house where Willie lived.

Willie went to school, but a servant went along to carry his books for him and to take the pony home. Willie always rode to school. The servant went for him in a closed carriage whenever it rained. When it was very cold, he was wrapped in furs and heavy blankets.

The way to grow strong and healthy.

He was not a sickly boy by any means. He was not really a lazy boy, but his parents took a notion that he ought never to work, because they were rich. His mother did not like to see him wear soiled clothes. She wanted him to have tender, clean, white hands, and a soft, delicate skin. He was not even allowed to play with other boys for fear he might get hurt. In the summer he had to keep in the shade. In the winter his place was by the warm fire.

When Willie grew to be a man he had no strength. His muscles were weak and flabby, his bones were soft, and his nerves feeble. He had no energy, no courage. He went to school nearly all his life, but he never had much care to learn. The young men all laughed at him, and all the sensible girls made fun of him. He tried to look after his business when his father died, but he knew nothing about business. Then his mother saw her mistake.

When Willie got his share of his father's estate it soon went. After spending his own money he began to call on his mother, and as she always had petted her boy she could not now deny him anything. It did not take many years for Willie's mother to become a poor woman. She had to sell her property. She moved out of a big, fine house into a little one, and out of that into a cabin, and then began real poverty. Willie hung around billiard saloons and hotels, and lived on scraps until the hotel keepers got tired of him, and then he took to stealing and forging names to cheques.

At last he landed in the penitentiary. His mother, poor woman, has for years been living on charity. Willie is now

nearly fifty years old, and his mother is a tottering old woman without home or friends.

Do the boys who read this want to live such a life as Willie did? Too many boys think their parents are cruel and unkind because they make them work, and do not give them everything they want. Wise parents never allow their children to grow up in idleness. Every boy and girl ought to have to work. A boy or girl who has never learned to work is worthless. The body cannot be sound and strong without work. Unless the body is sound and strong, the mind is almost sure to be weak.—*Cumberland Presbyterian.*

One Mother's Way

AFTER teaching another mother how to take care of her child's health, I went home and found one of my own boys ruining his eyesight reading fine print in the waning afternoon light. I was going to begin sharply, but remembered the boy's impatient temper, so I said: "Son, did you ever hear the story of the carpenter of Carlsbad?"

No, he hadn't.

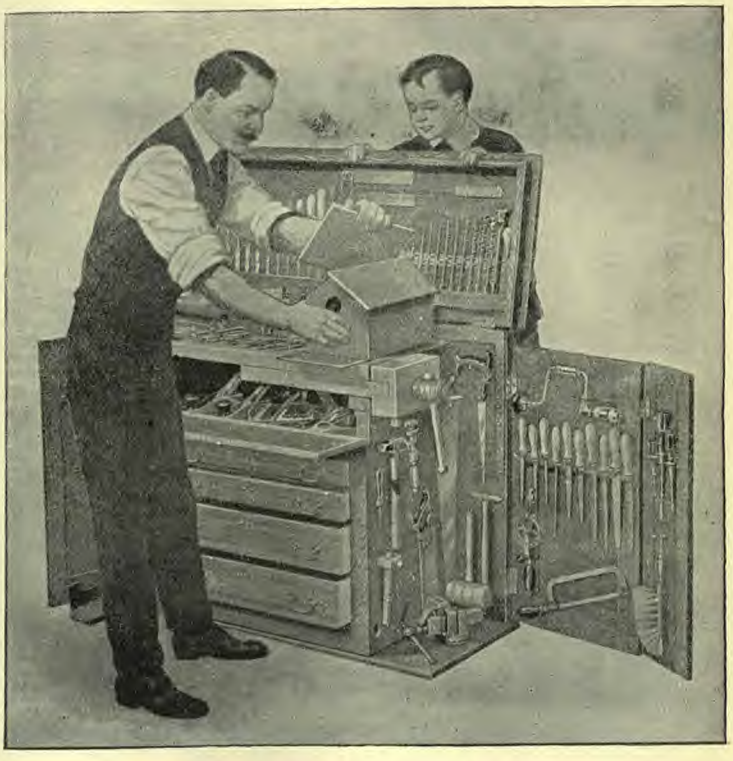
"Well, come and sit with me, and I'll tell it.

"There was once a carpenter who lived in Carlsbad, and he was always bragging about the fine things he could build if he had good tools. One night he had a dream. A friend brought him the finest chest of tools that had ever been seen—shining saws, sharp chisels, planes, a brace and bit, and all the things necessary to build a house.

"'Take care of these,' he said, for you will need them all your life, and you will get no more.'

"When the carpenter woke up, he found it was not all a dream; for on the chair by the bedside was the very tool-chest he had dreamed of—complete, new, and in perfect order.

"You may imagine how pleased he was. But as time went on, he forgot



A wise carpenter takes care of his tools

what his friend had told him about taking care of his tools. When he used his saw, he let its teeth get dulled; when he used his chisels, he left them out where they got rained on or rusty. Gradually everything got out of place, broken, and dull-edged. Suddenly there came a call to build a new palace for the emperor. It was to be the finest palace in the world, and the best workmen were called in to help. Our builder came also. Here was the great job he had wanted all his life; now he would make a reputation and a

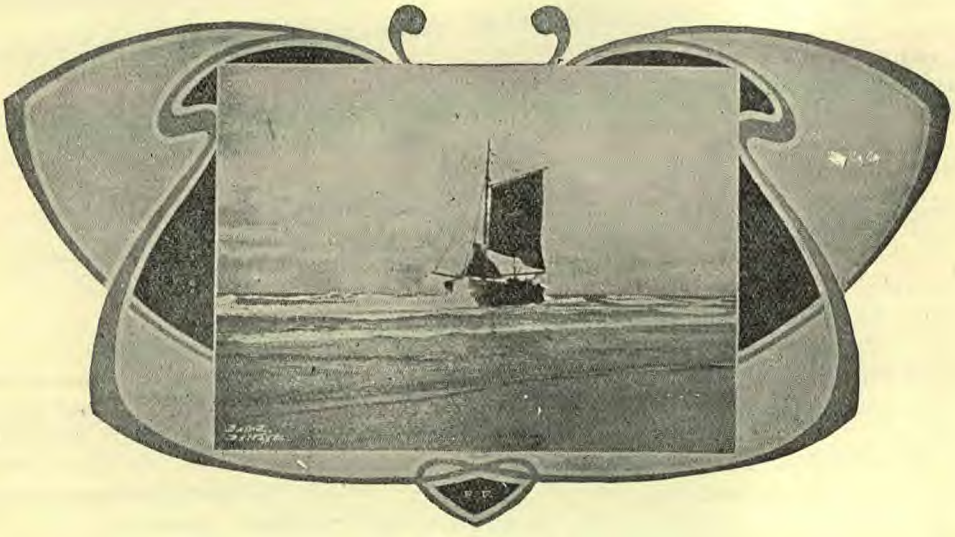
fortune. Alas! when he began to work, he had nothing fit to use. Some of his tools were lost, all were dull, rusty, and worthless, and he could accomplish nothing. Any moral there, Donald?"

"You mean my eyes?"

"Of course, and other things too. Your faculties are your working tools. Listen, all of you," I said to the family, who had just come in from school: "You children all began with a good box of tools — sharp eyes, sound teeth, perfect hearing, a good stomach, a normal nervous system. I've helped keep your physical machinery in good running order by teaching you the truth about it. But I cannot follow you around all the time, and keep you from blunting your tools. If you will read fine print in the dusk, crack walnuts with your teeth, or eat chocolate caramels at bedtime, you will have no eyes, no teeth, no stomach left when you are forty. The doctors are pretty smart nowadays, but I have never heard yet that they could supply you with any of these things to take the place of the old ones that are worn out. Take care of your tools of living."—*Charlotte Reese Connor, in Ladies' Home Journal.*

A Good Doctor

JOHNNY was sick. He was suffering from bad temper, because he couldn't have his own way. Sister Mary said she would bring a doctor to cure him of this dreadful sickness. All the morning she played with him, brought out her toys to amuse him, and at last Johnny's face grew pleasant again. The doctor's name was Sister Mary, and the medicine she gave him was something to do. This medicine is also good for older people.—*Selected.*



[Send questions for this department to the Editor, LIFE AND HEALTH, Warburton, Victoria.

NOTICE.— Subscribers sending questions to this department should invariably give their full name and address, not for publication, but in order that the Editor may reply by personal letter if he so desires. Because of this omission several questions have not been answered.

91. Food for Invalids; Ulceration of the Stomach; Morning Sickness

C. R. (Boort) asks:—

1. Is a certain patent food a valuable food?

2. What else would you recommend for invalids?

3. How can ulceration of the stomach be detected?

4. Remedy for ulcer of stomach?

5. What is the remedy for morning sickness in pregnancy?

6. What is the remedy for morning sickness combined with ulceration of the stomach?

Ans.—1. The food is used largely at the present by medical men, and is a highly nitrogenous food, but we do not believe its nutritive value corresponds in any way to its cost.

2. Raw eggs, gluten (40%), malted nuts, and good, unfermented wines are quite as beneficial and much more economical.

3. Mistakes are often made in regard to this trouble, and diagnosis of "ulcer of stomach" is often given when there is only an irritable condition. On the other hand, cases occasionally occur which are not recognised till perforation and death take place. A skilled medical man only can detect this trouble. The most characteristic symptoms are vomiting of arterial blood, great pain after food, generally localised, localised tenderness that can almost be covered with finger just below the ribs arterially, or at the back to the left of the eleventh or twelfth dorsal vertebra. Sometimes gastric hemorrhage is only recognised by the passing of tarry blood in the stools. This is especially the case when the bleeding is slight. At times the bleeding is so severe as to cause sudden death.

4. Rest in bed and very light diet, such as infant foods, gluten, zwieback, and milk. Only sufficient food should be given for a week or fortnight to prevent collapse. Very much less food is required while in bed.

5. Light, hot liquid food, such as groats, gluten, granose biscuit and hot milk should be taken half an hour or more before rising. Only a light breakfast should be taken. A rest in the horizontal position for an hour after meals is beneficial. Avoidance of food altogether till mid-day is frequently very helpful.

6. Same as for ulceration of stomach as already given.

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92. Warts

"Subscriber" asks for advice for "removal of warts from hands and forehead."

Ans.—Two or three applications of glacial acetic acid (every other day) will remove these growths. Care should be taken not to touch the sound skin with the acid. Smear the skin adjacent to the wart with a little vaseline or lanoline.

93. Pimples

"Kalgoorlie" complains that her nose "is always red and very painful, and comes out in pimples with little white specks. It has been like this for about twelve months."

Ans.—Probably the digestion is at fault. Avoid drinking with meals, especially tea, coffee, and cocoa. Avoid meat, sugar, oatmeal porridge, cakes, pastry, or any foods cooked with fat of any kind or raising powders. Masticate thoroughly all foods. Drink freely of water going to bed and on rising. Before retiring at night steam face well, and after sponging with cold water cover with a lotion made of calamina, one ounce; oxide of zinc, one ounce; and lime water half a pint.

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94. Chronic Constipation

"South Kensington" (N.S.W.) complains of sleeplessness with chronic constipation. Says he sleeps when the bowels are properly opened. He complains of other symptoms which are evidently also the result of constipation.

Ans.—Constipation is usually a result of imperfect digestion. With perfect digestion in the mouth and stomach constipation would cease to exist. It may be that the symptoms of indigestion are not very prominent, but the tongue will in all probability be coated, especially at the back part. Perfect digestion requires thorough mastication; and, consequently, the aid of the dentist is absolutely necessary. Decayed teeth must either be removed or filled, and artificial teeth must be supplied where the teeth are absent. Avoid tea, coffee, and cocoa. No drink should be taken at meals, but a plentiful supply of water between meals, at bedtime, and on rising, is very beneficial. Avoid milk (especially when boiled). The evening meal should be very light, consisting of zwieback (twice baked bread), granose biscuits, and fruits. Fresh or stewed fruits should be taken with two meals of the day. Avoid hard-boiled and fried eggs, corned meat, pastry, scones, cakes, and rich puddings. Attention to the digestion is better than laxatives, or even laxative foods. Exercise that brings the abdominal muscles into play is excellent for chronic constipation. Exercise with spade or fork in the garden is excellent. Woodchopping and walking will also be found very beneficial. We believe in natural rather than artificial exercises, but the latter are not without benefit. Improvement of the general health is followed by improvement in the digestion, and improvement in the digestion will most certainly help constipation.

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95. Sciatica and Bleeding Piles

"Sciatica" asks for a remedy for sciatica and bleeding piles.

Ans.—Sciatica is a most obstinate form of neuralgia of the sciatic nerve, due to neuritis (inflammation of the nerve) or peri-neuritis (inflammation of the coverings of the nerve). It is often dependent on gout or rheumatism, but often no very definite cause can be assigned. It may be due to tumor or loaded bowels, or again it may be brought on by exposure to wet or cold. Most of the remedies recommended for sciatica are of such a nature that they can only be given at a sanitarium or hospital. Undoubtedly very hot and very cold applications applied alternately at back of hip and leg (along the course of the nerve) are very beneficial. Each hot fomentation should be applied for ten minutes, and the cold for two. The treatment should be persevered in for some weeks. The hot and cold applications have much better effect when applied by means of a douche, the pressure of the stream of water helps to contract the small blood vessels in and around the nerve. Rest in bed is a very great help to all treatments. Massage with galvanism is very helpful. Dr. Benjamin Lee, in referring to the application of massage for the cure of sciatica, observes: "It is in sciatica, of all the neuralgias, that massage has now its greatest reputa-

tion. Truly astonishing results have been obtained, even when the affection has been of many years' standing, and after every other conceivable means of relief has proved unsuccessful. In sciaticas of a rheumatic character induced by cold, the task, as a rule, is an extremely easy one. Strong stroking, alternated with percussion, along the course of the affected nerve, is usually all that is needed to cure the disease in a comparatively short time." Enveloping the leg in powdered sulphur and flannel bandages over the whole of the leg at night time has often proved very beneficial. Sometimes prolonged and systematic movements of the leg by which the nerve may be stretched without operation have been found of greatest use in very chronic cases.

For bleeding piles the bowels must be kept regular by attention to digestion. Cold water should be taken freely on retiring and rising and between meals. Meat and all irritating foods should be avoided. Scones, pastry, cakes, boiled milk should be cut out of the dietary. Undoubtedly an operation is often the only permanent cure.

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96. Mosquito Bites

"Mosquito" asks for cure for mosquito bites, and also for common swelling caused by flies in the summer.

Ans.—A weak solution of ammonia in water, salt and water, or of some alkali, such as baking soda in water, will cure the irritation. The swelling produced is best treated by carbolic oil (8%), followed by hot fomentations.

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97. Fresh and Stale Bread

"Reader" sends us an article by Dr. Jamieson which appeared in the *Argus* some weeks ago on the use of "Fresh and Stale Bread." Dr. Jamieson advocates the use of fresh bread as being more digestible than stale. Dr. Jamieson states: "Given the proper amount of mastication it is, in my own belief and opinion, the case that fresh bread, like fresh toast, is both more wholesome and pleasanter than stale." Further on the doctor states, "And how appetite favours good digestion has been shown, not only by human experience, but by experiments on animals." In speaking of stale bread the doctor writes, "The average person fails to apply the necessary time and effort to its mastication, but moistens it with the liquid available, and so swallows it without the preparation in the mouth which is a necessary preliminary of easy digestion." Dr. Jamieson also complains that those who advocate stale bread are often inconsistent in their daily practice, and demand "hot roll for breakfast and hot scones for tea, possibly preferring even to these that dietetic abomination, hot muffins."

All who know Dr. Jamieson cannot help but esteem him very highly as an original thinker. His idea of the easier digestibility of new bread is certainly not shared in by the great majority of medical men. It is certainly better to eat new bread, masticating it thoroughly without drinking tea, coffee, or other drink, and with an appetite rather than to take stale bread, moisten it in the mouth with some artificial fluid, and swallow without proper mastication or enjoyment. Probably Dr. Jamieson is speaking from personal experience. He does not "enjoy" stale bread, and, consequently, he does not digest it so well. Digestion cannot be carried on favourably without an appetite. Most people, however, thoroughly enjoy bread twenty-four to thirty-six hours old, and find that it is much more easily masticated, that it causes a greater flow of saliva, and is not followed by a feeling of an oppressive "lump" in the chest that is so often experienced after partaking of new bread that cannot be properly separated into fine particles by the action of the teeth.

Robert Hutchison, M.D., F.R.C.P., in his recent work on "Food and the Principles of Dietetics," after speaking of the greater digestibility of dry bread and biscuits, remarks: "The notorious indigestibility of new bread, on the other

hand, is due to its moistness, which makes it difficult to chew, and at the same time prevents it from soaking up the saliva." And again, "New bread, unless very thoroughly chewed, offers greater resistance to the stomach than stale bread, owing to its tendency to form doughy masses."

98. Rupture

"Willis" writes in regard to her infant who suffers from a lump in the right groin, and states that "with slight pressure on the lump there appears to be a gurgling noise," and asks advice in regard to an operation.

Ans.—This is evidently a case of hernia or rupture, a small portion of the bowel descends through an opening in the lower part of the abdomen. The mother states the lump can be kept back by means of a firm bandage. We would advise her to continue this treatment till the child is six months old, and then if the rupture still exists to have it operated on. Quite a number of ruptures in infants disappear altogether when kept back in the abdomen for three or four months.

99. Patent Foods

"Neurosine" writes in regard to two patent foods.

Ans.—We believe they are highly nitrogenous foods, but that their nutritive value does not in any way correspond to their cost. The same amount spent in fresh eggs, good milk, gluten, malted nuts, and unfermented wine, etc., would give much more satisfaction.

100. Psoriasis

A subscriber from Willoughby writes concerning a skin trouble from which she has suffered for a long time, and states she is "covered with blotches, or scales, from my head to my feet." The disease in all probability is "psoriasis," and really requires sanitarium treatments. The vegetarian diet is absolutely necessary for a cure. Prolonged tepid baths and the use of a boracic acid ointment (boracic acid, half an ounce; balsam of Peru, two teaspoonfuls; and vaseline, two ounces) will be helpful. The case, however, needs the supervision of a medical man who has had experience with the disease.

101. Diabetes

Several have written for information on this subject. The subject is dealt with in another part of this issue.

102. Goose-Flesh; Obesity

"Lilydale Inquirer" asks what is the best treatment for (1) "goose-flesh," which is confined to the legs? (2) Obesity around waist and hips when the rest of the body is thin?

Ans.—(1) This is entirely a nervous phenomenon, and does not indicate ill health. It is caused by irritation of superficial nerves of the skin by cold or other irritant. The parts should be kept as far as possible at a uniform temperature, and unirritating material should be worn next the skin, such as thin cotton garment, or cellular cotton or silk. Regular bathing with cold water is helpful. The hot baths spoken of should only be taken occasionally, say, once a week.

(2) The rubber bandages suggested would be worse than useless. A thorough course of local massage is the best remedy we can suggest.

103. Hay Fever

"Coraleigh," from symptoms described, is evidently suffering from severe form of hay fever. A residence at the seaside or on the mountains is advised. Agricultural and dusty districts should be avoided. A frequent use of a preparation of Parke Davis and Co. is helpful; viz., "Inhalone." Any nasal affection should have special treatment. Cold sponge and use of a rough towel in the morning is recommended right through the year.

104. Pimples and Blackheads

"Timaru" asks for remedy for "pimples" which keep erupting on the face, and "blackheads."

Ans.—The writer is referred to answer already given in these notes. She also complains of being pale and having a sallow complexion. The digestion and general health is evidently at fault. A personal examination by a medical man is recommended in this case.

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105. Alcohol in Cordials

The Rev. Wm. Curner writes in reference to the amount of alcohol contained in most of the common cordials, especially hop beer. Hop beer mostly contains a very small percentage of alcohol, but it varies with every brew put on the market, and very rarely runs up to two per cent. If this mark is reached the vendors are liable to prosecution. In most of the cordials the very small amount of alcohol is a negligible quantity, and would have no effect on the system, neither would it increase the desire for stronger drinks. Undoubtedly a small amount of alcohol is formed in the alimentary canal whenever unsuitable combinations of food are taken, but the alcoholic effects are not detected. The sugar, acids, and other ingredients that these drinks contain do harm to the digestion, and, consequently, they are to be avoided. Every ingredient added to pure water (with the exception of the natural fruit juices) detracts from the value of the drink.

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106. Weak Throat

"Sexton," a subscriber from Sexton asks for good home treatment "for a lady with a weak throat." A "weak throat" often means a weak body or a delicate constitution. Local remedies are only of temporary help unless the constitution is built up at the same time. Often a diseased throat fails to recover because the digestion is at fault. We know that a poor digestion is accompanied by a more or less coated tongue, and there is undoubtedly a similar relationship between the stomach and the throat. A gargle of salt and water (teaspoonful to half a pint) twice daily, and a painting of the throat with a ten per cent of "Protargol" is very helpful. Cold water applications to neck and upper part of chest night and morning produce good results.

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107. Rheumatism

"Bridge Street," Woolvoloin, asks if water can produce rheumatism, or impurities contained in water or sweet fruits, such as dates, figs, raisins, honey, and melsitos. Our subscriber states that "in one of our local papers an article was written by a doctor who said the Brisbane supply of water contained ingredients which would cause rheumatism." The chief impurity in water that causes rheumatism is lead, consequently lead pipes and cisterns are to be avoided. Rheumatism undoubtedly primarily has its origin in some digestive disorder. A chill or exposure to cold may be, and very often is, the immediate precursor of rheumatism, but apart from impure blood—the result of improper food or impaired digestion—these causes would not bring on the trouble. Every disease has more than one cause. Our bodies can grapple with diseased germs, chills, etc., when not supplemented by other unfavourable surroundings, but they are overcome by a combination of two or more causes. A chill may produce diphtheria, tonsilitis, pneumonia, kidney disease, or bronchitis, but only when combined with some other predisposing cause—unless the predisposition exists the chill will do no harm unless very severe and prolonged. The disease produced thus depends on the predisposing cause, and that is found in hereditary or the manner in which we live. Sweet fruits, dates, figs, raisins, honey, and melsitos are all healthy foods, and unless they are imperfectly digested would not increase the liability to rheumatism. Cane sugar and

articles containing it, such as jams, very often disorder the digestion, and should be avoided.

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108. Hot Feet

" Elmsford " writes that she suffers very much from very hot feet, mostly at night after retiring—that she is in perfect health in every other way.

Ans.—We would advise our correspondent to soak the feet and legs in tepid water (98° F.) for half an hour before retiring, and also to rest the legs in a horizontal position as much as possible during the day. It is also important to keep the bowels acting regularly.

The writer also asks about certain patent medicines. These we do not recommend.

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109. Goitre

" Hastings " asks for remedy for goitre.

Ans.—Goitre is generally met with in its simple form—an enlargement of the thyroid gland of the neck—or in conjunction with great protrusion of eyes and palpitation of the heart. The latter form (the exophthalmic) is of a very serious nature and requires the attention of a skilled physician. Of recent years some good results have been obtained by the removal of the gland under a local anæsthetic. Simple goitre, if of recent origin, can be improved by attention to the general health with hot and cold applications to the throat daily. Galvanism regularly used for some months sometimes produces good results. Some medical men recommend a strongly interrupted faradic current.

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110. Hives

" Maitland " asks for a remedy for " hives." " It appears in the form of large white lumps, which are extremely itchy, and become very red when rubbed."

Ans.—This trouble is generally the result of errors in diet. Tinned fish, canned meat, certain fruits, such as raspberries, strawberries, pineapple, etc., may cause it. Bites of insects often cause the trouble. The writer remembers a very severe and prolonged case the result of a sting from a bee. It is very important to attend carefully to any digestive disorder that may be present. Prolonged tepid baths containing half a pound of baking soda to thirty gallons of water, sponging with vinegar, or alcohol and water (equal parts), will give temporary relief. The cold morning sponge and the wearing of unirritating garments next the skin are advisable.

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111. Measles and Mumps

A writer asks if these diseases can be contracted more than once by the one person.

Ans.—In the great majority of cases one attack is permanently protective. The writer, however, has treated quite a number of second attacks of measles. Occasionally the second attack appears so quickly after the first that it may be looked on as a relapse. The proclivity to repeated attacks occasionally runs in families. A great many of the reported second and third attacks, however, must be looked on as a mistake in diagnosis.

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112. Leucorrhoea

" Kotopna " complains that her little girl nine and a-half years old has " whites," and often complains of headache. Whites (leucorrhœa) is only a symptom of disease. Probably in this case it is from vaginal irritation. Keep the bowels regular by plain diet and plenty of pure water between meals and on retiring and rising from bed. Inject hot water with half a teaspoonful of alum or tannin to the half pint every night. A sitz bath twice weekly should also be given. If worms (thread) exist employ remedies suggested in a previous issue.

113. Electricity

"Palmerston North, N.Z.," asks if electricity is of any use in the treatment of severe cases of nervousness or neurasthenia, and whether a certain dry battery belt put on the market for all nervous diseases would be beneficial?

Ans.—We would not advise the indiscriminate use of electricity for any complaint. "Neurasthenia" is a convenient term embracing a multitudinous variety of nerve troubles, the term certainly would not give any medical man sufficient information on which to base treatment. We would certainly not advise the use of any of the advertised battery belts. They are merely a method of extorting money from sufferers. We have met in consultation many who have been duped by these advertisements. We do not remember a solitary case where any benefit whatever has been derived, although they are being used quite extensively.

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114. Cerebral Concussion

"Beverley, W.A.," who is under treatment by a medical practitioner, asks if anything can be done to relieve the condition described by his doctor as "the after effects of cerebral concussion." We quite agree with the opinion of his medical attendant that the all-important remedy is "rest," and that the continuance of his work as clerk will certainly delay recovery. Avoidance of all stimulants as tea, coffee, and alcohol is absolutely necessary. Tobacco should not be used in any form. A vegetarian diet will keep the blood in a less toxic condition than when meat foods are used, and thus enable the nerve centres to resume their normal functions more quickly. A month's treatment at a sanitarium would prove of great benefit.

W. H. J.

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