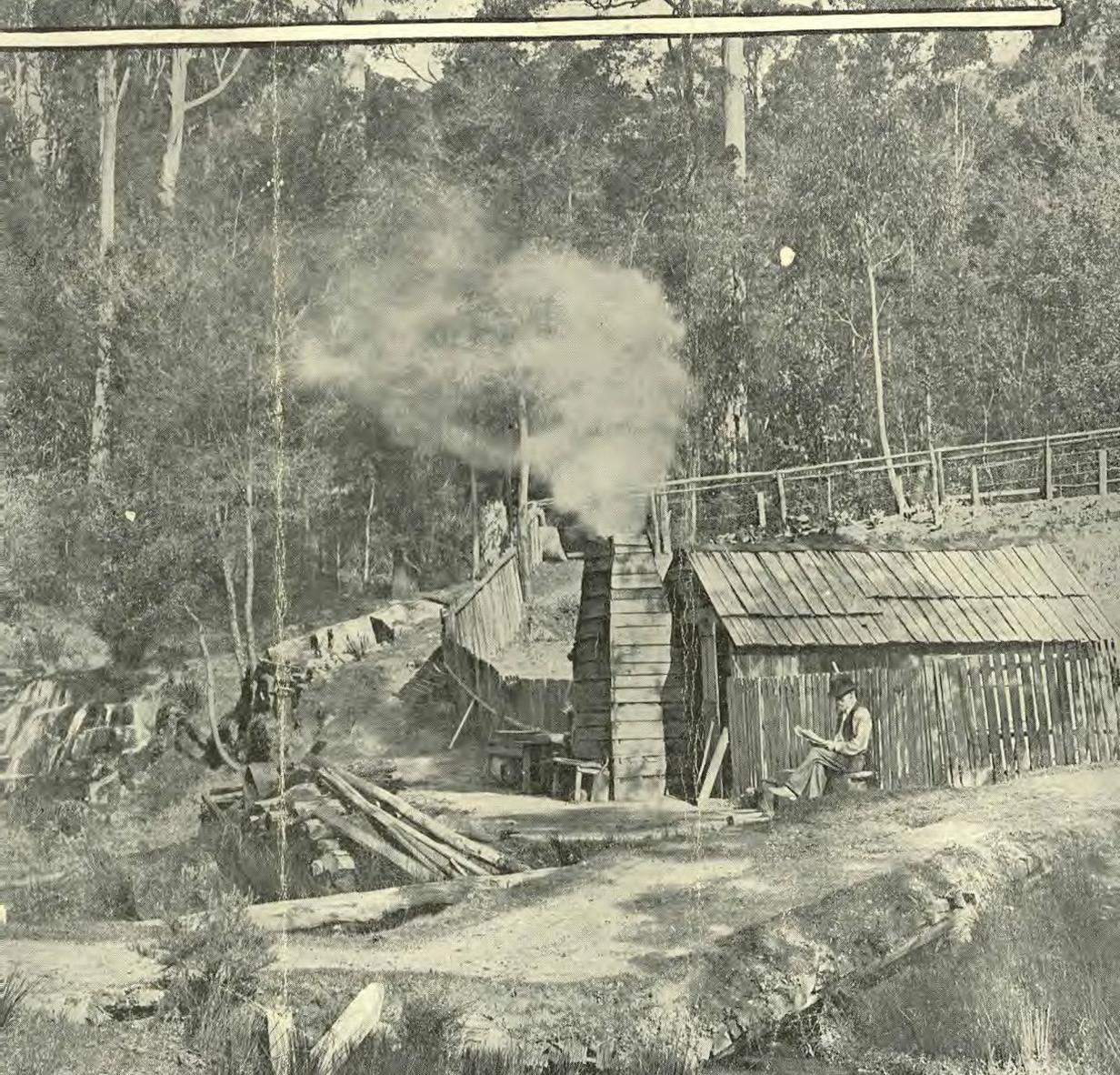


Life & Health



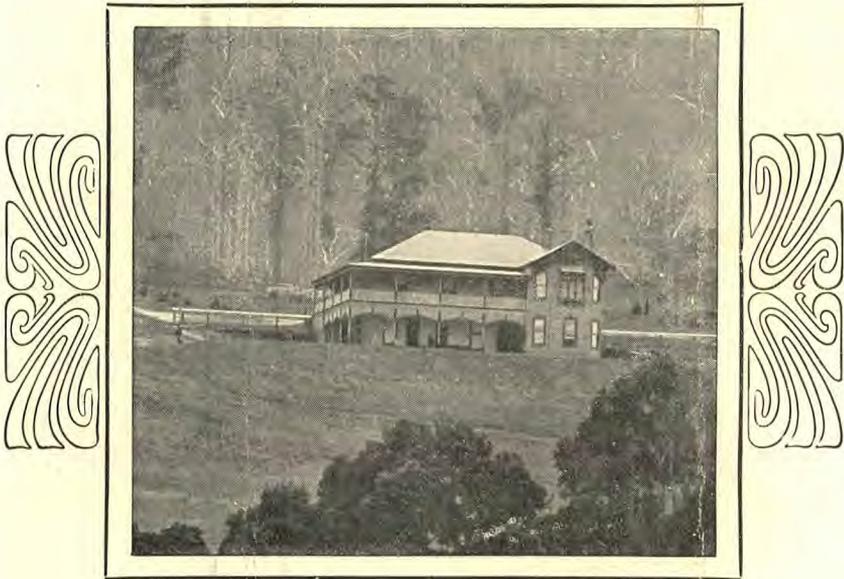
JUNE - JULY
- 1913 -

6^d

**Are You Sick? Do You Need a Rest
or a Change?**

The Warburton Sanitarium

IS THE PLACE TO GET WELL



Warburton is a beautiful township situated in the Upper Yarra Valley amidst magnificent mountain scenery, 48 miles from Melbourne. The climate, both in summer and in winter, is bracing and invigorating. Fine scenery and a good climate, coupled with the hydro-therapeutic, electro-therapeutic treatments, and the excellent vegetarian diet of the Sanitarium, are just the factors which are needed to restore the sick to health. Send for illustrated booklet to

The MANAGER, The Warburton Sanitarium,

Mt. Donna Buang Road, Warburton.

Telephone 5, Warburton Exchange

FIRST IN 1861! FOREMOST EVER SINCE!

Mason and Hamlin Organs

The Cabinet Organ was invented by Mason and Hamlin in 1861.
Mason and Hamlin Organs have maintained
their supremacy ever since.



Mason and Hamlin Organs are now recognised as "The Standard of the World."

Write for Latest Art Catalogue to the Sole Agents

Suttons Proprietary Limited

290 and 292 Bourke Street, Melbourne
Ballarat Bendigo Geelong

Also Sole Agents for the **FABER FOLDING ORGAN**, used in the Chapman-Alexander Missions

When replying to advertisements please mention "Life and Health"

Does Vegetarianism Interest You ?

IF SO, CALL AT THE

SANITARIUM HEALTH FOOD CAFE



View of Dining Room, Vegetarian Cafe

422-424 LITTLE COLLINS STREET, MELBOURNE

An Excellent Assortment of HEALTH FOODS Always on Hand

BRANCHES IN ALL STATES

When replying to advertisements please mention "Life and Health."

Kruse's Fluid Magnesia

For INDIGESTION, BILIOUSNESS,
and ACIDITY

Allays Feverish Conditions due to the Vaccination
and Teething of Infants
A Mild Aperient for Old and Young

The Genuine Kruse's Fluid Magnesia

Is Manufactured by

FELTON GRIMWADE & CO.

Whose Name appears on every Label



4/13



We were brought up
on the

BEST HEALTH FOOD

Robinson's

Patent

Groats

There's no excuse for having
weak or ailing children when
this fine FOOD can be ob-
tained so easily

4/13

Armageddon!

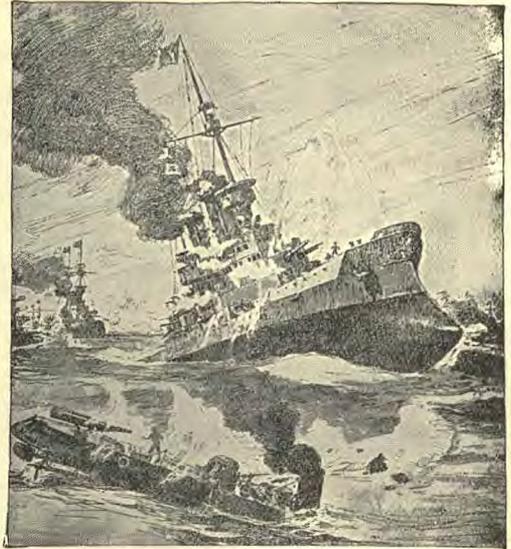
What Does It Mean?

What is its significance? The daily papers make frequent use of the word. It is heard in the legislative halls of the great nations of the world. And it commands attention from the man in the street. Whence its power?"

The above extract is from the first chapter of a work entitled—

ARMAGEDDON

*Recent Developments in Europe,
Turkey, and the Far East, in
the Light of Prophecy*



The author, G. Teasdale, deals with this important subject in such an interesting way that the attention of the reader is held from beginning to end. The following chapter headings will give some idea of the ground covered.

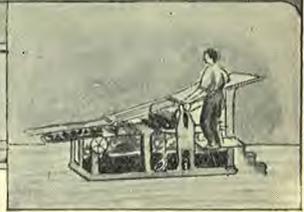
INTRODUCTORY. THE FALL OF WESTERN ROME.
SARACENIC INVASIONS.
THE TURK IN PROPHECY. THE NATIONS ANGRY.
THE EASTERN QUESTION. THE FALL OF TURKEY.
THE EAST AWAKENING. CONCLUSION.

Well Illustrated. Intensely Interesting. 122 pages, limp cloth

Price **1/-** (post free)

Order from our General Agents, or
SIGNS PUBLISHING COMPANY LIMITED :: WARBURTON, VICTORIA

THE TALK OF THE OFFICE



*"Temperance is the parent of health,
cheerfulness, and old age."*

Life and Health

The Australasian Health Magazine

*Published Every Two Months.
64 Pages and Cover*

Editor: A. W. Anderson
Associate Editor: A. G. Miller

Medical Contributors: F. C. Richards, L.R.C.P. and S., Edin.; Eulalia S. Richards, L.R.C.P. and S., Edin.; W. Howard James, M.B., B.S., Melbourne; A. Stuttaford, M.D.; A. V. Heynemann, L.R.C.P. and S., Edin.; Ethel M. Heynemann, L.R.C.P. and S., Edin.; P. M. Keller, M.D.; Florence A. Keller, M.D.; T. A. Sherwin, M.B., ChM., Sydney; Margherita M. Freeman, M.B., ChM. (Sydney).

Price (Payable in Advance):

For 12 months, post paid, Commonwealth
and New Zealand, 3/6

Foreign Countries, post paid, 4/6

All orders sent direct to the publishers or their agents, either for single subscriptions or for clubs, must be accompanied by cash.

SIGNS PUBLISHING COMPANY LIMITED, Melbourne
and Warburton, Victoria, Australia

When forwarding Money Orders or Postal Notes, please make same payable to SIGNS PUBLISHING COMPANY LIMITED, WARBURTON, and not to individuals. All remittances from New Zealand should be in the form of Money Orders, as Postal Notes or stamps are not negotiable in the Commonwealth.

Our General Agents

Address: "Life and Health"

Victoria

Chancery Lane, 422 Little Collins St., Melbourne.

New South Wales

"Tereora," The Avenue, Strathfield.
Royal Chambers, 45 Hunter Street, Sydney.

South Australia

12 Fifth Avenue, East Adelaide.
28 Waymouth Street, Adelaide.

West Australia

103 William Street, Perth.

Queensland

186 Edward Street, Brisbane.
Corner Peel and Grey Streets, South Brisbane.

New Zealand

Royston House, 70 Nairn Street, Wellington.
83 Willis Street, Wellington.
86a Cashel Street, Christchurch.
Strand Arcade, Queen Street, Auckland.

WE are in receipt of a copy of an interesting brochure published by the Sanitarium Health Food Company, of Sydney, containing many health hints and dietetic suggestions, as well as information in regard to the excellent foods manufactured by the company.

There is given a concise, readable description of the elements needed to nourish the body, and a reference made to many ordinary foods in which these various elements abound. Thus one may assure himself that his dietary is not lacking in any of the essential elements of nutrition.

Reference is made to some "Common Errors in Eating," for "no doubt," the booklet says, "many people are made miserable by mistakes made at mealtime." Some very common errors are thus dealt with:—

"Snacks, eating between meals, too many meals, are all mistakes. Three meals a day are quite enough to satisfy the actual needs of the body. . . . The digestion of a moderate meal takes four or five hours, and the stomach should have an hour's rest before the next meal is eaten."

"Take time to get hungry before you eat, and then take time to masticate and thoroughly relish your food. Hasty eating leads to copious drinking during meals, and these are both common errors which result in diseases of the stomach, liver, kidneys, and bowels."

"The hurry habit leads to over-eating, and all excess of food involves a waste of energy in its digestion. Not only so, but the body becomes overloaded, and the system clogged with unused food. Economy in nutrition results in increased efficiency of brain and body."

The booklet is well illustrated, showing photos of the factory and surroundings, as also of the health food cafés in Sydney, Melbourne, Adelaide, Brisbane, Auckland, and Wellington. There is also a full page illustration containing the photographs of five bonnie Australian babies.

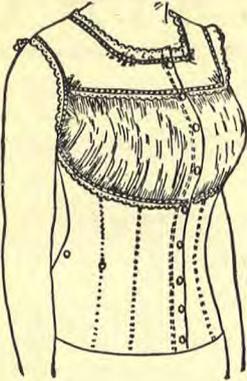
We heartily recommend those interested in the subject of dietetics and healthful living to write for a copy of the brochure to the Sanitarium Health Food Co., 45 Hunter Street, Sydney, and a copy of the publication will be forwarded free of charge.

HEALTH APPLIANCES

FOR HOME USE

SOLID COMFORT is to be found in wearing the

Good Health Bodice



A perfect substitute for the corset. Gives satisfactory support, and allows perfect freedom of movement. A well-made and well-fitting garment.

Patterns, cut to measure

(post free) 1/6

Bodice carefully made to measure in either white or drab jean.

PRICES: plain, 7/6; trimmed, 10/6

In ordering send bust, waist, and hip measurements, also length front and back from base of neck to waist line. Measurements should be taken snugly over underclothing.

The New Atomizer Outfit

A complete outfit for the effective home treatment of catarrhal and other affections of the nose, throat, and middle ear.

This scientific home-cure outfit, with medicine for both instruments sufficient for a long time, with full directions for use, will be sent packed in neat box for 8/6 (post free).

Send all orders to SANITARIUM, Wahroonga, N.S.W.

VELVET SOAP



IS PURE AND
CONTAINS NO
CHEMICALS
THAT HARM
THE LINEN.

COMMON SOAPS
AND POWDERS ARE
RUINOUS.

J. KITCHEN & SONS LTD.

Good Health Cook Book

By Mrs. Lauretta Kress, M.D.

Contains a most valuable selection of choice recipes, proper food combinations, tables of nutritive value of foods, coupled with a treatise on general dietetic principles.

Neatly bound in cloth cover
(post paid) - - - 2/6

Limp cloth covers (post paid) 1/-

Order from our General Agents, or
SIGNS PUBLISHING CO., LIMITED,
Warburton, Victoria, Australia.



CONTENTS

EDITORIAL

Rheumatism	<i>W. Howard James, M.B., B.S.</i>	533
More About Adenoids	<i>Eulalia S. Richards, L.R.C.P. and S., Edin.</i>	536
Tea and Coffee	<i>Florence Keller, M.D.</i>	538

GENERAL ARTICLES

More Hints for Dyspeptics	<i>A. B. Olsen, M.D., D.P.H.</i>	541
Are Bad Teeth Caused by Bad Stomach?	<i>H. F. Rand, M.D.</i>	544
The Nutritive Value of the Banana	<i>George E. Cornforth</i>	545
The Hawkesbury (poetry)	<i>E. A. Robinson</i>	547
How to Render First Aid	<i>Mary W. Paulson, M.D.</i>	548

PHYSICAL CULTURE

The Hygiene of Deep Breathing	<i>William J. Cromie</i>	550
Beauty is Merely Health and Physical Comeliness	<i>Bernarr Macfadden</i>	553

THE HOUSEKEEPER

The Cooking of Vegetables	<i>Mrs. D. E. Kellogg</i>	555
Seasonable Vegetarian Recipes		556
The Art of Cooking		557
Glass, Iron, and Paper Clothes		557
Fruit Sugars	<i>Lenna Frances Cooper</i>	558

QUIET TALKS WITH MOTHERS

A Word to Weary Women	<i>Eulalia S. Richards, M.D.</i>	559
Baby's Good Night	<i>R. Hare</i>	562
Mother and Son	<i>Jane Calhoun</i>	563
"Run Away Now: I Am Busy"		563
The Home		563
Let the Children Alone		564

HOME NURSING

Pneumonia: Its Causes and Treatment	<i>D. H. Kress, M.D.</i>	565
Measles	<i>Mrs. A. F. Haines</i>	568
The Throat Compress	<i>V. L. Mann, M.D.</i>	570
Doctor Mother	<i>Folger McKinsey</i>	571
The Tonic for the Sick		571

THE CHILDREN'S HOUR

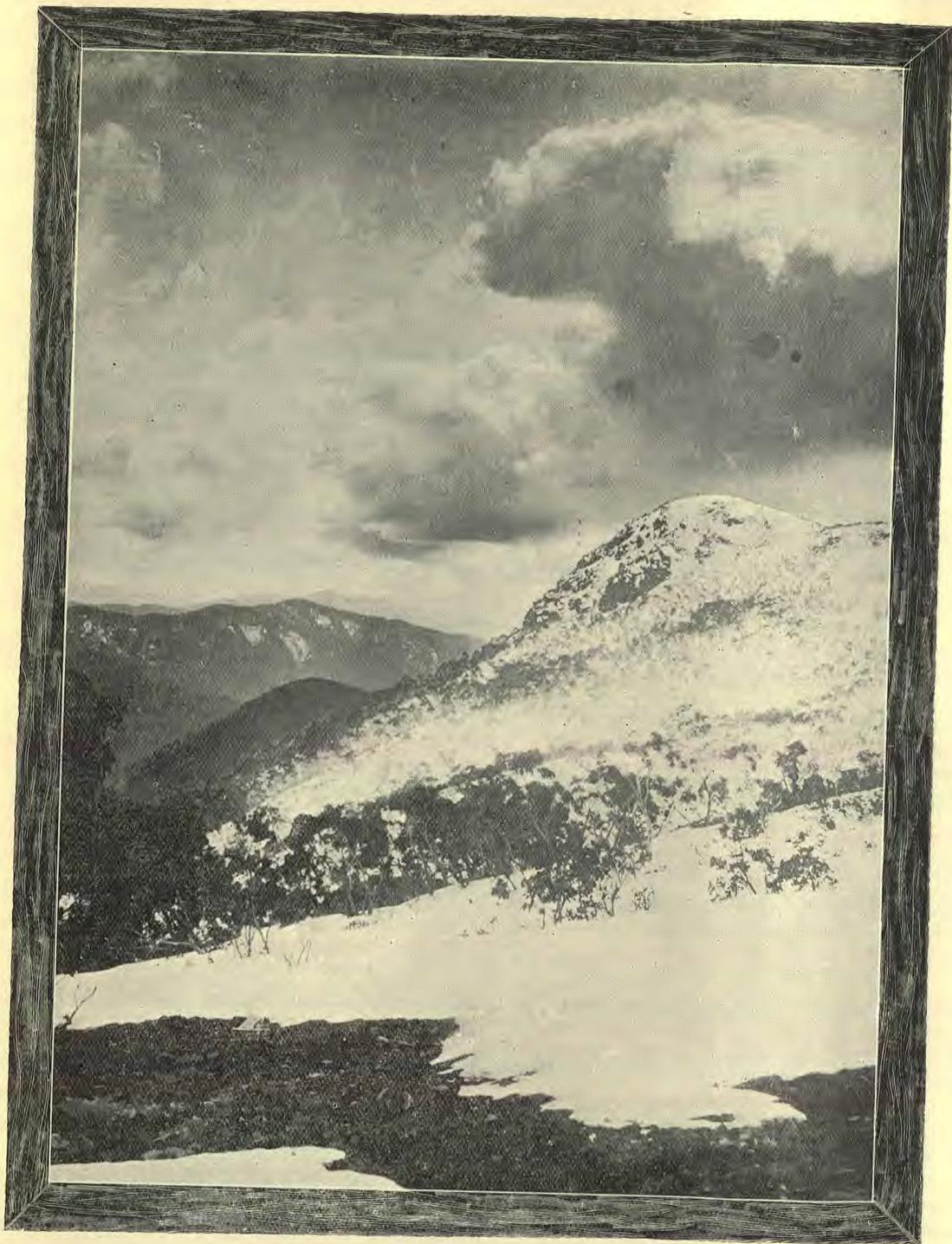
I Meant To (poetry)		572
The Harvey Boys and Their Pets	<i>Uncle Herman</i>	572
The Arctic Traveller	<i>G. V. Reichel</i>	575

CHATS WITH THE DOCTOR

W. Howard James, M.B., B.S., Melb.

Constipation—Patent Foods—Rheumatoid Arthritis—Acidity of Stomach—Carbohydrates	
Itching and Eruption between Fingers—Callous Ulcer—Seeding Warts—Very Cold	
Mortal—Weakening Losses in the Urine—Good Ointment for Common Sores—	
Ulcers of Stomach—Asthma—Weak Heart	577

Our cover design is a reproduction of a photograph of a hut on Scotchman's Creek, Warburton, by Mr. Sears, of Melbourne



MT. SMYTHE, VICTORIAN ALPS

N. J. Caire, Photo., Melb.



Rheumatism

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

ACUTE rheumatism (rheumatic fever), subacute and chronic articular rheumatism, rheumatic arthritis (sometimes called chalk rheumatism on account of the deposit of white substances around the joints), and gout may be looked on as a family of diseases, for all are dependent on similar causes. Our knowledge of bacteriology enables us to understand to some extent why one person on exposure to cold contracts bronchitis, another pneumonia, another pleurisy or consumption, but we cannot as yet state why under similar circumstances one person should contract rheumatic fever, another articular rheumatism, and a third gout. Some peculiarity of constitution, idiosyncrasy as it is conveniently termed, seems to determine whether certain causes will produce rheumatism in one of its varied forms, or gout. Heredity is undoubtedly a very important factor. The scriptural statement that the "iniquity of the fathers" is visited "upon the children unto the third and fourth generation" is a scientific fact. "The fathers have eaten sour grapes, and the children's teeth are set on edge." Bad habits, carelessness

in eating and drinking, often produce worse effects in future generations than in the primary individuals; thus to sin against one's own self is to sin against humanity and against those we most love. Even the child at the breast will suffer from its mother's excesses or intemperance in either eating or drinking.

It is now generally admitted that the causation that lies behind the rheumatic family of diseases is a retention in the system of unoxidised nitrogenous waste products, insufficiently burned "physiological ashes." Nitrogenous products, when sufficiently oxidised or burnt up, form urates which are readily soluble in the fluids of the blood and quickly excreted chiefly by the kidneys. When, however, these products are not sufficiently oxidised, uric acid, xanthin, hypoxanthin, and similar poorly oxidised substances, are formed which are not readily dissolved in the fluids of the body, and which are consequently only excreted with difficulty. Dr. Haig demonstrates that headache, epilepsy, mental depression, or melancholia and suicide, high blood pressure, angina, asthma, Raynard's disease, are produced by uric acid in the blood;

and that gout and rheumatism are due to the presence of uric acid "outside the blood" in the structures around the various joints and muscle sheaths.

All the warmth and energy of the body are produced by the oxidation of our food in the various tissues and organs of the body; the foods, after many vital changes in the digestive organs, glands, and the blood, are first stored in the tissues, and then burnt up as the various energies are required. In the burning up of non-nitrogenous foods there is but little "ash" to be removed, for the waste products are chiefly represented by carbonic acid and water. The nitrogenous foods, however, are not so completely burnt up; they leave ashes of a more solid nature, the urates, uric acid, etc., already referred to. As long, however, as these are properly burnt up no harm results, but the only partially burnt up products, uric acid, etc., have a great tendency to remain in the system. Under normal conditions about sixteen grains of these products are excreted daily by an average individual. If more than this amount of these products are formed in or added to the system daily, they remain in the body, and thus create a predisposition to disease. Dr. Haig, in his exhaustive and excellent work on "Uric Acid and the Causation of Disease," clearly demonstrates that the accumulation of uric acid and similar products, what we may call the rheumatic and gout poisons, in the system is not due to the system producing an extra quantity of these products, but to an increased intake or decreased excretion. In a paper in the "British Journal," 1894, Vol. 2, on the "Direct Introduction of Uric Acid into the Body, Its Bearing on the Prevention and Treatment of Disease," Dr. Haig points out that "Judging from the quantities of various substances taken, and the quantities of uric acid or xanthins they contain, a man may easily introduce nearly two grains of uric acid with an ordinary dinner, . . . and the percentage of uric acid from which this is calculated is probably decidedly under the truth, so that the introduction of four to

five grains with a carnivorous dinner is by no means extraordinary." In the flesh of animals there is always some amount of free uric acid or xanthin, and the consumer has consequently to excrete this addition as well as the sixteen grains formed in the body. If he takes in five grains with his meals he must excrete twenty-one grains to maintain normal health. This he probably will not do. Perhaps the uric acid excreted will rise to twenty grains, with the result that one grain is retained in the system. This one grain in a month would mean thirty grains, and in a year 365 grains, and thus a foundation is laid for an attack of rheumatic fever or other form of rheumatism or gout. Clearly, then, a part of the treatment for rheumatic or gouty affections is to avoid adding uric acid to the system by the continual consumption of animal flesh. All medical authorities are agreed on the advisability of greatly restricting the use of flesh foods in all rheumatic and gouty affections. Dr. Haig enumerates some of the foods ordinarily consumed which contain uric acid and xanthins, and gives the number of grains in each pound. We will quote a few:—

Lamb (cold roast leg) ...	3.5 grains per lb.
Hospital beef tea ...	7.0 ..
Kidney of sheep ...	3.5 ..
Liver of sheep ...	6.5 ..
Fowl (breast) ...	1.7 ..
Herring (Loch Fyne's kippered) ...	6.4 ..
Meat juice ...	49.7 ..
Meat extract ...	63.0 ..
Tea ...	175.0 ..
Coffee ...	70.0 ..
Cocoa ...	59.0 ..

"As regards," continues Dr. Haig, "the animal foods, their infusions and extracts, the figures given represent uric acid plus other members of the xanthin group; and tea, coffee, and cocoa contain xanthin compounds, not uric acid; but as I have pointed out, these may, for all pathological and physiological purposes, be regarded as one and the same substance, producing throughout the body and its tissues the same effects. . . . It needs also but a very simple calculation from the figures in the foregoing table to

show that tea is by no means the harmless substance it has been supposed to be, and that in place of causing a little dyspepsia by tanning the gastric mucous membrane, it may really bring about, in the course of a year, the introduction of a huge quantity of uric acid, and thus account for some of the most serious effects of collæmia, or arthritis." Hutchison, in discussing the dietetics of gout, shows that caffeine (the alkaloid of tea, coffee, and cocoa) plays an important part in the amount of uric acid or xanthin added from without ("exogenous uric acid") to the blood. "While the nucleins (nitrogenous elements) of the food are the main, they are not the exclusive, source of the exogenous uric acid. Part of it is also derived from such substances as caffeine, and from free 'purins' contained in the food."

It should also be remembered that the pulse foods (peas, beans, and lentils) contain from 0.1 to 0.2 per cent. of uric acid, or xanthin, and should be avoided by the rheumatic. We believe these foods are too largely used by vegetarians, and that the grain foods generally contain quite sufficient nitrogen for the maintenance of health and strength. Eggs and milk are a valuable source of nitrogen, and these contain no uric acid.

The state of the blood is a very important consideration in relation to rheumatic affections. In a perfectly healthy state the blood will dissolve quite a large quantity of uric acid and xanthins, and thus enable them to be freely excreted by the kidneys. The blood is in the healthy state of an alkaline reaction from the presence of sodium bicarbonate in solution. While this alkalinity is maintained, the rheumatic poisons are freely excreted with the urine, but if the alkalinity be lessened, the poisons are held in the system, producing primarily headache, depression, sluggish circulation, and impaired general nutrition. It is a remarkable fact that a dose of uric acid will often relieve these symptoms, and headache, depression, and impaired circulation vanish for the time. The blood thereby loses to some extent

its alkalinity; it consequently cannot keep the uric acid in solution, with the result that it is driven out of the blood into the tissues and organs of the body. In this way blood freed from these poisons circulate through the brain and nervous system, and relief is obtained; but this relief is only temporary, the poisons being still in the system quickly find their way into the blood again, and the old symptoms return. A strong cup of tea probably acts in the same way. Animal foods are certainly stimulating. Is it not quite probable that the stimulation is largely due to the free uric acid and xanthins which they contain? The uric acid taken with a meal which partly consists of meat lessens the alkalinity of the blood, with the result that the uric acid is driven into the joints, and thus the individual is increasing his liability to disease of a rheumatic or gouty nature. Sometimes, however, the lining membranes of the heart (internal and sometimes the external) suffer from the rheumatic poison, and heart disease is produced; sometimes the muscles become affected, and the various forms of myalgia result—lumbago, stiff neck, pleurodynia, etc. Even pleurisy is sometimes of a rheumatic nature. Exposure to wet and cold is a frequent exciting cause of rheumatism. The exposure lessens the action of the skin, the acrid secretions are not excreted, with the result that the alkalinity of the blood is lessened, and the uric acid, etc., is driven into the joints. The uric acid in the blood and tissues is the predisposing cause, the most important factor, the exposure is but the match that kindles the flame. Apart from excessive uric acid, cold and wet would not produce rheumatism.

Again, disorders of digestion undoubtedly predispose to rheumatism; improperly digested food and a sluggish liver, which only partially separates the impurities from the food, must lessen the healthiness of the blood, and prevent it from dissolving the rheumatic poisons out of the system. Again, deficient exercise diminishes the excretion of acids from the skin in perspiration and the intake of oxygen.

Exercise always means increased breathing and quicker circulation. The oxygen burns up the nitrogenous waste products, and makes urates instead of uric acid and xanthins, and these, being more soluble, are quickly passed out of the system. The increase of circulation drives the blood more quickly through the skin and the kidneys, and thus the acid secretion of the skin is increased, and the uric acid excretion of the kidneys improved. A man working in the open air is not anything like as liable to the uric acid diseases as the man with indoor sedentary occupation. A warm, dry climate is helpful in rheumatic and gouty cases on account of the increased activity of the skin and the excretion of acids which would otherwise interfere with the healthy alkaline action of the blood. Abundance of mature fruit with the meals (except when vegetables are taken) will be very helpful in rheumatic cases, the acids of the fruits unite with the soda and other salts always contained in our foods, and produce the salts necessary to maintain the healthy alkaline action of the blood. Dr. Haig's advice is, "When any man feels a twinge in a joint, let him cut down albumens and acids, and take potatoes and apples, and he will soon be all right again." Fruits are not included in the acids, for, as already pointed out, they help in forming the natural alkalis of the blood. Vinegars, malt liquors, wines, however, are prejudicial, also foods producing acid fermentations in the stomach.

More About Adenoids

Eulalia S. Richards, L.R.C.P. and S. Edin.

DURING recent years much has been said and written concerning adenoids, but even yet there is a tendency among parents to overlook or ignore this condition in their children. Since the results of neglecting the disease are so serious and far-reaching, it seems the part of wisdom to repeatedly consider the subject, giving "line upon line, and precept upon precept."

By *adenoids* is meant an excessive growth of lymphoid tissue in the pharynx, that is, the back of the nose and the upper portion of the throat. This lymphoid tissue is similar to that which occurs in the tonsils, and normally exists in the pharynx in small amount. In the condition known as adenoids, there is an abnormal development of this lymphoid tissue, resulting in varying sized masses of soft, fleshy, sponge-like tissue. The condition which leads to this excessive growth is most commonly that of chronic congestion or catarrhal inflammation of the nasal mucous membrane.

The immediate result of the presence of this growth is partial or complete obstruction to nasal respiration. Inability to breathe through the nose causes such inconvenience and discomfort to the child as to warrant the parents in seeking a prompt remedy for the defect. However, there are other far more serious results which must be reckoned with. It is not advisable in this short article to attempt an explanation of the whys and wherefores. A mere mention of the disastrous results of the disease should be sufficient for the parents who are deeply concerned as to the welfare of their children.

The Results of Neglected Adenoids

1. Inability to breathe through the nose.
2. Alteration in the facial contour and expression. The nose appears small and pinched, the lower jaw recedes, and there is a general expression of dullness or vacancy.
3. Alteration in the voice. The voice becomes thick and "nasal," and lacks that clearness and sweetness which should always characterise the childish voice.
4. Deafness either slight or serious, and tending to become permanent.
5. Various deformities of the chest, particularly the condition known as "pigeon-breast."
6. A marked tendency to tuberculosis (consumption) and other infectious diseases.
7. Faulty development of both mind and body.

It will be seen from the foregoing that it is a great injustice to a child to neglect adenoids, as their continued presence may result in serious and life-long defects.

The Recognition of Adenoids by the Parents

Mouth-breathing is the first symptom, and one which should immediately arouse the suspicion of the parents. At first this symptom may be noticed chiefly at night, especially if it be accompanied by snoring, but later on the child will be observed to breathe habitually through the mouth by day as well as by night. Mouth-breathing, together with a catarrhal discharge from the nose and frequent complaints of sore throat, should be sufficient to lead the parents to seek the advice of a physician. It is most unwise to wait until the child's hearing is affected and his general health suffers noticeably. While it is well for parents to frequently examine the throats of their children for swelling and inflammation of the tonsils, it should be remembered that adenoids cannot be seen, their presence being determined largely by the child's symptoms.

The Treatment of Adenoids

The only satisfactory treatment of adenoids is complete removal by means of a surgical operation. The operation is, however, a simple one, and if performed by a skilled physician the dangers attending it are very slight. The danger to a child from neglected adenoids is far more serious than the danger of their removal by surgical operation.

A question often asked is, When should adenoids be removed? Our answer would be, Just as soon as their presence is determined. There can be no possible advantage in postponing their removal, even in the case of a delicate child, for their very presence prevents the child from gaining strength, and his condition is likely to grow worse rather than better.

But are not the adenoids likely to return after removal? asks another parent. No, it is very seldom that adenoids return if completely removed, provided the cause

of the growth be also removed. But even though there should be a subsequent return of the growth, it may again be removed, and thus the child's health will not be seriously affected.

A third question sometimes asked by parents who are doubtful of the advantages of operative treatment is this, Will not the adenoid growth disappear spontaneously later in life? It is true that as the youth develops into manhood or womanhood the adenoids tend to shrink or atrophy. But suppose these growths should entirely disappear during mature years their disappearance at this late period would not atone for the evils wrought by their presence through the long years of childhood. Many a man is obliged to carry about in his body through life the evidence of neglect through childhood. Deafness, a disagreeable voice, an uncomely face, and a weakened body, constitute a serious handicap to a man who would successfully perform his part of the world's work.

The After-Treatment of Adenoids

For a number of hours after the removal of adenoids the nasal mucous membrane is swollen, and the child may experience difficulty in breathing through the nose. This trouble shortly disappears, however, and from this time on the child must be encouraged to breathe through the nose. The older the child the stronger will have become the habit of mouth breathing, so that it may require a little time and oft reminding before the child realises that he can breathe in the natural and comfortable way. If there is a tendency to mouth breathing through the night, the child should be made to sleep upon the side rather than upon the back. In some cases it is necessary for a short time to support the lower jaw during sleep by means of a bandage tied tightly and secured over the top of the head. But in most cases the removal of the nasal obstruction leads promptly to the resumption of correct breathing.

The catarrhal condition which often accompanies adenoids is usually relieved

by means of the nasal douche. To a glass of tepid water add half a level teaspoonful of table salt. Instruct the child to immerse his nose in the salt water, and to draw or breathe the solution up into the nose, allowing it to escape through the mouth. The nose will thus be cleansed from mucous or any dried secretion. For a time this nasal cleansing may well form a part of the daily morning toilet.

The Cause of Adenoids

For every effect there must be an adequate cause, or, in the words of the wise man, "The curse causeless shall not come." It is as useless to endeavour to cure a disease by merely removing the symptoms while the cause remains, as it is to attempt to destroy a poisonous plant by plucking the leaves while the root is undisturbed. We must remove the cause in order to cure the disease.

We believe that the chief cause of adenoids is the insufficient clothing of children's legs and feet. The effect of cold upon the skin is to contract the superficial blood vessels, driving the blood back into the internal parts, there producing various congestive and inflammatory conditions. Hundreds of women have experienced painful inflammations of internal organs brought about by an occasional chilling of the lower extremities. Yet these same women thoughtlessly permit their young and delicate children to have their limbs largely unclothed even in the coldest weather. We wish that the old-fashioned idea that exposure to cold hardens a child's constitution had never been thought of. The fact is that a child's constitution is more taxed by exposure to cold than is an adult's. The child has a larger skin area in proportion to his size than has the adult. This means then that the child must expend a larger proportion of his vital energy in keeping his body warm than does the adult.

It is quite true that over-clothing the body lessens its ability to resist disease. But it is equally true that habitual exposure of the limbs to cold tends to produce catarrhal inflammation of the nose,

throat, and chest as well as of other internal organs.

The safest plan is to clothe the body itself rather lightly, so as to avoid overheating, and at the same time to see that the legs and feet are warmly clad. The extremities being small in circumference and farther removed from the heart, are more readily chilled than the body, and so require warmer clothing.

The children who come to the physician for the removal of adenoids are almost invariably the children whose legs are bare in winter as well as in summer. Let the children who have been obliged to undergo operation for adenoids always wear warm stockings (not socks) in the cold weather, and in ninety-nine cases out of a hundred, there will be no return of the trouble.

Tea and Coffee

Florence Keller, M.D.

JUDGING from Dr. Wiley's interview on the subject of coffee drunkenness in which he says it is a commoner failing than the whisky habit, the United States Department of Agriculture would like to regulate the consumption of beverages containing caffeine. He expresses himself further as follows:—

"The misuse of tea as a stimulant and as a beverage is more prevalent than the use of alcohol. You must arouse people to a realisation of the dangers of drugs. This country is full of tea and coffee drunkards. The most common drug in this country is caffeine. It is dealt in at the soda fountains. Your children, innocent of any knowledge of its deleterious effects, consume it freely. They do this to their great physical and mental detriment. As I take it, in a state of health we have no need for all these artificial stimulants. Caffeine has a direct tendency to create Bright's disease. Caffeine is the essential alkaloid of coffee as theine is of tea. Both are dangerous and detrimental drugs. Caffeine is one of the many drugs taken at soda fountains and in private as a combatant of fatigue.

Such drugs deaden the sense of fatigue, yet fatigue is nature's danger signal, and the man who strikes it down is in the same class as the man who removes the red lights at a railway crossing."

That the Irish peasant is also a great tea-drinker is well known, but apparently the use of the stimulant is carried to such excess by the population in the congested areas of Connemara that it has become a positive danger. Such at least is the testimony of the National School Inspector on the Galway Circuit. "The use of tea," he writes, "is now carried to such dangerous excess that it ranks before alcohol as an enemy of the public health. To aggravate the situation, it is in the very poorest parts of the country that the tea evil is most active and hurtful. Let the quality be good or bad, the tea is so prepared for use that the liquid, when drunk, has the properties of a slow poison. The teapot, stewing on the hearth all day long, is kept literally on tap, the members of the family, young as well as old, resorting to it at discretion. The opinion of enlightened observers is that by the immoderate use of tea the working classes are drugging themselves into a lower level of vitality, and adding to the sum of physical and mental disease."

The inspector thinks the popularising of nutritious vegetable soups would prove the best corrective.

Effect of Light upon Germs

SUNLIGHT is undoubtedly the best all-round germicide or disinfectant that we possess. We read: "Light, especially the light of the sun, has a truly wonderful effect on nearly all forms of germs. Almost without exception they are killed by a not very prolonged exposure to the rays of the sun, and the electric arc has a similar though, of course, less intense action. At first it was thought that the heat of the solar rays might be responsible for the death of the bacteria, but it has been shown by careful experiment that the rays of light themselves have a power of destroying germs quite apart from any heating effect which may be produced. . . . This powerful action of the light of the sun in destroying germs is of enormous practical importance in nature. Everywhere, when the sun is shining, in the air, in lakes, in rivers, and in the sea, and on the land, all day long the light of the sun is destroying germs, and the action is fairly rapid. The knowledge of this fact helps us to understand one reason, at least, why rooms well-lighted by windows are more likely to be free from disease than are those which are dark and gloomy."—*Good Health*.

"PREVENTION is better than cure, and far cheaper."





ROAD SCENE, WEST COAST, N.Z.

By permission of N. J. Caire, Photo., Melb.



More Hints for Dyspeptics

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

NUTRITION is what the body requires rather than stimulation and irritation. Hence good digestion is best encouraged by the omission of most of the dietetic accessories which one finds on the average table. The use of mustard, peppers, curries, and all similar hot and irritating articles, is decidedly detrimental to good digestion and sound health. Most condiments have a decidedly irritating and exciting influence upon the delicate mucous membrane of the stomach, and interfere with and even retard the digestive process. The proper procedure is to develop the natural flavours of the food in cooking rather than to mask them by the use of savouries and condiments.

Cakes and Sweets

Anything like the free use of sweets, sweetmeats, candies, sugar, jams, marmalades, preserves, cakes, tarts, pastries, and similar articles, must also be seriously deprecated. While the sparing indulgence in some of these articles at rare intervals is of little consequence, still their common use must be regarded as one of numerous factors which encourage digestive disturbances. It is, in more ways than one, a waste of money to spend it upon tidbits. When we bear in mind that the starch of vegetables, rice, and all cereals is changed into sugar in the process of digestion, we can readily see the wastefulness of taking cane sugar, and, by the

way, the two sugars are not the same. Ordinary cane sugar is not capable of assimilation into blood, but must be changed into another form by intestinal digestion.

The Number of Meals

The people of this prosperous country are given to too frequent eating. Many people take food as often as five times a day, and there are few who do not take it at least four times. There is every reason to believe that three meals are ample, and more frequent feeding is undesirable. Breakfast in the morning, dinner at noon-time, and supper in the early evening, provide all that the healthy body requires, and more frequent eating cannot be recommended except in the case of certain invalids.

Eating between Meals

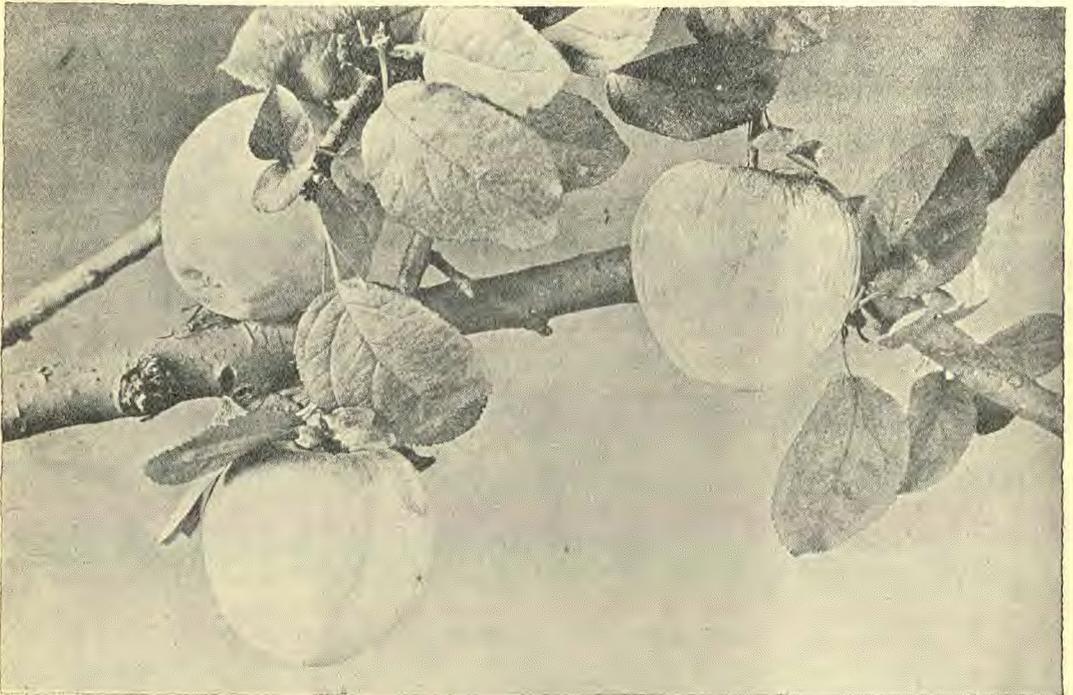
Eating between meals is decidedly injurious. Too frequent meals and eating between meals gives the stomach no rest. Under such conditions it will always contain food in various stages of digestion and fermentation. Such fermentation processes brought on by micro-organisms of one kind or another are unnatural, and give rise to flatulence and the formation of various poisons which, on assimilation into the blood, cause headache as well as other aches and pains, and a general feeling of drowsiness and malaise. This rule about not eating between meals applies

to children as well as to adults, but perhaps is even more urgent in the case of the former.

Over-eating

The question is not how much food can be put into the stomach, but rather how much can be properly digested and assimilated into the blood. Strictly, food in the stomach is still outside the body, although it is capable of causing a great

pared to deal with the food which he takes, providing it is reasonably wholesome and properly masticated. If the quantity of food were limited to the real requirements of the body, and if people should now and again skip a meal when they are not actually hungry, they would not only enjoy plain food better, but also escape much of the stomachic disturbances from which they are prone to suffer. The best sauce, by the way, for either break-



A Sure Cure for Constipation

deal of discomfort and pain. Taking too much of even the plainest and most wholesome food throws unnecessary work upon the digestive and eliminative organs, and if the practice is continued for any length of time it must lead to dyspepsia, if not to some more serious disorder.

Natural Hunger

We wonder how many people wait for natural hunger before partaking of their food. When a man is really hungry, his digestive organs are almost always pre-

pared to deal with the food which he takes, providing it is reasonably wholesome and properly masticated. If the quantity of food were limited to the real requirements of the body, and if people should now and again skip a meal when they are not actually hungry, they would not only enjoy plain food better, but also escape much of the stomachic disturbances from which they are prone to suffer. The best sauce, by the way, for either break-

Drinking with Meals

The free drinking of any form of fluid with the food not only interferes with mastication by washing down the food into the stomach too rapidly, but also has the effect of diluting the digestive juices and thus retarding digestion. An occasional sip of fluid is not particularly harmful, but free drinking is, and this is particu-

larly true of certain unfortunately common drug drinks, such as tea and coffee.

Tea, Coffee, and Cocoa

If we were to make the statement that nine out of every ten people in the United Kingdom are to-day enslaved by the use of a poisonous, habit-forming drug, many people might be surprised into asking: "What is it?" The answer is: Tea. According to Dr. Robert Hutchison, tea is "*in no sense a food*;" but it is, on the other hand, a poisonous narcotic beverage. Its daily use soon sets up a craving for it which is oftentimes exceedingly difficult to overcome. Tea, like tobacco, has a pleasant, soothing influence which arises, however, from the benumbing, paralysing effect of the drug upon the sensory nerves. When this temporary effect passes off there is a demand for another cup of tea, so that many people are kept under its influence more or less constantly, except while asleep at night. Many people find it necessary to have a cup of tea in bed in the morning, and by its frequent use keep themselves in a state of seminarcosis.

Alcoholic Beverages

It is only necessary to mention these drinks in order roundly to condemn their use. Alcohol is in no true sense a food. It does not benefit the body in any way whatsoever, but its influence is, on the contrary, always harmful, whether we regard the nervous system, the digestive organs, heart, kidneys, or the liver. The unnatural craving, not only for alcohol, but also for tea, coffee, and cocoa, is one of the most common symptoms of dyspepsia and debilitated nerves.

Extremes of Heat and Cold

The frequent use of very hot drinks or foods, or ice cold drinks or foods, must also be emphatically forbidden. Were we to consider the welfare of the teeth alone we should be obliged to condemn utterly both hot and cold drinks and foods. Extremes of cold and heat in the food have a debilitating effect upon the digestive organs. They also interfere with the

proper mastication of the food, and their influence must be regarded as another important factor in the production of dyspepsia.

Furthermore, there is abundant evidence to show that foods or drinks which are intensely hot or cold cause irritation in the stomach which is likely to lead to the growth of cancer.

"Digestive Pills"

"Eat what you please, but take our Digestive Pills afterwards," is the substance of an advertisement we once saw. It is a complete fallacy to think that any digestive pills are beneficial, and the same, by the way, is true of all digestive teas and coffees. The name is an entire misnomer. We trust that some day we shall as a people, learn that the only benefit of the use of patent medicines and secret remedies is that which is conferred upon the pocket of the manufacturers and vendors. The consumers never sustain anything but injury from the use of such medicines, either directly through their poisonous effects or indirectly by neglecting a disorder which should be promptly and properly treated.

Constipation

Let no one think that he has a good digestion if he is suffering from constipation. Sluggish bowels as a rule mean a sluggish stomach and a torpid liver. By careful dieting and particularly by the selection of mildly laxative fruits, such as figs, dates, prunes, grapes, bananas, oranges, etc., it is possible to cure most forms of constipation. Olive oil in desertspoonful doses at breakfast or dinner makes a most valuable remedy for inactive bowels, and it is at the same time a nourishing food.

Muscular Exercise

A quiet, inactive, sedentary life where there is a great deal of sitting in a more or less close or overheated room is another important factor in the production of dyspepsia. Properly to utilise the food eaten one must engage in a reasonable amount

of physical exercise daily. A brisk walk in the fresh, bracing air, a spin on the cycle, a round of golf, a game of lawn tennis or croquet, or some similar exercise—all these make excellent antidotes for dyspepsia.

A Final Don't

If we were not to raise a warning against the common habit of worry and of taking anxious thought for the morrow this article would be very incomplete.

Bolt your food with little or no mastication, and then worry about your digestion or business or family cares, or anything else, and you are doing your best to court indigestion and dyspepsia. The man or woman who expects to enjoy a good digestion and sound health must overcome the habit of worry, and be able to bring to the breakfast or dinner-table a cheerful countenance and a hopeful, optimistic spirit.



A Brisk Walk is an Excellent Antidote for Dyspepsia

Are Bad Teeth Caused by Bad Stomach?

H. F. RAND, M.D.

YES, and no. But usually the trouble which causes bad teeth also causes a bad stomach. Those who use largely of liquid foods for any great length of time injure their teeth and injure their stomachs. Solid foods are what give exercise to the teeth and stomach. If a person should abstain entirely from solid food for twenty-four months, the gums will recede, the teeth become loose, and the patient will decline in health very rapidly. If such a person could resume the eating of solid food, in a few months' time the gums would become firm and healthy, and the teeth would again become firmly fixed.

We have known of teeth being placed in the cavities in the gums and in the course of time becoming as firm as other teeth. There is no doubt that this prin-

ciple will be used more and more by dentists as their practice and efficiency increase. When this is properly done the tooth is just as solid as an original tooth, and fully as serviceable.

And these teeth will be a great help to the stomach at the same time as they assist in the mastication of food. When the teeth are loose, massage to the gums, properly applied, will be of great assistance, if not an entire relief from the difficulty.

By the use of carefully selected disinfectants the teeth may often be saved, and fully retain their usefulness. The teeth should be carefully brushed, using warm water to rinse out the mouth, before and after each meal, thus removing the particles of food from between the teeth. At intervals they should be carefully

cleaned with some good tooth-powder. And occasionally they should be carefully examined by a competent dentist and any cavities or disorders attended to.

The teeth should not always be brushed in the same direction, but care must be taken to brush up and down as well as across, so that all of the particles of food may be removed from between the teeth. Water should be forced through the space between the teeth. This is the matter that in time decomposes and causes decay of the teeth. A good brush, properly applied, will do much to prevent decay, and there is nothing better than warm water as a tooth wash. You may add to this, with benefit, one part of dioxygen to ten of water. Care should be taken not to chill the teeth. You would be surprised to see how much matter could be removed from the teeth in this way, if you could take the water and look at it through a microscope, even after you have brushed the teeth as carefully as you can. It is also a good practice to use a thread to work backward and forward between the teeth. You will see that this attention makes a great deal of difference in the health of the teeth, and in the general health of the body as well.

The Nutritive Value of the Banana

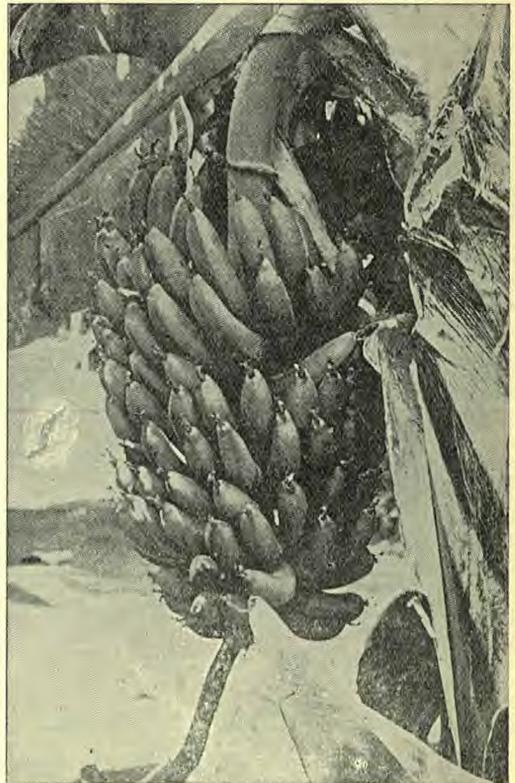
George E. Cornforth

THE banana is very productive, and requires little attention in cultivation. Each plant grows from ten to twenty feet in height, has great leaves three or four feet in length, and produces, in one bunch, from seventy-five to one hundred or more bananas. After bearing one bunch, the stalk dies, but other shoots spring from the same root, each of which bears one bunch and dies. A field once set out to bananas will produce fruit for many years. The plants are not usually raised from seed, but the shoots are set out in rows.

According to Humboldt, a plot of one thousand square feet, which will yield thirty-eight pounds of wheat or four hundred and sixty pounds of potatoes, will

produce four thousand pounds of bananas, and in a much shorter period of time. The banana is more nutritious than most fruits, but its nutritive value is often exaggerated. It is sometimes said, for instance, that one pound of bananas equals in nutritive value one pound of meat. The nutritive value of lean meat is:—

FOOD VALUE PER OUNCE IN CALORIES				
Proteid	...	...	...	26.2
Fat	...	...	...	7.4
Carbohydrates	...	...	...	.0
Total	...	...	...	33.6



From this it is seen that the total nutritive value of the banana approaches that of meat, but its nutritive constituents are of a different character, being mostly carbohydrate. One could not substitute bananas for meat, as the statement referred to might suggest would be possible, for they contain but little of the proteid food element.

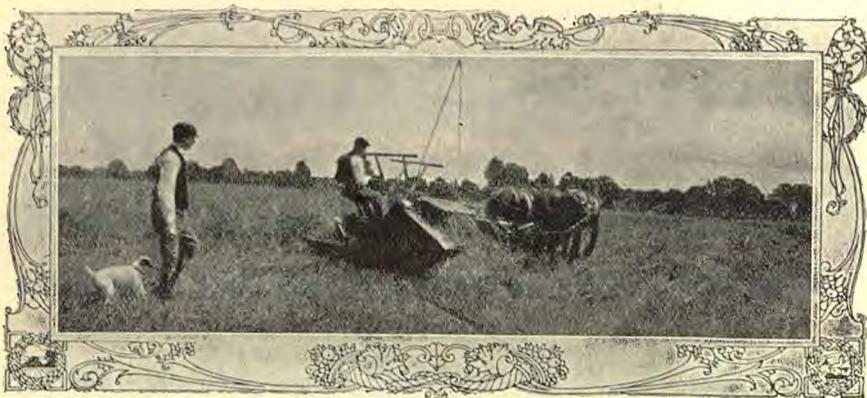
The banana contains more than one-third as much nourishment as bread, but it contains only one-half as large a proportion of the proteid element. The unripe banana contains considerable starch, and is unfit to eat raw; but in countries where it grows the green banana is used, being cooked much as we cook potatoes. Unripe bananas are often dried, and eaten as bread. They are also made into a meal, or flour, which is used just as we use wheat flour in making yeast bread, biscuit, dumplings, etc., and in thickening soups, stews, and gravies; in fact, it is used for everything for which we use wheat flour. It is darker than wheat flour, and makes darker bread; but the taste of the bread does not differ from that of wheat bread.

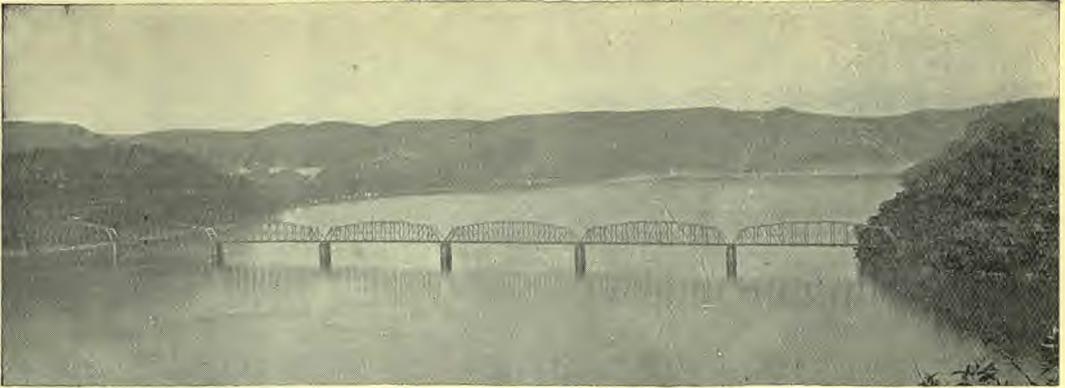
Bananas are picked very green to send to this country, otherwise they would spoil before we get them. For use where they are grown, they are allowed to become nearly mature, but are picked when

ready to ripen, except for home use, when they are sometimes allowed to ripen on the plant; however, as ripe bananas spoil so quickly, they cannot be allowed to ripen on the plant if they are to be sent to market. They are, of course, sweeter and nicer when allowed to become mature on the plant than they are as we get them.

The part of the banana next the skin contains considerable fibre, or cellulose, and an acid. These cause the fruit to disagree with some people. For this reason it is well to scrape off this fibrous part next the skin before eating. Some persons are able to eat bananas when scraped in this way who cannot eat them otherwise.

Bananas may be peeled, scraped, sliced, and served with cream, or they may be sprinkled lightly with sugar and then covered with orange juice. A dish of sliced bananas and sliced oranges mixed, with a little sugar sprinkled over each layer, is delicious.





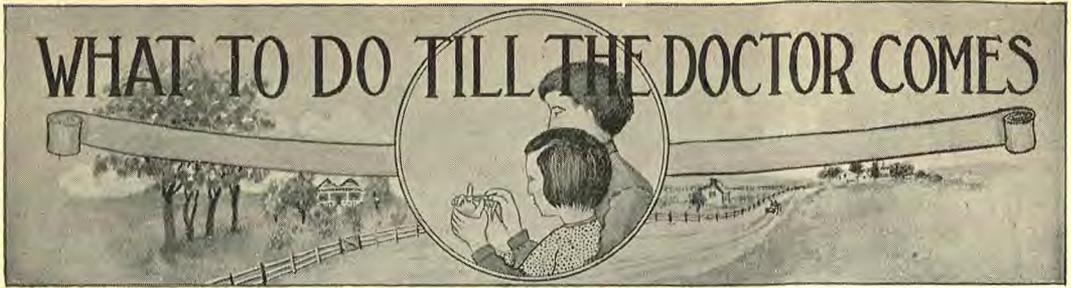
THE HAWKESBURY

AFAR from bustling cities sped
 To view her beauties grand,
 The child of Nature still is led
 To this enchanted land.
 Through rocky chasms cracked and worn
 By nature's constant grind ;
 Through virgin forests swept and torn
 By fierce spasmodic wind ;
 Past gentle slopes with verdure crowned,
 And many a dizzy height,
 Where no discordant sight or sound
 Invades the soul's delight,
 Thy silver stream flows gently on
 To bear unto the sea
 Its tribute, as in ages gone
 Into Eternity.
 Stupendous boulders down thy bank
 Seem ready still to crash
 Through ragged brush and grasses rank,
 The fierce impact would splash
 The stricken waters far and near,
 And fill the air with spray ;

The fish, amazed with sudden fear
 Would madly dart away.
 Mark how yon cliff, its fissured side
 With verdure overgrown,
 Is mirrored in the peaceful tide ;
 Each charming feature shown.
 The roving eye at every turn
 Is met by blooming flowers ;
 Those rocky ledges, waterworn
 And hollowed into caves,
 In ages past were racked and torn,
 The play-ground of the waves.
 Raised by some great volcanic force
 Above the flowing stream,—
 They boldly mark its ancient course :
 Their jagged edges gleam.
 The pencil and the pen portray
 But little of thy charm :
 Here, Nature keeps her holiday,
 And sheds her healing balm.

—E. A. Robinson





How to Render First Aid

MARY W. PAULSON, M.D.

IF a foreign body gets into the ear, do not try to poke it out with something handy. You are apt to push it farther into the ear and make a great deal of trouble. A drop of oil put in the ear and afterward syringed out with a little warm water, provided the pressure of the water is very light, will sometimes help in removing this particle.

Fainting and Sunstroke

What shall we do in case of a faint or unconsciousness? In a real case of fainting the face is pale. There is not enough blood in the head. The patient must be laid out flat, the windows opened, and everything arranged for plenty of fresh air. Loosen the clothing about the neck and about the waist. Then stimulate inspiration by percussion on the chest, or by slapping the chest with cold water, or by simply bathing the face with cold water. How frequently we see just the opposite done—people crowding around a person who has fainted—sometimes simply out of curiosity! Such people should be driven back, and opportunity given for the patient to be straightened out on his back. If, after gaining consciousness, the patient is very weak, a little aromatic spirits of ammonia will stimulate him. Give fifteen drops in a little water.

During the warm months of the summer many persons lose their life because of sunstroke. Others are disabled for life, seeming never to regain their nerve

force. In case of such sunstroke, pour cold water over the back of the head, thoroughly cooling the head. The patient should be put in as cool a place as possible, and cold should be applied on the chest. If practicable, the patient should be immersed in a cool bath. Do not give any stimulants.

Suffocation and Drowning

What shall we do in case of suffocation either by gas or by smoke? Oftentimes persons in a lifeless condition are found in a room in which gas is escaping. Immediately remove the victim to the fresh air, and perform at once artificial respiration. This is done by loosening the clothing, first placing the patient in an absolutely horizontal position, with the head low, and a pillow rolled up tightly placed under the shoulders. Open the mouth, and force the jaw forward. Grasp the patient's forearms firmly as close to the elbows as possible. Press the elbows to the sides of the body, driving the air out of the lungs. Then slowly bring the arms in a circle outward and upward until they are stretched back and above the head, pushing them well back, thus expanding the chest, and raising the chest as high as possible by a strong pull on the arms.

This should be repeated no faster than about fifteen to twenty times a minute. This movement has to be kept up sometimes an hour or more. At the same

time it is important to know that nothing is in the throat. If the tongue drops back in the throat it should be pulled forward. The rest of the body should be kept warm, or the limbs should be thoroughly rubbed to promote circulation therein.

This same movement is necessary in cases of drowning. It becomes necessary first to turn the drowning patient over on his face, thoroughly shaking the body in order to get all the water possible out of the lungs. Then the patient should be turned upon his back and artificial respiration used, as described in the foregoing. It is also necessary in cases of morphia poisoning or other cases of poisoning where the respiration has stopped. Many lives are saved by this simple yet important procedure.

Bites from Poisonous Animals, etc.

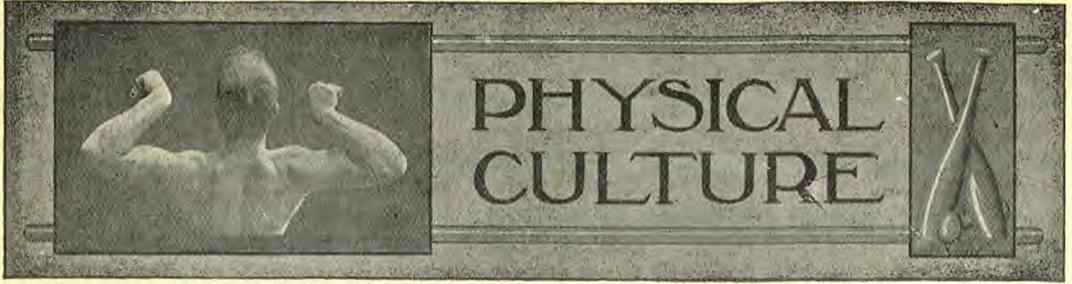
It sometimes becomes necessary to know what to do in case of bites from dogs or other animals, or when a rusty nail is run into the foot. If the flesh has

been perforated, the blood should be pressed out of the wound at once, making firm pressure above the bite, thus preventing the poison from being carried into the system. Then the wound should be thoroughly washed with warm water, and the raw surface in the wound touched with carbolic acid; and immediately following this, wash it with alcohol.

Great care should be taken in the use of carbolic acid, as it is very easy to burn the surrounding tissues. Touch only a drop to the exposed tissues and immediately follow with alcohol. Some anti-septic ointment may then be used, such as carbolised vaseline, and the wound bandaged. In case of bee stings apply lime-water or plenty of baking soda.

“TAKE time for eight hours of refreshing sleep, eat simple food regularly, bathe often, see that the drinking water is not contaminated, cultivate smiles, and the doctor will have little business with you.”





The Hygiene of Deep Breathing

WILLIAM J. CROMIE

Instructor in Gymnastics, University of Pennsylvania

TO the average person, articles written on such subjects as health and hygiene are in the main dry and uninteresting. This is because the paper is too technical or prosaic, or is poorly written, or because the reader's education along this line is so meagre as to cause the subject to be unappreciated. I deeply realise that such a title as "The Hygiene of Deep Breathing" will not strike a popular vein in most people, because it sounds too simple or commonplace; but that is not sufficient reason why it should not be written, nor, again, why it should not be read.

It is the simple things in life that are best for us, and simple or hygienic eating, drinking, and exercising, with simple pleasures and habits, should be studied and encouraged. This paper is an appeal to the woman, because her breathing is more shallow than that of the man, although the same regimen of exercise is beneficial to both. If any woman will read this carefully and perform the exercises daily for six months, physical training will by that time have a new meaning, and such subjects as health and hygiene will have added attractions.

The average woman gives very little thought to the art of breathing, because this simple though very important process goes on constantly whether she takes note of the fact or not. She receives food into

the stomach but a few times daily, while air is taken into the lungs fifteen or twenty times each minute. This air undergoes in the lungs a species of digestion, and this process goes on without any intermission both day and night during her lifetime. She can live but a few minutes without breathing, consequently the act is one of the greatest factors in hygiene and life.

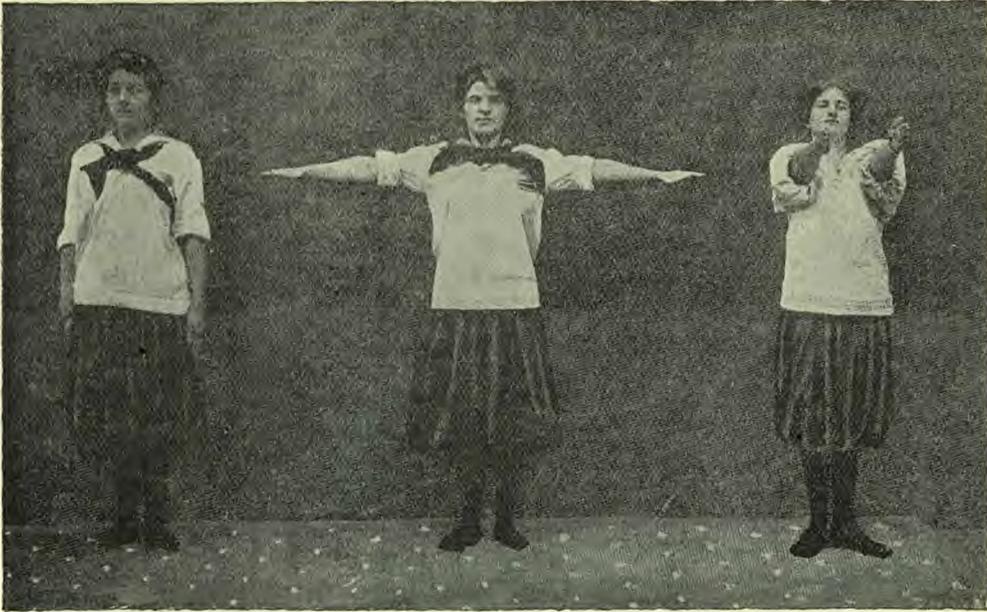
The Breathing Organs

In order that the act of breathing may be better understood, I shall give a short review of the physiology of the lungs and chest. The lungs, or organs of respiration, with the heart between them, are situated in the thorax, or chest, and are separated from the stomach and intestines and other organs of the abdomen by the broad umbrella-shaped bridge, or muscle, extending across the body, called the diaphragm. When one is about to inhale air, the muscular fibres in this membrane contract in such a manner as to bring the diaphragm more nearly to a level or plane than it was before, enlarging the cavity of the chest, and thus causing a negative pressure, often spoken of as a "vacuum." The air rushes through the mouth and nostrils, trachea or windpipe, and bronchial tubes, to equalise the pressure in the lungs with that outside. This is called inbreathing, or inspiration. Out-

breathing, or the act of expiration, is caused by the diaphragm's being pushed upward against the lungs by the contraction of the muscles of the abdomen; the walls of the chest contract, the ribs being pulled downward by the muscles.

The size of the chest is greatly diminished by these movements, and the air is pressed out of the lungs through the air-tubes, bronchi, larynx, and nostrils. For the function of breathing, one possesses a bellows-like arrangement, which alter-

they are always open. The larynx, or opening into the windpipe, is situated in front of the throat, and is protected by a kind of lid, called the epiglottis, which immediately closes under the impulse of reflex nervous action whenever any particle of food or drink is about to be swallowed. The larynx, containing the vocal cords, is continuous with the trachea, or windpipe. The trachea divides into two branches, called the bronchi. Each bronchus enters the lung on its own side, and



A

B

C

From position A, inhale deeply as arms are raised as in position B. Exhale as arms are brought front as in position C.

nately contracts and expands under the control of the nervous system, bearing a close analogy in its mode of action to the apparatus employed in the circulation of the blood. Each consists essentially of a kind of pump which propels, one fluid, and the other air, through a series of ramified tubes, the difference being that in the lungs the inflow and outflow pipes are the same.

Although one can breathe through either the mouth or the nostrils, the latter are the natural air-passages, inasmuch as

divides into a large number of small branches, named bronchial tubes. In the nose, the air is warmed and moistened, and the coarse particles of dust, etc., are left clinging to the damp and sticky surface.

In all exercises which call for deep breathing, such as cycling, running, mountaineering, rowing, and most games, the breath should be taken in as much as possible through the nostrils. When the organs of breathing are forced into stronger action, the possible harm which may be

done by dry, cold, or dust-laden air is correspondingly increased.

Force in Inspiration and Expiration

The lungs are not, as some seem to think, a support for the chest walls, but, on the contrary, tend to suck them in. The elasticity of the lungs, in fact of all the tissues of the body, tends to become less with advancing years. When the skin loses its elasticity, it becomes wrinkled, and on account of its being permanently stretched and no longer tightly adapting itself to the underlying structure, is thrown into folds. What is true of the skin is also true of the lungs; the elasticity and suction they exert diminish.

Many women visit the massage expert, men the barber shop, in order to have the face massaged. It is observed that massage of the face tends to keep away wrinkles, and gives a healthy glow to the skin, making its functions more active. Just as the skin may be preserved and nourished by a rich supply of blood through the agency of massage and proper care, so may the suction and elastic properties of the lungs be preserved by the "massage" of deep-breathing exercises, such as are illustrated in this paper. Of course, the lungs should be carefully protected from bronchitis, pneumonia, coughing, etc., and all straining exercises where the thorax remains fixed should be avoided.

A Chest Developer

The chest is enlarged by elevation of the ribs and the descent of the diaphragm. The elevation of the ribs increases the sagittal and lateral diameters, and the descent of the diaphragm increases the vertical diameter.

In ordinary breathing the average person has very little rib movement, especially in the upper part of the chest, respiration being chiefly abdominal. It is during fast walking, running, athletics, gymnastics, swimming, games, and special deep-breathing exercises, such as are illustrated in this paper, that the upper diameter of the chest is brought into vigorous action. In the civilised woman it is the

upper part of the chest that is mostly used, but this type of breathing is not a natural one, due to the fact that diaphragmatic action is correspondingly curtailed on account of the restricting influence of stays which interfere with the free descent of the diaphragm and the expansion of the lower bony cage. It is for this reason, claims Gibson, an authority on the lungs, that after the age of fourteen the lower transverse diameter of the chest is less in the civilised woman



A B C

From position A, inhale deeply, head back as in position B. Lower the head as in position C, exhaling. While exhaling, bring the elbows as near the front as possible.

than the upper, the reverse being the case in man. It naturally follows, then, if tight dress or restricting corsets are worn, that chest development will be retarded. The practice of tight lacing, common among the fashionably dressed women of a few years ago, was criminal, because it not only impeded proper breathing, but cramped the action of the heart, stomach, and other internal organs, and thereby injured them. Deep breathing is the best chest developer.

I found my chest larger after a two days' walk of one hundred miles than before. Athletes who do nothing but run, get a larger girth of chest. Of course, the swing of the arms assists in this, but

the greater portion of the development is due to the deep breathing.

There are so many forms of breathing advocated for singers and others that one is apt to become confused. The following are some of the forms that are recom-



A B C

From position A, clasp the hands behind the head, elbows front as in C. Inhale deeply as the elbows are forced back as in B, and exhale as the elbows are brought together as in C. The elbows should be closer together in C. Lower the chin to chest as the elbows come together.

mended: Clavicular, pure lower costal, lower costo-abdominal, pure abdominal, and abdomino-costal.

Each of these systems has its devotees, and I shall not try to discuss them pro and con, but shall direct attention to what I consider the best kind of deep-breathing exercises. The above systems may be better for singers, but the exercises herein illustrated are the most efficient for the woman who desires a large and elastic chest and bust.

(The illustrations in this article are from photographs by Haeseler, Philadelphia.)

GIRLS need such exercises as give grace to carriage when walking and sitting, lightness and erectness. House work is generally equal to the best calisthenics.

Beauty is Merely Health and Physical Comeliness

THE author of the maxim that beauty is only skin deep is credited with a truth aptly expressed. True, beauty is skin deep, but in more senses than one. In reality, the maxim is a terse statement of a most profound fact as we shall see.

What makes a good skin? Pure blood, good kidneys, and strong lungs. What makes pure blood?—Perfect digestion. And what makes perfect digestion?—Plain food and not too much of it, together with exercise and other things that tend to good health. It is easy to see, then, that a fine skin comes from good health, and beauty therefore is but skin deep in the sense that there can be no beauty unless there exist the conditions that demonstrate themselves in the shape of a beautiful skin. That, then, is something for which every girl should be thankful, for you see that she can control her health and through her health her attractiveness. Remembering this she need not be concerned about the colour of her eyes, the size of her nose, the tilt of her chin, or any other of her inherited characteristics. These may add to or detract from her looks, but they will never determine her true beauty, which lies outside the region of facial perfection and in the domain of perfect health.

The beauty of physical health is a force which people often appreciate without knowing just what it is that compels their admiration. If asked to analyse the attractions of a given girl they would probably fail to do so. When told that that to which they have been rendering homage was merely good health they would probably be sceptical. Yet what in reality has so attracted them? Simply, rosy cheeks, a sprightly manner, a good poise, beautifully rounded limbs, and delicate curves of face and body. And all of these are only indications of perfected health.

The story is told of a country doctor and his wife who visited the Museum of Fine Arts in Central Park, New York. The doctor's wife was entranced with the

charms of the female figures, and could not sufficiently express her admiration for their beauty. Finally she turned to her husband and said, "Wouldn't it be fine if all the women in the world were as lovely as the sculptors have made these statues?"

The doctor made a wry face and looked at his spouse disapprovingly.

"Where would I find any patients if all women were like that?" he grunted. "You don't suppose that these superb creatures ever had dyspepsia or headaches or any female weakness, do you? Beauty is all right in a museum, my dear, but if the time ever comes that all women are as beautiful as these, there'll be no work for us doctors."

It would be hard to find a girl over fifteen years of age who would not submit to any sort of torture if she thought it would give her beauty. Yet no agonies need be suffered to get it and keep it. When the words "beauty" and "health" come to be synonymous terms in a girl's mind, she will be willing to practise some amount of self-denial in order to secure the former. She will, for instance, decline to eat chocolate creams, lobster, animal flesh, fried oysters, or drink quarts of so-called "sodas." She will no more dream of swallowing harmful things than she would of wearing an unbecoming

dress, or a hat that did not harmonise with her hair or complexion; and, what is of vastly greater importance, she will inaugurate a system of ten or thirty minutes of exercise daily, since this is one of the secrets of keeping the blood pure and the internal organs clean and in perfect working order. Every famous beauty and every actress celebrated for her personal charm knows this secret, and they consequently persistently cling to their exercises and cold baths for the sake of the resultant youthfulness and beauty that they impart to face and figure.

Who does not know what a girl will go through to get a pretty dress, or a new hat? Won't she cheerfully sit up half the night to sew? Won't she deprive herself of small luxuries and even necessities if she can thereby secure something which she believes will add to her charms? When a girl once knows that health is beauty, and beauty is health, she will make just as vigorous efforts to increase her health as she has made heretofore to enhance her attractiveness by the use of fetching millinery and pretty dresses.

Some amount of effort is necessary on the part of those who wish to be healthy. But the reward is immeasurably greater than the labour.—*Bernan Macfadden, in "Health, Beauty, and Sexuality."*





The Cooking of Vegetables

MRS. D. E. KELLOGG

THE preparation of vegetables for the table is generally thought to be a very simple process, one which the most inexperienced cook need not hesitate to undertake. "Anybody can cook vegetables" is a common expression. It is not difficult so to apply heat and the solvent property of water as to soften vegetable tissues enough for mastication, and by the addition of condiments and seasonings to make them taste well; but to cook them so as to preserve their natural flavours, and change their constituent elements into the most digestible form, requires no little care and skill.

Vegetables admit of much variety in preparation for the table. They may be wholesomely cooked by baking, roasting, steaming, boiling, and stewing. Water enters so largely into their composition that but little additional liquid is needed for cooking, and a general rule, applicable to all tubers to be cooked by boiling or stewing, is to cook them in as small an amount of water as possible without burning. The salts and the nutrient juices are largely dissolved in the water, and if this is drained off, much of the little nutriment these foods possess is wasted.

The potato is the most commonly used of all the tubers, and in nutritive value it exceeds all others. In a mealy state the potato is easily digested, but when waxy or water-soaked, it is exceedingly trying to the digestive powers.

To obtain the desired result, when the potato is to be cooked by boiling, it should be introduced into water that is actively bubbling, and cooked continuously until it can be easily pierced, then thoroughly drained. Cover the saucepan, with the exception of a small aperture for the steam to escape, and set it on the back of the range or in some other warm place for a few minutes, to allow the moisture on the outside of the vegetables to evaporate, and serve at once.

Whether or not to cook the potatoes with skins on is a matter to be settled by individual consumers. The chemists have demonstrated that when boiled in their skins, the waste of nutritive elements is only three per cent; when boiled without skins, fourteen per cent, or two ounces to every pound. Because so much of the nutriment is lost in water, the potato, as well as most other tubers, is better when cooked by steaming, roasting, or baking.

To cook a potato by baking, first thoroughly clean and dry it. For cleaning tubers nothing is better than a vegetable brush. Put into the oven, the temperature of which should not at any time during the cooking exceed four hundred degrees. A common test is a temperature in which the hand can be held long enough to count twenty. Do not pierce to try. When done, the tuber will feel soft or mellow when pressed with the fingers. On taking from the oven, burs

the distended skins by a quick pressure of the fingers, just enough to allow the steam to escape, and serve at once.

A principle to be observed in the cooking of tubers is to remove them from the water or oven just as soon as tender. The cooking will continue some minutes after their removal, owing to the heat stored within. By overcooking, vegetables become less digestible.—*Good Health*.

Seasonable Vegetarian Recipes

Lemon Juice a Disinfectant

WHILE all fruit-juices are natural disinfectants and germ destroyers, this is especially true of lemon-juice, because it contains such a strong acid. "The juice of one lemon in two glasses of water, if left standing fifteen or twenty minutes, will thoroughly disinfect it. The lemon is highly valued in cookery as a flavouring ingredient, and its use is very common in making the popular beverage lemonade, for which some readers might like a recipe.

Lemonade

One quart of water, juice of three large or four small lemons, two-thirds cup of sugar. After squeezing out the juice, strain it through a fine strainer. Mix the ingredients; and when the sugar is dissolved, the lemonade is ready to serve. If used for medicinal purposes, as in fever, or as a hot drink in connection with treatment to ward off a cold, it would be better to use less sugar.

To Stew Prunes

Wash the prunes well. Cover them with cold water from two to three times the depth of the prunes. Let them stand over-night. In the morning put them to cook in the water in which they soaked, letting them simmer for about three hours. When done, they will be tender, with a thick juice, and will require no sugar.

Prunes "Cooked in Cold Water"

The largest varieties of prunes are excellent prepared in this way. Wash the prunes well. To one pint of prunes add one quart of water. Set them in the refrigerator for forty-eight hours. They will then be plump, soft, and delicious, more like fresh, sweet plums, and more wholesome than the stewed ones.

Baked Quinces

Quinces may be baked with the skin on, or may be pared before baking. Remove the cores, fill the cavities with sugar, put into a baking-pan, add water, and bake till tender. This will require a longer time than is required for baking apples. Baste with the syrup while baking, adding hot water if necessary.

Steamed Dates

Carefully look over and wash the dates. Put them into a steamer and steam ten or fifteen minutes. Serve hot or cold.

Stuffed Dates

Carefully look over, wash, and stone the dates. Fill the cavities with walnut meats or almonds. The dates may then be rolled in sugar.

Date and Cocomnut Caramels

Mix two parts seeded dates and one part shredded cocomnut. Run the mixture through a food chopper, using the finest cutter. Press into a flat cake and cut into caramels.

Baked Pears

There are hard varieties of pears which are hardly suitable for eating raw, but they are excellent baked. Some varieties are nice simply washed, put into a pan with a little water, and, without the addition of sugar, baked till tender. Some small varieties are good baked whole with one-half cup of water, or more, to each quart of fruit. The large varieties may be quartered and cored before baking, and if tart, may require the addition of a little sugar. After cooking in any of these ways, they may be served with sugar and cream.

Baked Sour Apples

Select sound, ripe apples of uniform size. Wash them, and remove the core from the blossom end, not cutting through the apple. Put the apples into a granite baking-pan, fill with sugar the cavities made by removing the cores, pour a little water into the pan, and bake till the apples are tender. When done, the juice should be nearly evaporated, thick, and rich. Serve hot or cold, plain, or with cream or whipped cream.

Citron Apples

Prepare as for plain, baked apples, peeling the apples unless the skin is very tender. Put pieces of chopped citron in the cavities made by removing the cores, then fill the cavities with sugar. Bake slowly till the apples are tender, but not broken. Serve hot or cold with cream or whipped cream.

Rice Soup

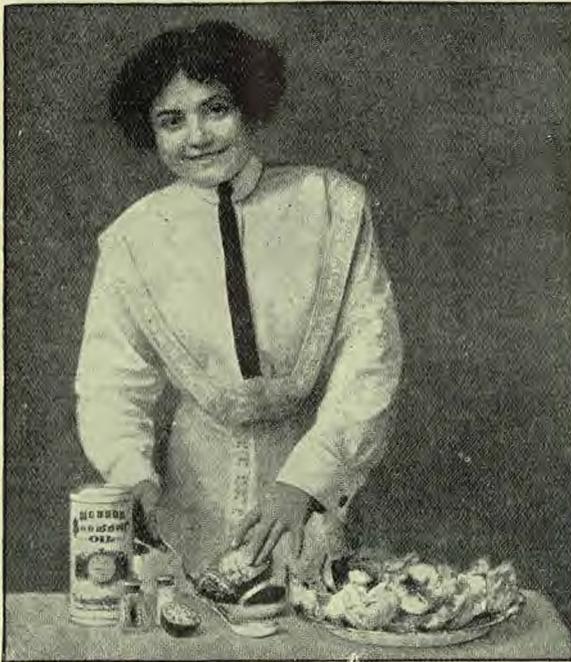
Rice, one-quarter cup; salt, one teaspoonful; milk, three cups; butter, one tablespoonful; water, three cups; egg yolk, one; flour, two teaspoonfuls.

Boil the rice in the water for forty minutes or until perfectly soft, adding salt; add sufficient boiling water from time to time to keep the original amount; press through a sieve and thicken with well-beaten yolk of egg, milk, flour, and butter. Add a little more salt if necessary; serve with toasted biscuit.

If food and rest are properly watched it is good for children to work as well as grown people; though not, of course, such long hours. One great trouble with our schools is that they teach work with the head, and do not teach work with the hand.

The Art of Cooking

COOKERY is or should be a fine art. Like other arts, it has its laws of proportion, harmony, and contrast. The art of cookery appeals to the sense of taste, music to the sense of hearing, and the graphic arts to the sense of sight. Gratification of the sense of taste is as legiti-



mate as enjoyment from any of the senses. The temperate indulgence of the sense of taste is indeed necessary for good digestion, on which depend physical wellbeing and efficiency. A systematic study of cooking, then, should be a fundamental part of the education of the home maker. —*American School of Home Economics.*

Glass, Iron, and Paper Clothes

It has remained for the twentieth century to show us the advantages of garments made of minerals, says the *Literary Digest*. Incredible as it may seem, stone, iron, and even glass are now being manu-

factured into clothes. Some of these strange garments are described by a writer in *The Inventive Age* (Washington, Oct. 1). The latest novelty in women's dresses, he informs us, is represented by robes of spun glass. The cloth comes in shades of white, green, lilac, pink, and yellow. The inventor is an Austrian, and the goods are as bright and flexible as silk.

"The first lady to wear a glass dress was of royal rank, which insures the popularity of the material. It was of a delicate shade of lavender shot with pink, and its peculiar sheen reminded observers of the sparkle of diamond dust.

"The Russians are manufacturing a fabric from the fibre of a filamentous stone from the Siberian mines, which is said to be of so durable a nature that it is practically indestructible. The material is soft to the touch and pliable in the extreme, and when soiled has only to be placed in a fire to be made absolutely clean.

"Iron cloth is largely used to-day by tailors everywhere for the purpose of making the collars of coats set properly. This cloth is manufactured from steel wool, and has the appearance of having been woven from horsehair.

"Wool not the product of sheep is being utilised abroad for men's clothing. This is known as 'limestone wool,' and is made in an electric furnace. Powdered limestone, mixed with certain chemicals, is thrown into the furnace, and after passing through a furious air-blast it is tossed out as fluffy white wool. When it comes from the furnace the wool is dyed and made into lengths, like cloth. A pair of trousers or a coat made of this material cannot, it is claimed, be burned or damaged by grease, and is as flexible as cloth made of sheep's wool.

"Other novelties in clothing include those made from paper and cordage. An English manufacturer has succeeded in

making fabric from old ropes. He obtained a quantity of old rope and cordage, unravelled it, and wove it by a secret process into a kind of cloth. It is said to be so durable that a large trade has grown up in this line, especially in the British colonies.

"Paper clothes were worn by the Japanese troops during the war with Russia, and they were found to be very serviceable and much warmer than those of cloth. Paper dressing-gowns, bathrobes, and similar articles of attire are now being turned out by the cart-load in England, France, Germany, and other European countries. The paper of which they are made is of the 'blotter' variety, and after being treated by a new process is dyed in various colours or printed with a pretty floral design. Even gloves are made of paper, the principal claim to advantage being that they are susceptible of being cleaned many times."

Fruit Sugars

By Lenna Frances Cooper

WHEN we speak of sugar we usually think of the white granulated material found on our tables. But there are other kinds, there being three distinct varieties: (1) Cane-sugar, which we obtain not only from the sugar-cane, but from the sugar-beet as well. (2) Milk sugar, which is found in milk, but is not a very sweet sugar, and is used for the coating of sugar-coated pills. (3) Fruit sugars, known as grape sugar and fruit sugar. These you

cannot buy as sugar from the grocer's, but you do get them dissolved in the juices of ripe fruit. Our body also manufactures it from the starch which we eat. This is a part of the process known as digestion. Starch is one of the chief forms in which fuel food is stored. And, strange to say, neither plant nor animal can live upon it as starch. It must be changed into sugar. In the human body we have a substance found in the saliva, known as ptyalin, which performs this function. But did you ever stop to think that starch is primarily intended for the food of some young plant? The potato is really a storehouse of food for the young plant. In the spring, when the "eyes" begin to sprout, these young plants must have something to feed upon in order to grow. Within the potato is a substance very similar to our saliva, which changes the starch into sugar, preparing it for the use of the young plant. It is the same way with wheat and the seeds that we plant.

The fruit sugars are the most wholesome form of sugars; hence it is much better to get our sweets from fruit than from confectionery.

Another important part of fruits is the acids. They are also a fuel food, but their chief value is that of a cleanser. We use soap and water to cleanse the outside of the body, and sometimes forget that we need an internal cleansing as well. On the whole, well-matured and ripe fruit is a most wholesome and delicious food, and should form a part of our daily ration.





A Word to Weary Women

EULALIA S. RICHARDS, M.D.

THE world is full of weary women, women whose work is never done. The majority of these women are the mothers of families. They pride themselves on the cleanliness of their homes, on the abundance and richness of the food on their tables, on the whiteness of their husbands' shirts, on the size and style of their children's wardrobes, and on a hundred other things that are dear to the heart of the good housewife.

All of this is well enough in itself, but it entails an immense amount of work for the busy mother. And sometimes, even in her loyal heart, the question must arise whether the effort is worth while. May it not be that her burdens are heavier than necessity demands? Might not her family be quite as healthy and happy under a less complex system of daily living?

To-day we hear much of the advantages of the simple life, but to the housewife brought up in the old-fashioned way it is no simple matter to appreciably simplify the household routine and lighten the burden of responsibility and care. At first it may appear easier to follow the old paths, but once a number of short-cuts are worked out it will be found advantageous to forsake some of the old ways. The following suggestions are made by a housewife who, by careful planning, has

been able to spend many happy hours with her children or in service for others which must otherwise have been spent in household labour.

House Furnishings

Every woman desires to make the house in which she lives a home. But homeliness depends not so much upon the elegance of the furnishings, or the number of belongings, as upon the simplicity of the furnishings and the taste displayed in their choice. Recently a lady while calling at the home of a family in comfortable circumstances counted thirty-four distinct articles displayed upon the mantel shelf and other pieces of furniture in one room alone. These articles included vases, pieces of china and earthenware, framed photographs, seashells, and other curios. No doubt the mistress of the house considered this a particularly cozy and home-like apartment, but to the visitor it was more suggestive of a china shop than of a living room. What a large amount of time must the housewife consume in dusting and otherwise keeping in order such a room. And really how needless this expenditure of time and effort!

The woman who desires to conserve her time and energy will furnish her rooms simply. The floors may be of hard wood, or they may be covered throughout with linoleum which is both inexpensive

and durable. Such floors are easily cleaned. There may be in the centre of the room a carpet square or a number of smaller rugs, but they should be of such size that they may be frequently and easily removed for cleaning.

The window curtains should be of the



Child's One-piece Tunic

simplest form. For bedrooms, sash curtains of net or muslin are quite sufficient provided there are blinds which may be drawn at night or by day in case it is necessary for any reason to exclude the light. Heavy draperies which harbour

dust, also window and bed hangings which serve no real purpose, should be discarded, as their laundering and up-keep entail much labour.

The furniture itself should be plain, but of good design. The up-to-date housewife regards dust not merely as an unpleasant thing, but as a highly dangerous carrier of disease germs, hence she dispenses so far as possible with upholstered furniture.

As to the little odds and ends in the rooms, the fewer of these the better. A few good pictures, one or two vases containing flowers, a number of well-chosen books and perhaps a beautiful statuette are sufficient in addition to the few personal touches which are certain to appear in any living room. A room simply but comfortably furnished and devoid of needless ornaments is easily kept in order. It is also far more restful to weary minds and bodies than the room which is crowded with furniture and is so cluttered with ornaments that one can scarcely move about without fear of breaking something.

The Home Table

While the family should be provided with an abundance of nutritious food, simplicity should mark the daily menu. A few varieties of food, intelligently chosen as regards food elements, well and palatably prepared and daintily served, are much more to be desired than a large variety of rich and indigestible dishes. When will housewives learn that they only make work for the doctors as well as for themselves when they load their tables with rich foods. Let the housewife study to excel in healthful cookery, to so prepare each dish that it shall be above reproach. Let her motto in cookery be, "Not how much, but how well," and very shortly her family will be fairly shouting the praises of her simple but delightful meals. Who has not many times been seated at a table so loaded with attractive viands that he became possessed with a feeling of almost nervous fear? He felt that he desired to enjoy all of the good things,

but knew that to do so would be a physical impossibility. And so he sat contemplating the profusion of dishes, vainly trying to decide which to enjoy and which to leave untasted. No such perplexities annoy the family of the sensible mother. She provides her table with a pleasing variety from day to day, but each meal is itself a study in simplicity. The adoption of simple living means not only the saving of much time and labour by the overworked mother, but the gaining of health and increased efficiency by the entire family. This gain is inestimable.

The Family Wardrobe

Unfortunately, in matters of dress we are more or less slaves to custom and conventionality. Yet the mother who sets her wits to work may devise many ways of lessening the family sewing and laundry. The husband and sons may be induced to wear, on ordinary occasions, soft shirts which are easily washed and ironed; the mother and daughters may, while engaged in housework, wear dark but becoming long-sleeved overalls. The younger children may be provided with clothing which is wondrously simple and withal attractive. At last Dame Fashion has devised a style of garments for children which is so sensible and yet so pretty that many women wonder why no one thought of it years ago. The one-piece frocks and tunics, illustrations of which are given, may be made in a surprisingly short time, and in laundering they may be laid out upon the table and ironed quite flat. Only the busy mother knows what a saving of labour is effected by this style of garment. For summer wear it is best to make the children's sleeves elbow or threequarter length, as they do not soil so quickly as when made full length. For every-day winter wear the small school boys may be provided with neat knitted jerseys, which are comfortable, durable, and easily cared for. The little schoolgirls may wear one-piece belted tunics of navy serge, or some other suitable material, with bloomers of the same material in lieu of petticoats.

A great saving of time may be effected in the making of nightdresses. A one-piece garment is so easily made, and is far more comfortable for night wear than the ordinary one made with yoke and sleeves. For wear in hot weather no nightdress is more comfortable than one which is made with no opening down the front, but merely a circular opening which slips over the head. Such a garment, if finished without decoration, can easily be



One-piece Nightgown with Seams Only at the Sides and under the Arms

made, by aid of the sewing machine, in half-an-hour's time.

The family ironing may be lessened not only by simplifying the garments worn, but by folding neatly and putting away without ironing many articles that are ordinarily ironed with care. Table linen, handkerchiefs, outer garments, and certain other articles, require careful ironing, but there are many undergarments and other articles of household use which do not require ironing at all.

These are only a few of the many ways in which the busy mother may lighten her burden without in any way detracting from the happiness and comfort of her family. The wise mother will seek and discover many more.



Baby's Good Night

By R. HARE

The sweetest home memory that links with the past,
The one that must linger while reason shall last,
Is the memory that calls back the hour of delight,
When love, long ago, kissed the baby good-night!

The vision was calm as the sweet summer dream,
And round it the gloaming had cast its fair gleam,
While stars in their jewelled lights, changeless and bright,
Smiled over the scene of that fondest good-night!

How brightly the little eyes flashed in their joy,—
Love's idol untarnished by sins base alloy,
But tears dim the vision that beacons my sight,
Since love, long ago, kissed the baby good-night.

Mother and Son

ALWAYS I was conscious that I must keep my boys close to me. I knew the time would come when my authority could not be enforced. Then only love could bend them to my wishes and judgment. So I sought for nearness and mutual understanding. From the first, they knew I would tell them the truth and never refuse to answer a direct inquiry. When they brought me the physiological questions which are bound to enter the life of the growing child, I answered them simply and clearly. I made nothing common or unclean. Life was pure and sacred; and if there was anything they did not comprehend, they turned to me for the clear truth, secure that they would get it.

It was not only seriousness we shared. Fun of all sorts, outings, jollifications for birthdays and holidays, vacations in the open, all these we had together, and I learned much of games and sports which had been a sealed book to me even in my youth. But a familiar story it had to become to me if my boys and I were to be truly "intimate friends."—*Jane Calhoun, in Harper's Bazaar.*

"Run Away Now: I Am Busy"

ONE of the most serious mistakes that scores of mothers make in rearing their children is in allowing them to be lonesome or to have dreary hours at home. Too many mothers by far shut their children off from their personal work instead of teaching them to share it. "Run away now: I am busy" is a mother's familiar sentence of banishment to a child who is seeking to take part in his mother's world of work. Perhaps no other sentence in the category of the average mother has sent so many children out to seek wrong affinities with playmates, or to learn some idle form of amusement. Of course, it is true that the child's part in the mother's work may

be more of a hindrance than a help, if the mother chooses to look at it from that standpoint. But what is the accomplishment of a "big morning's work" in comparison to an empty hour in a child's life? The years that our children spend with us are all too few, and no action of ours should banish them from our sides when their natures reach out to us. No mother can afford to let any chance pass to have her child get better acquainted with her. It benefits the child, and educates the mother!—*Ladies' Home Journal.*

The Home

• THE ideal home is not self-centred. It is a centre of service. So far as circumstances will permit, the old-time ideals of hospitality should be maintained. In wise and uplifting ways the home should be shared. It is a good practice to invite young people who are away from home. It relieves loneliness, discouragement, and temptation. Remember, it is—

"Not what we give but what we share,
The gift without the giver is bare."

"The home is the bulwark of civilisation." Within the extreme limits of wealth and poverty a home may be good or bad irrespective of social position or property. Our homes are what we choose to make them. It is a question of what we admit and what we keep out of them. Our best selves and the best that we have to give should go into the home. The home life, to a large degree, determines the character of children. The home tends to make us all better or worse. Thus the home becomes the chief factor in determining the character of the community and the nation. The trend of our times is away from the home into the countless amusements and interests of modern life. But home life at its best should be strongly maintained and cherished. It should not be narrow nor selfish, however; and from it should develop and overflow steadily lives enriched for service and blessing.—*Selected.*

Let the Children Alone

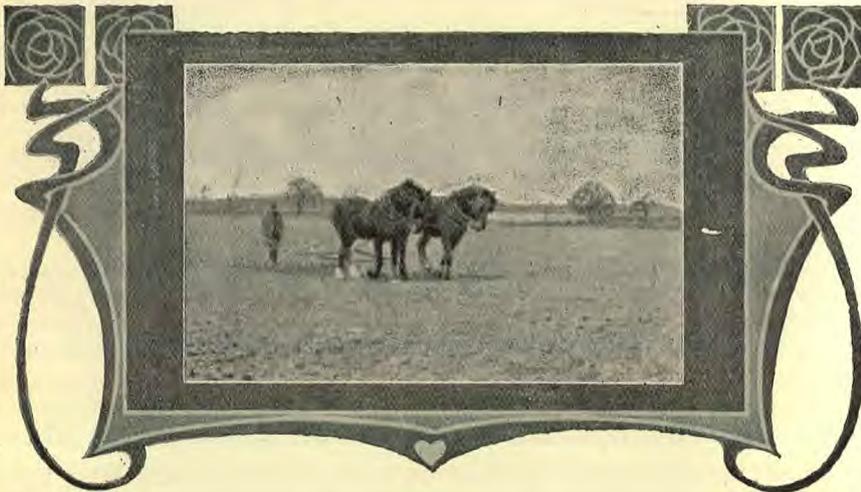
MOTHERS, mothers, why will you worry your children so? Let them alone, do let them alone. What if they do stand in the window where the wind blows? They will move on long before they catch cold. What if they do run and jump and squeal? Did you ever see a young animal that didn't? What if they do come dancing into the house on a run? What hurt will it do? What if they do break things occasionally in their efforts to do things? What is a dish worth compared with a helpful boy or a womanly girl? What is a garment worth, clean and whole, when placed beside a sturdy little man or woman who just must do something?

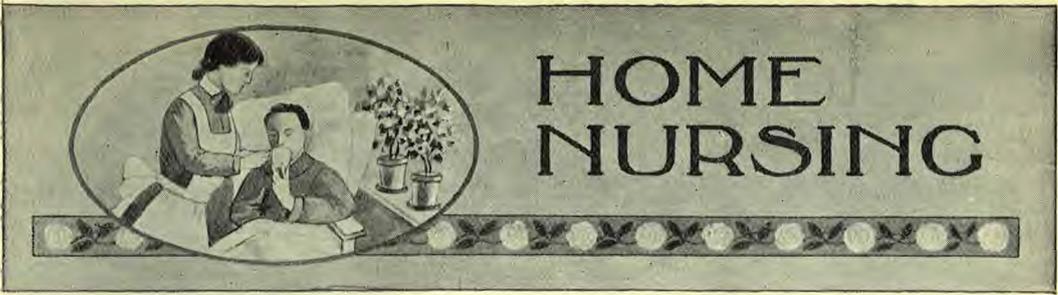
Obey? Of course they should, but not because they *have to*, not because punishment, or scolding,—which is the cruellest punishment of all,—will certainly follow disobedience or failure to come up to the standard set by a mature mind. True

obedience can be secured only where understanding exists. Think how long it takes you to learn many of the things you do.

Can you put yourself in their place, and feel as they feel? Do you realise that their feeling may be as sensitive as your own—possibly more so? Do you know their little human hearts bleed when cross, harsh words are spoken to them? Do you know how willingly they would obey you, serve you, if you would just treat them as human beings, far more responsible than you give them credit for being? And do you know that they would be far, far more responsible in every way if you would manifest more confidence in them?

Watch them, of course: guide them, and instruct; for the immature, untrained mind is as awkward as the unskilled little hand, but oh in a thousand little, wholly unimportant things that they do and want to do, let them be natural, let them alone! —*Selected.*





Pneumonia: Its Causes and Treatment

BY D. H. KRESS, M.D.

PNEUMONIA, one of the most widespread and most-to-be-dreaded of diseases, is present in all climates, and attacks people of all ages and during all seasons. The sudden temperature changes of spring may explain its greater frequency at that time of the year.

Predisposing Causes

Anything which lowers the vitality of the lung tissue renders one more liable to an attack of pneumonia. Among adults, alcoholism is one of the most potent of predisposing causes. The disease frequently follows a cold or an attack of influenza.

Butchers, publicans, and others who live high and exercise little, are especially subject to the disease, and with such it frequently proves fatal. As a result of over-loading the system with material that cannot be appropriated, cell activity is lessened, tissue vitality is lowered, the circulation is rendered sluggish, and the internal organs, especially the lungs, are engorged. This is a condition that frequently precedes pneumonia. Exposure to cold or chilling of the body aggravates this condition, increasing the lung engorgement, and preparing a soil favourable for the growth of the germs.

The Pneumonia Germ

|| Pneumonia is believed to be due to a specific micro-organism, or germ, and to

be communicable from one person to another. There are numerous instances on record where several members of the same family were, one after another, stricken down with the disease.

The germ is always present in the saliva of persons who have recently recovered from an attack, and may be present for years after. In fact, it is frequently found in the mouths of healthy individuals who have never had pneumonia.

Like the germ of tuberculosis, it is present nearly everywhere; but while the tubercle bacillus produces its most fatal effects on those who are poorly nourished, the germ of pneumonia is more apt to cause a fatal termination when it gains a foothold in the lungs of the overfed and overnourished, gouty, or rheumatic subject. It is usually the weakling who succumbs to tuberculosis. It is often the middle-aged man, who appears to be quite sound, that the pneumonia germ selects as a subject for the undertaker.

Prognosis

While the disease is not apt, as a rule, to be fatal in adult life, a fatal end is almost a matter of course in the aged, and in those suffering from heart weakness, or kidney disease, or from diabetes. The disease is also highly fatal in the stout, the apparently robust who are fond of the pleasures of the table, and perhaps include

more or less of alcoholic drink in their intake, and use meat freely.

Pneumonia usually runs its course, and not much can be done to abort it; but care in the matter of treatment and diet adds greatly to the comfort of the patient, and favours recovery.

Treatment

The disease requires prompt and careful treatment. It is impossible to outline

The aim of all treatment should be: (1) To relieve the engorged condition of the lungs; (2) to reduce the local inflammation; and (3) to allay the symptoms which distress the patient, such as pain and difficulty of breathing.

For the relief of pain, fomentations applied over the chest, in front and behind, for ten or fifteen minutes, will be found of value.

On removing the fomentation, a cold

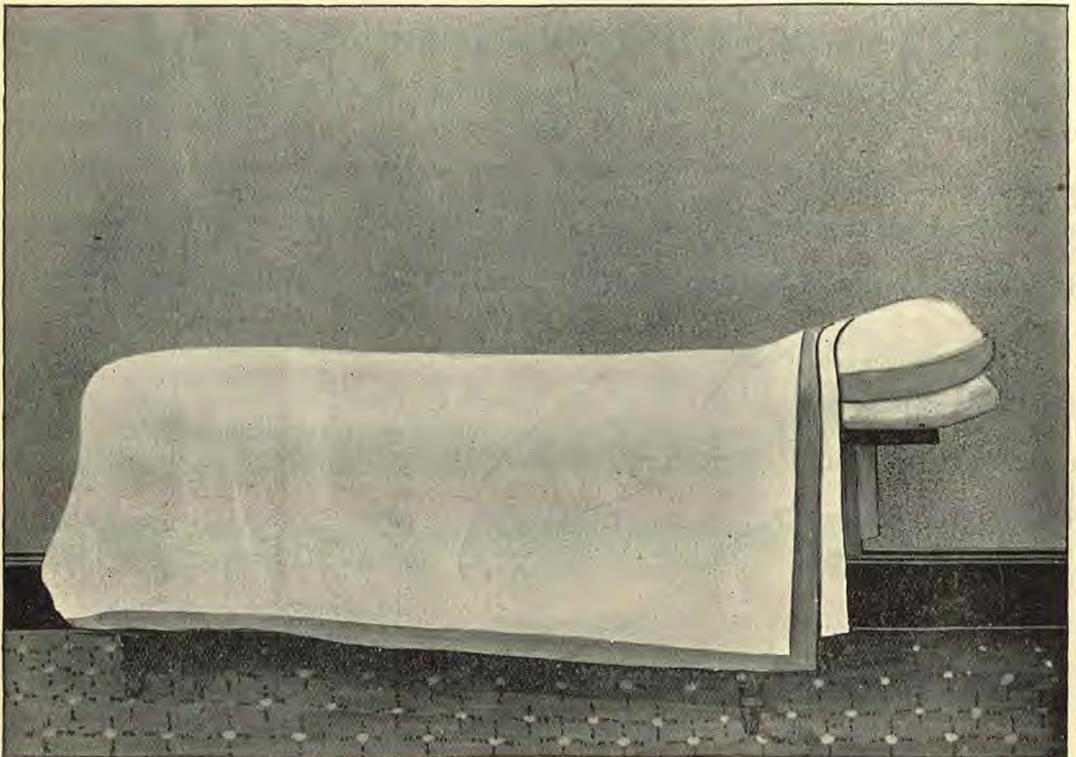


Fig. 1. The couch, on which has been spread the blankets and the sheet, wrung out of cool water, ready for patient.

a treatment that can be employed in every case. The condition of the patient must be understood.

Heroic treatments should not be given by novices, as much harm may be done. As a rule, there is more danger in attempting to do too much than in doing too little. It goes without saying that the welfare of the patient depends very much on the skill and the experience of the attendant.

compress should be applied both to the front and to the back of the chest. The compress applied to the front should cover chiefly the parts involved, and should be kept cold by changing every few minutes. The compress applied to the back should be allowed to remain as a heating compress until the next fomentation is applied, which should be after an interval of one or two hours.

The feet and arms should be kept warm constantly. This is important, as chilling of the extremities throws more blood into the interior, and embarrasses the already overworked heart and lungs. The circulation of the blood to the skin should be encouraged by cold mitten frictions or cold towel rubs. This treatment serves a double purpose—the friction draws the blood away from the internal

action will occur in a short time, and the blood will be drawn to the surface. Sweating may be induced by prolonging the wet-sheet pack, and in most cases will be found beneficial.

An enema of cool water may also be used as an aid in lowering the temperature. Encourage the drinking of cold water. Sipping of hot water will often relieve the cough.

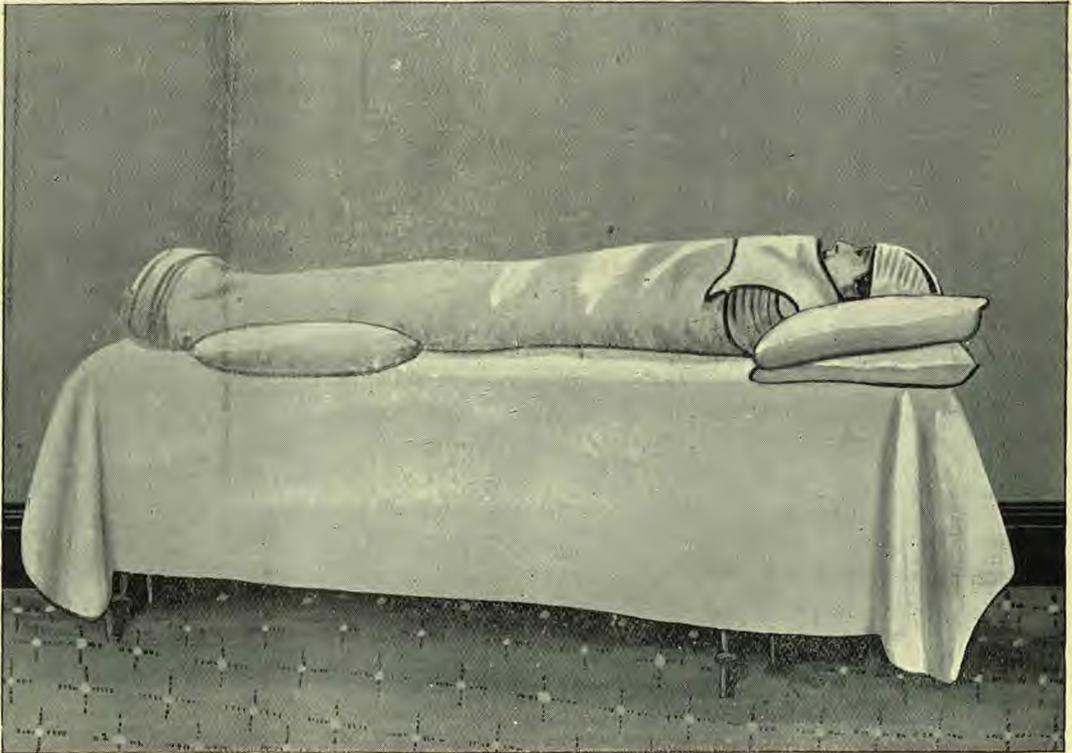


Fig. 2. Wrappings completed. By this time a smart reaction has taken place, and the patient feels a glow of warmth over the entire body.

organs to the surface, thus relieving the laboured breathing and easing the heart's action; and the application of cold water lowers the temperature, and increases the oxidation and elimination of wastes.

If the fever is high, a wet-sheet pack may be preferred. Wring a sheet out of cold water, and wrap it snugly and rapidly around the patient, and around this two or three blankets, arranged so as to exclude the air. If the feet are kept warm, a re-

The bowels may be kept open, if necessary, by a light cathartic.

Blue lips and laboured breathing indicate extreme congestion of the lungs and failure of the heart, and call for immediate attention. Derivative treatment should be given at once. The hot hip and leg pack, with heat to the feet, is an excellent means of affording relief. An ice-bag or frequently renewed cold compress should be placed over the heart.

We give the following directions for the wet-sheet pack, which is one of the most efficient treatments in dealing with certain stages of pneumonia. A suitable couch, as shown in the illustrations, is more satisfactory for this treatment than a bed. On the couch are spread a sheet and then three warm woollen blankets. A sheet which is wrung snugly out of cold water is then spread over the blanket, as shown in Fig. 1. The patient now lies down full length on the couch, and the wet sheet is wrapped quickly and snugly about the patient so that it comes in contact with all parts of the skin surface. In order to do this the arms are raised as the sheet, hanging down on one side, is drawn over the chest and body, and the lower part tucked in between the limbs. The arms are now lowered, and the other side of the sheet is drawn over, so as to enclose the entire body, including the arms and shoulders. The sheet should be drawn snugly around the shoulders and the feet. Each blanket should be drawn over the patient in such a manner as to effectually exclude the air. A hot water bottle is applied to the feet, and rubber spine bags containing hot water are placed on both sides of the body, and if necessary one is placed between the lower limbs. The head should be kept cool during the treatment by application of a suitable towel, which is wrung out of ice-cold water and wrapped about the head in the form of a turban. (See Fig. 2). If the wet-sheet pack is applied quickly and properly, the patient reacts very soon, and then it becomes in effect a warm or hot treatment according to the length of exposure. A wet-sheet pack should be terminated with some cooling treatment, as a wet-mitten friction or a cool sponge, followed by thorough drying, without exposure to the air. To give such a treatment properly requires experience. A pneumonia patient should be under experienced medical supervision. This does not mean under drug medication, but under the care of one who knows the danger signals and how to meet them.

As soon as the inflammation of the lungs begins to subside, the cold compresses are no longer necessary. A general heating compress should then be used to promote the circulation of the blood through the diseased area and to encourage absorption.

Other treatment may be indicated. The one thing that should be kept in mind in giving treatments is the condition of the patient, and the treatments should be modified to meet each individual case. Any treatment which successfully equalises the circulation and draws the blood from the engorged lungs and that will reduce the local inflammation, may be safely employed.

The open-air treatment of pneumonia, giving the patient unlimited opportunity to breathe the pure air, is gaining favour in this disease.

Diet

Attention should be given to diet. While in tuberculosis the chief aim is to improve the nutrition by feeding the patient on nourishing food and plenty of it, in pneumonia it is best to feed sparingly, and of foods which contain comparatively little of the albuminous elements. Meat, eggs, beans, nuts, and nut preparations should be avoided. Beef extracts are dangerous and aggravate the trouble. Fruit juices are beneficial in all stages of the disease. When the patient is able to take solid foods, thoroughly baked breads and ripe fruits are among the best foods that can be used.

Measles

By Mrs. A. F. Haines

AS measles are somewhat prevalent just now we shall suggest some simple treatments.

SYMPTOMS.—The first symptoms of measles greatly resemble a severe cold, being fever, chilliness, catarrh of the nose, eyes red and tearful, dry cough, frequent fits of sneezing, nausea, and sometimes vomiting. After these symptoms it is

generally three or four days before the eruption appears.

SECOND STAGE.—The fever increases and eruption begins to appear about the mouth, forehead, eyes, and behind the ears, extending down the neck and chest to the lower portion of the body. The eruption first shows itself in the form of small red circular spots, very slightly raised above the somewhat reddened skin. On the face the spots sometimes run together forming irregular blotches about one-third of an inch long by half that breadth. The rash feels rough to the fingers.

THIRD STAGE.—The disease reaches its height on the third day when the rash begins to disappear. As it fades, it assumes a dirty yellowish-red appearance, and there continues a reddish hue for some days after the eruption disappears. The surface of the skin often becomes somewhat scurvy. Measles generally produce an epidemic, being an infectious disease. The disease may occur at any age, but usually it is much lighter with children than older people.

TREATMENT.—Care should be taken to prevent exposure to the disease, for it is very contagious. In preparing the sick room there should be a thorough ventilation, but the room should be somewhat darkened or a shade placed before the patient's eyes.

Stimulants of all kinds should be prohibited, and a light but nutritious diet of milk, fruits, and grains provided. The patient should be given all the cold water he desires.

In mild cases the only treatment required is to make the patient comfortable. It is not wise, however, to trust even a mild case of measles to domestic care alone.

If the rash is slow in coming out or is repelled after once appearing, give a warm blanket pack, or warm full bath, providing all the hot lemonade the patient can drink, after which give a tepid sponge. The patient should be kept moderately cool by sponging the hands and face fre-

quently with tepid sponges every fifteen minutes, and cool compresses to the abdomen, changing when they become warm. The cold compresses are prepared by wringing a thin piece of cotton cloth out of cold water, folding in three thicknesses over the abdomen and placing a dry cloth over this to protect the bedding, and to keep the cool air from the wet compress. When this is removed the skin should be dried by patting with a soft towel instead of rubbing.

During convalescence the cool baths are given in preference to the hot treatments. A more speedy and safe recovery is accomplished when the patient is not weakened by being long shut away from fresh air. The old method of loading the child with excessive covering, causing constant perspiration, is uncomfortable, makes the child sensitive to cold, and is all unnecessary.

A rub given with sweet oil twice a day will relieve the irritation of the skin and lessen the sensitiveness to cold. The ears should receive careful attention, as the inflammation of the throat not infrequently extends into the ear causing supuration and injury to the drum membrane.

A patient suffering thus should have the attention of a good physician, as inattention might at this time cause incurable deafness. If there is inflammation of the eyes a cold compress should be applied to them, and they should be washed with a solution of three or four grains of boracic acid to an ounce of water.

If croupy symptoms develop, ice compresses should be applied to the throat, or, it may be sponged with water as hot as it can be borne. Hot fomentations are also good.

In case of convulsions give warm baths. In case the diarrhoea, which often accompanies measles, becomes troublesome, give a cold enema three times a day.

When the patient has recovered, the sickroom should be disinfected by burning sulphur. It should afterwards be thoroughly scrubbed and aired.

The Throat Compress

V. L. MANN, M.D.

THIS is a very simple yet efficient hy-driatic treatment. It is applied by wringing gauze or linen four inches wide out of cold water and wrapping it four or five times around the neck. Before this is applied, it is generally a good thing to foment the neck with one application. After the cold moist gauze is applied, this should be covered with a dry flannel eight inches wide and some cases with an impervious dressing, oiled silk. The throat compress is best applied at night, removed in the morning, the neck being then rubbed with cold water and a dry flannel bandage substituted for the throat compress during the day.

This remedial agent is an excellent measure to reduce the congested condition of the throat. By a reflex action on the nerves which come to the skin, the throat is relieved of its excess of blood, which often keeps up a tension and an irritating condition of the mucous membrane of the throat. The dressings of the throat should not be thick and heavy enough to cause an increase in the warmth, as this will dilate the great vessels of the neck, and result in headache. So the dressing should be re-wet as soon as it becomes dry.

There are a great many conditions of the throat in which the compress will serve a useful purpose. A common cold, when the throat becomes very much irritated and there is that constant tickling with the inevitable result of coughing without relief, only to be followed by another cough, the compress acts as a soother to the affected region. The throat should be covered lightly with the flannel, and the compress should be changed every four hours.

In chronic inflammatory conditions of the throat the compress should be covered with an impervious material, as oiled silk. Chronic laryngitis and pharyngitis, whooping cough, diphtheria, and croup, in all

the useful effects of the neck compress will be seen.

When used to counteract inflammation that is becoming quite severe, several thicknesses of the cheesecloth are required. They should be wrung out of very cold water every four or five minutes. It should never be allowed to become heated. This will contract the deep vessels of the neck. Used in this way it is good for quinsy. However, a handy or more efficient way to treat quinsy, is to foment the throat and then put on the ice-bag for an hour, at the end of which time foment again. Care must be used not to chill the tissues too much, and the effect of the treatment should therefore have constant watching. The writer has seen many throats in a bad condition from quinsy after they had been lanced and all other forms of treatment given, and still the swelling so bad that the patient could not talk or swallow, yet when the fomentations and the ice were used, recovery took place.

A cold can be aborted by extending the throat compress to a head compress. Just before going to bed wet the hair in cold water and wipe so that there will be no dripping. Cover the head with a three inch gauze bandage wrung out of cold water, by beginning at the back of the head and carrying it forward, repeating until the head is covered with five or six thicknesses of gauze. After this process is finished it should not drip, as this would make the individual take fresh cold. Over this a hood made of oilcloth should be placed. After this compress has been on a few minutes, it will relieve the stuffiness of nose, and is efficient in aborting cold.

THERE is no scientific justification for the employment of alcohol in medicine.
—*Dr. Alfred Carpenter.*

DOCTOR MOTHER

A LITTLE wound, a little ache,
 A little blistered thumb to take
 With touch of love to make it well—
 These things require a mother's spell.
 Oh, sweet the progress of the skill
 That science brings unto the will!
 Vast range of methods new and fine;
 But when our little ones repine,
 The mother is the very best
 Of doctors into service pressed!

Sunshine and air and mother's spell
 Of helping little lads get well,
 And helping little lasses, too—
 Here are three remedies that do
 So much more, often, than the grave,
 Skilled hands that try so hard to save.
 For Doctor Mother, don't you know,
 Gives something more than skill—gives so
 Much of herself; gives, oh, so much
 Of love's sweet alchemy of touch!

Upon the little wardroom bed
 A little curl-encircled head,
 A little slender hand and pale,
 A little lonesome homesick wail:
 Loved nursing, best of skill and care;
 But, oh, behold the wonder there
 When Doctor Mother, bearing sun
 From where the wilding roses run,
 Leans down, with hungering love and kiss—
 There is no medicine like this!

In a little child-heart's hour of woe,
 Pain, ache, or life-wound's throb or throe,
 The Doctor Mother knows so well
 The weaving of love's wonder-spell—
 Just what the little heart requires,
 Just how to cool the fever fires,
 Just how much tenderness and cheer
 Will calm the little doubt and fear,
 How much of gentleness will ease—
 Alone she knows such arts as these!

—Folger McKinsey.

The Tonic for the Sick

How few know how to conduct themselves in the presence of a sick person! After twenty-five years of experience it is an increasing conviction that visitation of the sick should be limited almost entirely to a very few. Some stay too long. Some talk too loud. Almost all talk about other sick persons. Few ever laugh or smile. The test of the value of any visit to the sick is its effect upon the patient. So tested, most of our trying to do good to the sick is a clumsy, depressing affair.

There is no finer art under the sun than to pitch one's thought and one's voice to lighten up one's face, to illumine one's soul with gracious good cheer, so that one's coming brings a tonic of strength, and one's going leaves a ray of sunshine on the soul of the sufferer. And even this art of healing is only one aspect of all life. How brutal our charity is sometimes! How abrupt and awkward the hand that reaches the dole! This ought not to be. To fill the stomach while we wound the heart is poor policy. It is the spirit that needs our healing everywhere. Out of two decades of contact with human misery we declare with absolute conviction that in nine cases out of ten the human need is for what Jesus gave rather than for what we even try to give.—*Universalist Leader*.





I MEANT TO

- "I DID not rise at the breakfast bell,
But was so sleepy—I can't tell—
I meant to.
- "The wood's not carried in, I know;
But there's the school bell, I must go—
I meant to.
- "My lessons I forgot to write,
But nuts and apples were so nice—
I meant to.
- "I forgot to walk on tiptoe;
Oh, how the baby cries! Oh! oh!
I meant to.
- "There, I forgot to shut the gate,
And put away my book and slate—
I meant to.
- "The cattle trampled down the corn,
My slate is broken, my book is torn—
I meant to."

Thus drawls poor idle Jimmy Hite,
From morn till noon, from noon till night:
"I meant to."

And when he grows to be a man,
He'll never work out any plan,
His life will end as it began—
With nothing.
—*Home and School Visitor.*

The Harvey Boys and Their Pets

"HURRAH," cried Alfred, as he rushed into the house with great glee, "a whole day's holiday to-morrow!"

"Where shall we go?" shouted Eben, his younger brother, overjoyed with the prospect of a day's outing.

"I vote we go into the country for the day," said Alfred, "we could spend a jolly day on the good old Upnor Hills."

"Just the very thing," returned his brother excitedly, "let's go and tell mother we would like to go directly after breakfast, and take our lunch with us. My,

won't it be grand," he added, clapping his hands with delight.

Of course Mrs. Harvey was only too glad that her two sturdy boys should have a day in the country, as the outing would do them good after being kept in stuffy schoolrooms day after day.

So the next morning Alfred, Eben, and their mother were up in good time, and soon finished their breakfast.

After breakfast Mrs. Harvey took down the big family Bible and read the usual morning portion of Scripture with her boys, and then she knelt down and asked the Lord to bless and protect them during the day, and bring them safely home in the evening.

Morning worship finished, she set to work briskly, and packed up two little parcels of lunch for the youthful holiday makers.

"Oh, just a minute," said Alfred, as he ran into the garden toward the greenhouse, "I have forgotten my glass jar and muslin net."

"Your glass jar and muslin net!" said his mother. "What are you going to do with those, Alfred?"

"Why, mother," said her eldest boy, "I am going to catch some newts from the pond and bring them home to keep as pets."

Mrs. Harvey smiled lovingly as she waved good-bye to her two happy boys as they disappeared round the bend of the road.

It was a lovely morning, and Alfred and Eben stepped out manfully on their long walk of five miles to Upnor Hills.

On their way they passed the famous

old city of Rochester, with its ancient Norman castle and large cathedral. Somehow, they were never tired of passing through this quaint old place, with its old-fashioned houses that reminded them so much of the days of Queen Elizabeth, whom they had read about at school.

In about two hours they came in sight of the curious old village of Upnor, resting peacefully at the foot of the hills which overlook the River Medway and the Royal Chatham Dockyard on the opposite side of the river.

It did not take the boys long to climb up to the top of the hills, and of course they both made for the pond at the top as fast as their legs could carry them.

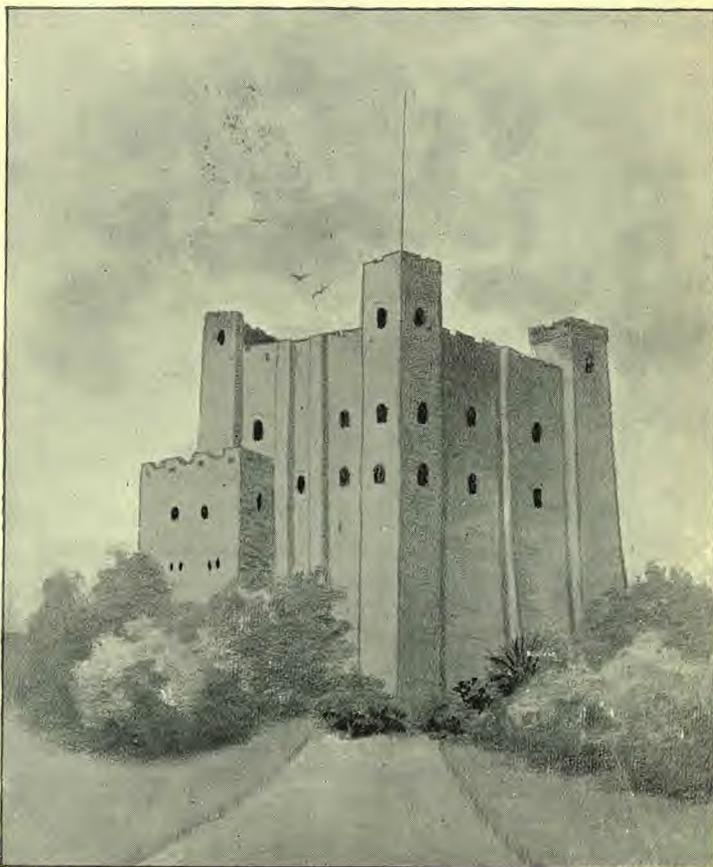
They had hardly reached the side of the pond, both almost breathless, when Alfred shouted excitedly as he looked down into the water, "Look, Eben! there's one!" "And there's another," called out Eben in high glee.

Sure enough, there were quite a number of little newts waving their long tails so gracefully as they glided along in the water.

"There seems no end to them," said Eben, "I wonder where they all come from?"

"They breed very fast," said Alfred, "teacher was telling us the other day that one mother newt will lay as many as a hundred eggs in one season. When Mrs. Newt is ready to lay an egg, she will swim up to some water-plant and wrap the tiny egg up in a leaf with her hand-like feet, so that it is completely covered out of sight of any hungry creature who might want to eat it.

"When these eggs hatch," continued Alfred, "a number of little tadpoles appear, which in some ways are very much like those of frogs and toads. They have the same big, round heads, and the same little waggly tails, and they feed on the same scraps of decaying matter. When the first little pair of legs begin to grow, it is always the front pair, and not the



"They passed the famous old city of Rochester, with its ancient Norman castle."

back ones as in the case of frog tadpoles."

"How very wonderful," exclaimed his younger brother Eben, who had been listening eagerly to all Alfred had said; then suddenly he called out: "Look again! Alfred, there's one that looks as though he has only partly dressed himself; his jacket is half on and half off."

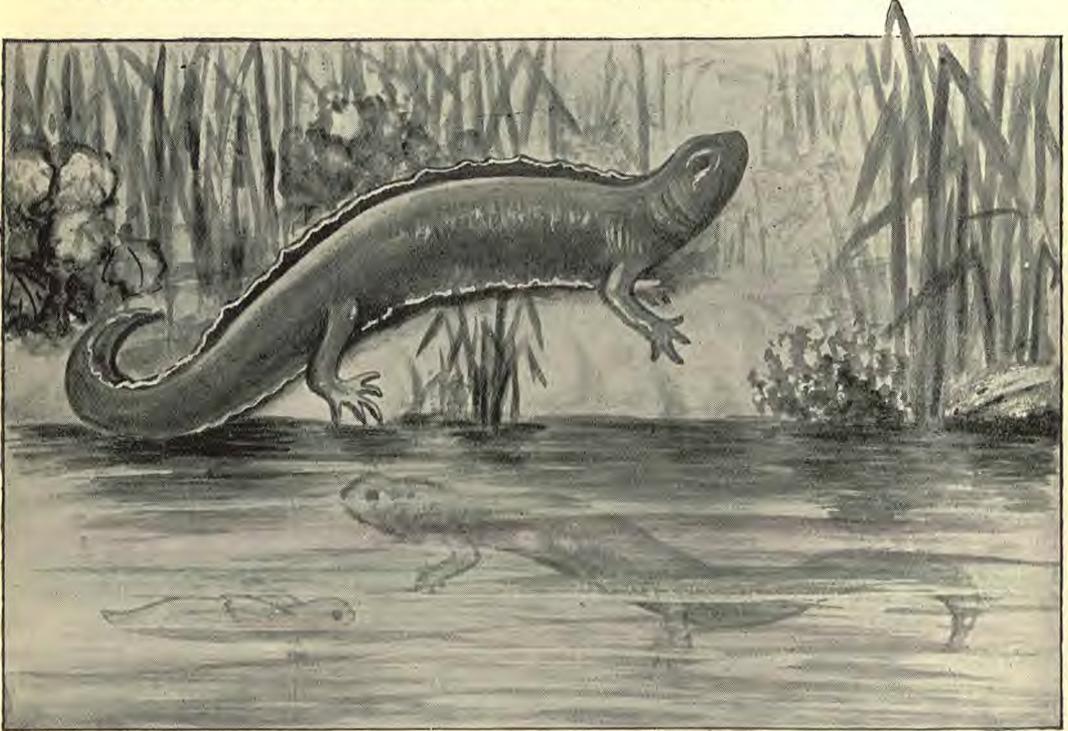
"I see," said Alfred excitedly, "that reminds me of just what teacher was tell-

ing us about the father newts changing their coat of skin every now and then. He told us that just before this change takes place they swell out their bodies so that the skin splits along the back. Then, partly by twisting and wriggling about, and partly by the help of their little hand-like paws, they managed to strip off their old garments altogether, and leave them floating on the water."

"Do you see the colour of the lower

the nimble little creatures dart out of the way of the net, but soon Alfred was able to fish one or two out of the water, and place them in his glass jar. How delighted the boys were to get a good, close look at the little things, swimming about inside the glass vessel!

By the time evening came, and they had had a good game of hide-and-seek and bat and ball, the boys started for home. Altogether there were six newts



"Sure enough, there were quite a number of little newts."

part of his new coat?" went on Alfred, his face still glowing with enthusiasm; "it is a beautiful orange colour, spotted with black, and along his back runs a wavy crest which has a scarlet border. That is Mr. Newt's early summer coat. But about the middle of June he loses those beautiful colours and takes on the same plain dress as Mrs. Newt wears all the year round."

By this time Alfred had his little muslin net, which was fastened on to a long cane, into the water. It was such fun to see

in the glass jar, and Alfred and Eben walked home in triumph, well pleased with their day's outing. When they arrived home, all the Newt family were let loose into a good-sized glass tank of water, which had been made ready on purpose for them.

Day by day Alfred and Eben would watch these interesting little creatures and feed them with worms, which the newts would tuck into their mouths with their handlike paws in such a comical way.

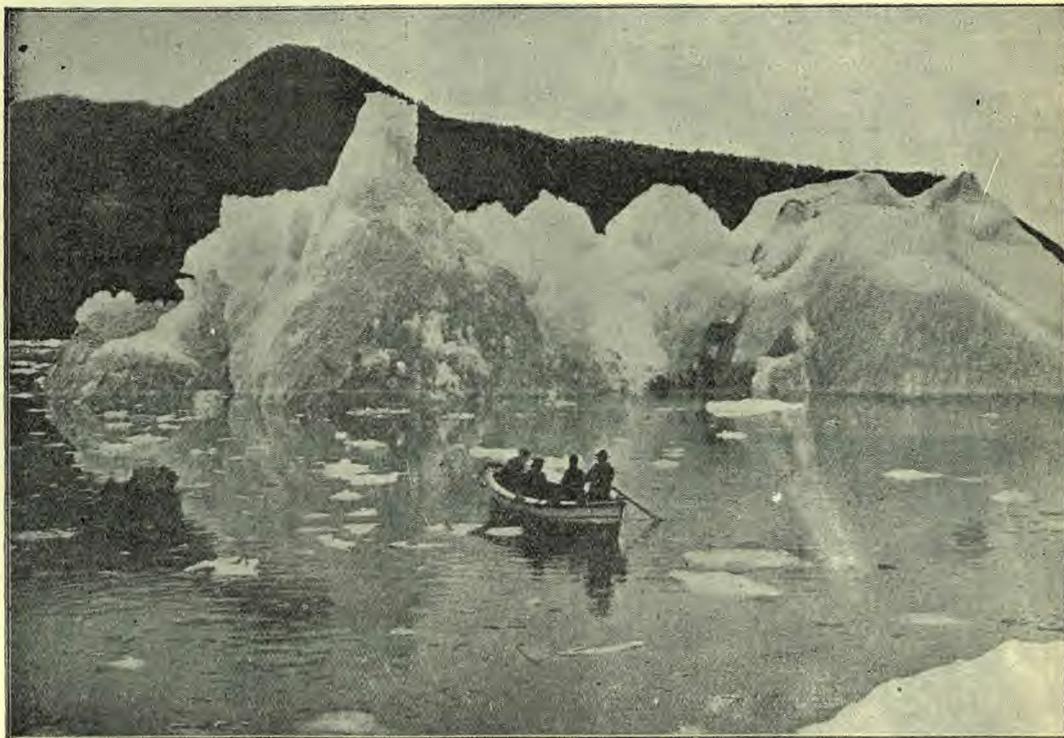
Mrs. Harvey was very pleased to see

her boys take such an interest in their new pets, because she felt that if they were kind and attentive to the smallest of God's creatures they would learn to show the same kindness and loving attention to all around them. Besides, in watching the ways and habits of their little pets they were learning more about the great wise Father who made all creatures, both great and small, even to the little newts in the pond.

UNCLE HERMAN.

"One morning we observed that we were being rapidly carried by a strong current toward the open ocean, where a heavy sea was coming from the east down upon us. It was in vain to try to drag our boats over the ice-floe against this current; it was inevitable that we must come into the dangerous breakers at the margin of the ice, and there, we knew, would be no safety.

"The ice-floes were smashed to pieces



Among the Icebergs

The Arctic Traveller

THE following story, given in the words of a well-known Arctic explorer, graphically sets forth the truth of an ever watchful Providence, who, by timely intervention, delivers a valuable life from destruction.

"That you may get an idea of what risks one runs in Arctic currents," says this traveller, "I will tell you of our experiences during one day and one night only.

all around us. The one upon which we were standing was rapidly breaking up; in fact, it had already separated into several pieces. We had nothing to do but select another ice-floe, the strongest we were able to find in the vicinity, and upon this determine our struggle for life.

"After a while we got a strong floe, placing upon it our two boats, into which we had put all our possessions. Our tent, of course, we pitched upon the ice, and with it, for use at night, placed our

sleeping-bags. These bags were made of peltry—untanned fur-skins—and are the same as those used by all Arctic explorers, large enough to crawl into feet foremost, furnishing an excellent safeguard against extreme cold.

“At night all the men were ordered to sleep except one, who should keep watch and call us when it would no longer be possible for us to maintain our position. While Captain Sverdrup took the first turn we crept into our sleeping-bags, even the Lapps among us feeling that we had seen the sun setting to-night for the last time.

“After several hours, I was awakened by hearing the breakers roar just outside the tent. I expected to hear Sverdrup call, or to see the tent swept away; but Sverdrup did not call, and the tent stood. For some time I continued to lie listening to the thunder of the breakers; but I soon fell asleep again, and did not awake until next morning, when I was amazed to dis-

cover that we had again approached land, and were far distant from the open sea.

“Sverdrup then told me that our position had been fearful for some hours. There had been a large mass of ice on one side of the floe, which had threatened inevitable destruction, crushing in upon our position little by little, until only the spot, and a narrow edge more, *where our tent was standing* was spared! Once he had come to the tent door to call us. He unfastened one hook holding the flaps of the tent, but paused before unfastening another, thinking he would still look to see how formidable the next breaker would prove. This breaker was worse than all preceding it. He unfastened the second tent-hook, but again waited to observe the effect of the next wave. He did not unfasten any more hooks. Just *at the decisive moment* the current turned, and we were again carried toward land, away from the dangerous breakers.”—*G. V. Reichel.*



CHATS WITH THE DOCTOR



[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.

115. Constipation

A correspondent from Adamstown, N.S.W., asks for a remedy for constipation. This question has been answered in a previous issue. The natural way to relieve this symptom is to attend to the digestion in the mouth. That which is digested in the mouth will act as a tonic to the stomach, and contents of the healthy stomach when passed on into the bowels will tone them up, and in time cure constipation. Constipation does not require treatment by laxatives, but a healthy digestion. Constipation is a symptom of disordered digestion. All sloppy foods should be avoided. Oatmeal porridge in some cases acts as a laxative, especially when taken without milk, but unless porridge does act in this way it is better avoided. Great advantage is derived by substituting for ordinary bread rusks, zwieback, granose, and other unsweetened biscuits. The unsweetened wheatmeal and oatmeal biscuits are excellent. Very little animal food should be taken. Eggs when taken should be very lightly cooked. Milk, especially boiled, is better avoided altogether. Avoid also pastry, cakes, and rich dishes generally. Fruit should be taken freely at the close of the meal except when vegetables form a part of the meal. Fresh fruit is preferable to cooked foods. Vegetable salads can with advantage be substituted occasionally in place of fruit. Very often those who suffer from constipation are of sedentary habits, and in that

case abundant exercise, walking, riding, etc., will prove beneficial. Rowing and swimming are excellent exercises where available. Vigorous kneading and percussing of the abdomen two or three times a day will often prove helpful. Pure water should be taken plentifully between meals, especially on retiring at night and first thing in the morning. The water may be flavoured with fresh fruit juice, but cordials usually offered for sale are better avoided, as they mostly contain some injurious ingredient, and are rarely exactly what they profess to be. Keep the skin active by daily sponging with cold water, especially over the abdomen and lower part of the spine. Use a good, rough towel briskly. Some find benefit from the use of a pinch of Epsom salts after meals. The remedy is a simple one, and where effective cannot be productive of any harm. It is important that a regular time should be fixed for evacuating the bowels, and generally speaking the best time is directly after breakfast. An attempt should always be made whether the desire be present or not.

116. Patent Foods

We are frequently asked our opinion in reference to patent foods. A good many of the advertised foods are nourishing and fairly digestive, but their cost is altogether out of proportion to their nutritive value.

Artificial products, we believe, are better avoided. Simple, plain foods will yield all the nutrition the system requires. Simplicity of food is very essential to good digestion. The mixture of foods in the kitchen is harmful in proportion to the number of ingredients in the various dishes. We do not mention the patent foods by name, as their rightful place is the advertising column.

117. Rheumatoid Arthritis

A correspondent from Gore, N.Z., asks for a list of foods necessary for rheumatoid arthritis and also treatment for the same. If treatment be commenced early, much can be done for this obstinate malady. Changeable climates must be avoided—a warm, dry, equable climate is acknowledged by all authorities to be essential for successful treatment. Light, woollen garments should be worn next the skin, but over-clothing is to be avoided. "Whitla" recommends "a thin flannel vest and drawers, with a piece of wash-leather inserted inside the fabric next to the skin, over the large joints, as at the shoulders, elbows, and knees. . . . The feet wear is not to be neglected, and cork insoles are essential in wet weather." All undue exposure to cold and damp should be avoided. A good, nourishing diet is essential. A lowering of the vitality by abstinence from food is especially harmful in this trouble. The digestion, however, must be kept in perfect order. Animal foods are best avoided, especially the red meats. Foods containing a large quantity of natural fat are of great value, such as the various nuts. Olive oil, good sterilised butter may be used with bread, granose, wheatmeal, or other unsweetened biscuits. Malted nuts are a really good, fatty food. Cane sugar should be avoided except in very small quantities. Spanish onions, celery, raw or stewed, when used continuously are, and we believe deservedly, highly spoken of. Electricity (the continuous current, 15-25 Leclanché cells) will often prove beneficial. The sponge electrodes should be well moistened in

hot salt and water, one applied above and the other below the joint. These applications to be effectual should be used twice daily. Massage of the joints is of great value where walking and general exercise are painful, and is best carried out in conjunction with sweating hydropathic procedures. In chronic cases simple, passive movement of the joints is very valuable, preventing pain and stiffness. Sometimes great benefit is derived by breaking up the adhesions under chloroform. Sulphurous and other saline baths are often of undoubted value, but care must be taken not to carry out these measures so vigorously as to lower the general vitality, the general health must be maintained. A heating compress—the covering of the joints with moistened lint, oiled silk, and with cotton wool and bandage—at night will give ease, and help to reduce the swelling and stiffness.

A second letter has been received with further questions on this subject. "The patient," our correspondent, states, "Has been nearly a year on the vegetarian diet recommended by your sanitarium, and still suffers much from indigestion and constipation." When indigestion and constipation have been well established, one cannot expect to get rid of them in a few months, whatever dietary is followed, and especially when you have to battle with a condition like rheumatoid arthritis. The dry dietary considered under constipation is recommended. Correspondent asks "if protose and legumes are to be avoided?" "Have all foods that produce uric acid to be avoided?" We believe protose and nuttolene to be excellent foods in rheumatoid arthritis, but the former must be used in moderation. All nitrogenous foods have a tendency to form uric acid where the organs of digestion act sluggishly and there is insufficient outdoor exercise. Uric acid is due to incomplete oxidation of the nitrogenous waste products, and, consequently, where exercise in the open air is limited, energy must be obtained as much as possible from the non-nitrogenous

foods. The various health food preparations, manufactured from the whole grain, contain all the nitrogen that is necessary, especially when helped by such foods as milk, lightly cooked eggs, and protose. Correspondent also asks, "What effect would the taking of salts, or saltpetre,—as much as will go on a threepenny piece three times a day or oftener?" We would not recommend saltpetre, but Epsom salts may be taken as suggested if it has the result of keeping the bowels regular.

118. Acidity of Stomach

"E. E." asks: "What diet would suit a lady fifty years of age who suffers from acidity of the stomach, and what is the cause of a substance like chalk powder on the hands and wrists, and which itches?"

Ans.—The latter is probably due to dryness of the skin, the result of lowered general health, of which the acidity is a part. In addition to attending to the general health we would recommend the free use of a good lanoline or olive oil. Acidity accompanies so many and often opposed conditions of the stomach that a general answer cannot be given to this question. Sometimes it is due to deficiency of the normal acid (hydrochloric), and sometimes to excess. In the first place it is due to fermentation in the stomach caused by germs. In this case the dry dietary is advisable, as given under "Constipation" in this issue. All food should be thoroughly masticated, and baker's bread (especially new), sweets of all kinds, milk, soups, liquid foods, coarse vegetables, large quantities of farinaceous foods should be avoided. Avoid foods cooked with fat or raising powders. In acidity from hyperpepsia (where there is excess of the normal acid), there is frequently intense burning at the pit of the stomach. Often there are severe attacks of pain soon after eating. Acid foods, acid fruits, hot liquids increase the acidity and pain. Pain usually begins a short time after the meal, and increases while the food remains in the stomach. Flesh

foods increase the secretion of hydrochloric acid, and, consequently, should be avoided. Condiments and all articles difficult of digestion should also be avoided. Foods should be cooked without milk or eggs. Eggs themselves generally agree well. Granose biscuits with the yolks of hard boiled eggs may often be eaten with advantage almost exclusively for a few days. Fruits should be cooked without sugar. Rest for an hour or more after meals is advisable, but at other times the patient should take abundance of outdoor exercise. A diet may be selected from the following: Purées of peas, beans, nuts, or lentils, granose biscuits, granola, gluten, zwieback, oatmeal prepared in various ways, vegetable and corn soups, baked apples, pears, or tomatoes, stewed prunes or raisins, nut or sterilised dairy butter on zwieback or granose biscuits, rice, macaroni with tomato sauce, fresh fruits, such as grapes, apples, bananas, pears, figs, dates washed from sugar, oranges, peaches. Temporary relief may be obtained by administering about a third of a teaspoonful of baking soda after meals, but this is in no way curative, it simply neutralises in part the excessive acidity, and except in very severe attacks should be avoided.

119. Carbohydrates

W. Geelong correspondent asks: "Name foods that are carbohydrates, also name fruit and the acid it contains, that would be suitable for a gouty and rheumatic adult person. Also, do carbohydrates make uric acid? if so, should they be discontinued, and what foods substituted in place of them?"

Ans.—Carbohydrates and fats are the foods that contain no nitrogen, and consist of the three elements, carbon, hydrogen, and oxygen. The carbohydrates contain hydrogen in the same proportion as water; viz., two atoms of hydrogen to one of oxygen. The fats contain an excess of hydrogen, and, consequently, are capable of producing more heat and

energy. The following are carbohydrates: all forms of sugar, all starches, such as potatoes, rice, sago, tapioca, bread, biscuits. Vegetables and fruits contain a large proportion of carbohydrates. Flour, of course, contains some nitrogen, but its chief constituent is starch. Carbohydrates cannot produce uric acid,—a nitrogenous substance,—as they contain no nitrogen. If, however, they upset the digestion, they may indirectly interfere with the oxidation of nitrogenous foods, and thus increase the amount of uric acid in the system. We believe that all fruits, especially fresh fruits, that do not interfere with the digestion, are good in rheumatic affections. The acids of the fruits unite with the various salts in the foods, and produce compounds which keep the blood alkaline; in other words, they tend to overcome the natural acidity of the blood in the rheumatic and gouty subject. Fruit, however, should be taken at the close of the meal, and should form part of the meal. The taking of fruit, especially the more solid kinds, between meals is decidedly injurious. Fruit should be omitted from the meal that partly consists of vegetables. Asparagus and onions are the only vegetables which contain appreciable amounts of uric acid-forming bodies. There is a good deal of unfounded prejudice against the use of tomatoes and rhubarb in rheumatic and gouty affections. Both are credited with containing a large quantity of oxalic acid, but the sour taste of the tomato is due to citric acid. Rhubarb contains a large quantity of oxalic acid, and should be avoided in gravel and stone of oxalic origin, but it is not injurious in ordinary rheumatic and gouty disorders.

120. Itching and Eruption between Fingers

Correspondent from Katunga asks for advice for the above.

Ans.—The trouble is probably not connected with the diet in any way as correspondent suggests. It is probably parasitic. We would suggest the following

ointment: Equal parts of compound mercurial ointment, oxide of zinc ointment, and vaseline. Rub in thoroughly at night.

121. Callous Ulcer

"Kingaroy" asks for advice in relation to callous ulcer on ankle, the result of an old burn, and asks "if the plaster-of-Paris treatment in this case should be tried."

Ans.—The leg requires absolute rest in the horizontal position and simple treatments of boiled water with sterilised gauze five or six times during the day. This will probably produce a healthy wound. The writer states the new skin is very thin; and, consequently, after healing takes place, the tissues break down again on the slightest knock. Probably skin grafting after the wound has become thoroughly healthy would remedy this. Prolonged rest and good, general health are absolutely necessary for a satisfactory result. We would not recommend the plaster-of-Paris treatment. If the veins of the leg are at all enlarged, their obliteration by an operation often allows the ulcer to heal.

122. Seeding Warts

Correspondent asks for advice *re* "seeding warts. They grow until quite large, then they dry off and the wart falls off, but after awhile another comes in the same place."

Ans.—After the wart falls off touch the point with a little glacial acetic acid for two or three days in succession. First cover the adjacent skin with a little vaseline to prevent healthy skin from being injured by the acid.

123. Very Cold Mortal

"Como" writes: "I am forty-five years of age, sixty-eight inches high, and 132 lbs. in weight, and a very cold mortal. These wintry nights I wear three pants,

four shirts, three vests, and so on. My children laugh at me. Still I am never warm enough. Nobody else feels the cold like I do; perhaps you might advise."

Ans.—Clothes do not produce warmth. They only help to conserve the heat produced in the body. Excessive clothing tires the body and prevents the skin from throwing off waste products, and, consequently, should be avoided. Through the nervous system we are naturally protected against heat and cold. In warm weather the blood vessels on the surface of the body dilate, and thus heat is dissipated; in cold weather the blood vessels are contracted, and thus heat is conserved. And again in hot weather there is less oxidation of food,—shown by decreased appetite, especially for heat-producing foods,—which means a less production of heat. In cold weather there is increased oxidation of food, a greater appetite especially for fatty or heat-producing foods, and this means increased heat production. In cold weather animals grow a thicker fur and birds a closer plumage. In the human being there is an increased amount of fat just under the skin in winter; that is, if the adjustment is left to nature; but if we protect ourselves by piling on clothing nature seems to recognise that such an adjustment is not necessary. Thus it is the more clothes we wear the more we seem to need them. Undoubtedly, we live very artificial lives. Sometimes we are crouching by the fireside in close rooms, and at other times we are out in the piercing cold. Nature cannot adjust to such quick changes, and extra clothing is consequently required. The heat of the body, however, is far better maintained by natural methods. Manual labour and exercise will do more for us in this line than fires and excessive clothing; the heat produced is more continuous and lasting. Increased appetite for and ability to digest heat-producing foods, especially the fats—cream, butter, olive oil, nuts, etc.—is another evidence of nature's efforts to counteract the loss of heat from the sur-

face of the body. These fatty foods should be partaken of freely, but in such a form as not to interfere with digestion. Fats should be eaten as far as possible in their natural condition. Melted and cooked fats are not only indigestible themselves, but they hinder the digestion of other foods. Cold increases the production of heat in the body, and this is one of the reasons why the cold sponge and rough towel rub of a morning do so much good in that way. The garments worn should be warm and not heavy. Jaeger's combination garments are much more comfortable, and retain the heat better than the singlet and underpants. If found necessary to wear more clothing, a silken garment next the skin will be the best; it is light, and at the same time retains the heat well. At night time instead of piling on a lot of heavy blankets, it would be better to wrap a blanket right around the person. This will be found more satisfactory than a couple of heavy blankets. A good eider-down quilt is equal to a couple of blankets, and is more healthful. Even the hot water bottle is preferable to a lot of heavy bed clothing.

124. Weakening Losses in the Urine

"Como" suspects the above, and asks: "How could I ascertain if this be so, and what would be a remedy?"

Ans.—We would recommend "Como" to consult a properly qualified physician on this point. Young men are duped by the score on this symptom. They have been guilty of masturbation—self-pollution—and excessive venery, with the result that the semen at times comes away unconsciously, and may appear in the urine. They become alarmed, and consult an unqualified man, one whose only aim is to make money. He alarms them still more, and thus in many cases makes his patient a little gold mine for himself. The condition is a serious one, but mostly it is quite remediable. If the general health can be restored the trouble will cease. It is, however, the writer's opinion, after

an experience of some twenty-five years, that lessened vitality, both bodily and mentally, from this cause will exist throughout life. Young men should especially remember this fact, and guard against it. The masturbator will find throughout life that he is much more influenced by debilitating influences than the man who has kept himself pure; and that he is not able to exert his mental faculties to such an extent. He, however, need not despair. He can still, with care, lead a useful life. Again I say, "Beware of quacks."

125. Good Ointment for Common Sores

"Como" also asks for the above. The following he will find very satisfactory: One teaspoonful of finely powdered boracic acid, thoroughly mixed with one ounce of resin ointment and one ounce of vaseline.

126. Ulcers of Stomach

M. M. F. asks if they can be cured, and what treatment is advisable. She has been operated on for the same about three months ago. We would refer our correspondent to our last issue, where the subject has been discussed. There is no "specific" food for ulcer of the stomach; that is, there is no food that can be said to be curative. Ulcers under proper treatment, however, permanently disappear, and the chief treatment is the selection of food that is easily digested and assimilated.

127. Asthma

A writer from Kew, Dunedin, asks for advice "regarding little girl three years old who is troubled with asthma. She gets quite choked up and very sick. . . . She is at present taking medicine with strychnine in it."

Ans.—A thorough examination is necessary in these cases in order to give acceptable advice. The condition of the nose

and throat should be inquired into, large turbinated bodies should be reduced, nasal polypi extirpated, and post nasal growths removed, and catarrh of any part of the respiratory tract needs appropriate treatment. Great care is necessary as regards diet. The evening meal should be given not later than six o'clock, and should be of a very light nature, so that it can be digested and passed from the stomach before retiring. The other meals of the day should be more substantial, but all food must be easy of digestion. Outdoor life, in the open country if possible, the daily cold sponge bath, the protection of the body by suitable clothing, are essentials. During the attack the fumes of nitre-paper will often cut short a mild attack, and give considerable relief. Dip a sheet of absorbent paper into a saturated solution of nitrate of potash, and dry. The dried paper should be cut into pieces and burned, the child inhaling the fumes. Place the child in an extemporised tent, or throw a large sheet over a couple of umbrellas. Strychnine is not used to relieve asthmatic symptoms. It is probably placed in the medicine for some other reason. We think these powerful drugs should be avoided.

128. Weak Heart

"Graftsman" asks for "a diet that would be suitable for anyone with a weak heart." He writes, "There are quite a number of eatables that do not agree with me, such as pastry, fried fish, steak and onion, or much meat of any kind, or anything fried in fat. . . . They repeat too often, and cause a fulness of the stomach, also an aching feeling of the heart."

Ans.—Very often a weak heart is nothing more than disturbed digestion through unsuitable food, such as mentioned. All would be better to abstain from such foods. Often heart symptoms are of nervous origin, and are due to tea, coffee, or tobacco, or over-mental work. Masturbation produces a decided weakness of the heart. Where there is actual disease

of the heart, valvular lesions, or muscular degeneration (fatty degeneration), only gentle exercise should be indulged in, but the heart symptoms are only a part of some other complaint. Rest is not so necessary. The heart is placed immediately over the stomach, and is greatly influenced by faulty digestion, mechanically by over-distension of the stomach with gases, reflexly by irritation of the nerves of the alimentary canal, and directly by absorption of imperfectly digested products. No drink should be taken with meals, tea and coffee especially should be avoided. Water, or fruit juice and water, may be taken a couple of hours after the meals, and up to within an hour of the next meal. Avoid all foods that cannot be readily broken up by the teeth. New bread, scones, pastry, rich cakes, should all be avoided. Fried foods and all foods cooked with fat are especially injurious. Granose biscuits, toasted corn flakes, wheatmeal and oatmeal biscuits are excellent substitutes for ordinary bread. Excellent results are often obtained by substituting these foods entirely for the bread. Sloppy foods are not favourable to mouth digestion, and are generally best avoided. A small plateful of oatmeal porridge will, however, often agree, but with many it causes fermentation. Granola, rice and raisins, or gluten, make good breakfast foods. Protose, macaroni, pea or bean purées are good substitutes for the ordinary meat diet. The best vegetables are French beans, cauliflower, green peas, and spinach. A small quantity of various kinds of vegetable marrows, however, agree with most people. Fresh fruit can be used with advantage at all meals of which vegetables do not form a part. They should be taken at the close of the meal, and never between meals. Milk foods are excellent when they agree, but are often better avoided when there is constipation or a tendency to biliousness. W. H. J.

SANITARY instruction is even more important than sanitary legislation.—*Lord Derby.*

Almost a Man

By Mary Wood-Allen, M.D.

FRANK talk to a boy who was "almost a man." Every boy will read it and be the better for it.

It is a help to mothers and teachers in teaching the lad concerning himself, purely, yet with scientific accuracy.

PRICE 1/- POST FREE

Signs Publishing Co. Ltd.,
Warburton, Victoria

ALMOST A WOMAN

By Mary Wood-Allen, M.D.

THIS valuable book deals carefully in a chaste, yet thoroughly scientific manner with the laws of health, and the changes which accompany development into womanhood.

It speaks to the young lady just as a mother would like to talk to her daughter.

It is a boon to every mother.

PRICE 1/- POST FREE

Signs Publishing Co. Ltd.,
Warburton, Victoria

Christchurch Sanitarium and Health Home

PAPANUI, CHRISTCHURCH, N. Z.

An Ideal Home for the Treatment of Non-Contagious Diseases

The treatments consist of baths of different kinds, including Electric Water Baths, Hot Air and Vapour Baths, Sitz Baths, Packs, and Sprays.

Electricity in its different forms, Galvanic, Faradic, Static, and Sinusoidal Currents being employed and adapted to the requirements of individual cases.

Trained Nurses of both sexes in attendance.

Massage.—Swedish Manual Movements which are of great value in improving weak muscles, restoring displaced organs, and correcting curvature of the spine, given by trained manipulators.

Special attention is given to all forms of digestive disorders, and the diet required for their treatment.

Diet receives special attention.

More than one hundred thousand
copies sold in Australasia

This enormous sale is the best evidence
that our cookery book entitled—

A Friend in the Kitchen

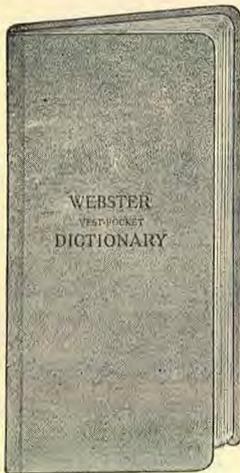
is appreciated by thousands of wives and mothers who have to decide daily what to cook and how to cook it. This practical little volume contains 144 pages with nearly 400 recipes and 35 illustrations. It gives special information regarding vegetarian cookery and the best way to prepare and cook grains, eggs, fruits, nut foods, etc.

Stiff cloth, gold or silver stamp, 2/-
(Post free)

Limp cloth (post free) 1/-

Order from our General Agents, or
SIGNS PUBLISHING CO. LIMITED
Warburton, Victoria, Australia

FIVE BOOKS IN ONE
VOLUME



FIVE BOOKS IN ONE
VOLUME

THE AUSTRALIAN Webster Dictionary

and complete

VEST-POCKET LIBRARY

45,800 Words—Absolutely Full Pronunciation

More than this, the same covers contain four other complete books:—

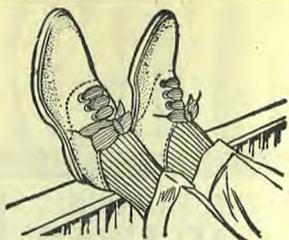
1. The Gazetteer
2. The Parliamentary Manual
3. The Expert Calculator
4. The Literary Guide

Writers, Speakers, and Business Men

Will find this literary wonder unexcelled in quality and unequalled in quantity by any other abridged dictionary

Bound in Red Leather, blocked in gold (post free) 2/6

Send to our Agents or to LIFE & HEALTH Office, Warburton, Vic.



Tennis Shoes

	PER PAIR
Ladies' best white canvas shoes, plain, with thick red rubber soles.	10/6
Men's best white canvas shoes, plain, or with canvas cap and strap.	12/6
Ladies' best white buckskin shoes, with cap and thick red rubber soles.	17/-
Men's best white buckskin shoes, with cap and strap.	21/-

Postage 1/- per pair extra for Men's, and 9d. for Women's
 Illustrated Price List free on Request.

Perdriau Rubber Co., Ltd.,
 "The Best House for all Rubber Goods"
 105 Elizabeth St. (between Bourke and Collins Sts.)
 MELBOURNE
 And at 270 George St., SYDNEY

B. CALLOSE

758 George St., Haymarket,
 and 853 George Street.

Importer of Italian Merchandise

Agent for the King and Queen Brands Olive Oil, guaranteed to be pure, highly recommended, being excellent in flavour; in $\frac{1}{2}$, 1, 2, and 5 gallon tins and also in bottles. The best Macaroni and Vermicelli, Walnuts, Barcelona Nuts, Almonds in shells and without shells, and the best Turkish Figs always in stock. Samples and prices free on application.

Established 1886. Telephone 2930.

CLOTHED WITH AIR!

Aertex Cellular



Recommended by doctors.

An ideal suit of underwear for summer.

SINGLET'S :			
Chest	30-38	- - -	2/0
"	40-44	- - -	3/3

DRAWERS :			
Waist	30-38	- - -	3/-
"	40-44	- - -	3/3
Postage 6d.			

Ladies' underwear stocked, and fabrics by the yard.

Illustrated descriptive price lists and samples of fabrics post free.

DAVID BRAHAM & CO.

(Sole Agents for Aertex Cellular Clothing)
 76 Market Street, Sydney

'Phone 664 B.

H. R. REUBEN

Dental Surgeon

Railway Parade and
 Burwood Road, Burwood

Dietetic Errors

How They May be Avoided;
 Their Relation to Disease.

By D. H. KRESS, M.D.

64 Pages . . Price Sixpence

Baby's Firsts

By DR. MARY WOOD-ALLEN

A valuable book on the physical care of the babe from the time of its arrival to the beginning of the second year. Written by a physician and a mother, it treats all the topics considered in a scientific, yet simple and thoroughly practical manner. A boon to mothers; it tells how to make many of the small things which add to the baby's comfort.

Price, post free, 1/-

SIGNS PUBLISHING COMPANY LIMITED,
 Warburton, Victoria

BOSISTO'S
"PARROT BRAND"
 TRADE MARK
EUCALYPTUS OIL
 FOR RHEUMATISM, SPRAINS, BRUISES, WOUNDS,
 COUGHS, COLDS, BRONCHITIS, &c.
 AVOID IMITATIONS
 ASK FOR **BOSISTO'S**
 "PARROT BRAND"

HYPOL
 THE FAMOUS
COD LIVER OIL EMULSION
 FOR ALL Chest Complaints AND Wasting Disorders
 OBTAINABLE EVERYWHERE

20th Century Pocket Inhaler

(PATENTED)



Closed, Ready for Use, Mouth or Nose

Made of Polished Rubber. Strong, Handsome, Convenient
 Does not interfere with any other treatment.
 Impossible to get out of order

The only Inhaler adopted extensively by Physicians of all Schools

Use for Coughs, Catarrh of Head, Throat, and Lungs, severe Colds in Head and Throat, Influenza, Headache, Relieves pain in Lungs, relieves Tonsillitis. Protects the Mucous Membrane of mouth, throat, and bronchial tubes. Exceedingly pleasant.

Inhaler Outfit and Medicine for over twelve months **5/-**

Extra Bottles of Medicine, per bottle (post free) **1/6**

Nose Piece



Mouth Piece, Open, Showing Inner Case

Address **SIGNS PUBLISHING CO. LTD., Warburton, Victoria**
 Or our General Agents

Commence the WINTER DAYS with a
Breakfast of

GRANOLA

THE PERFECT PORRIDGE FOOD

Simple in Preparation, and Economical in Use. Suitable alike
to persons of all ages.

One lb.
Packets
6d.

Four lb.
Bags
1/6

A Health Food
GRANOLA
A Thoroughly Cooked
Breakfast Food
Manufactured by the
SANITARIUM
Health Food Company
Head Office: 45 HUNTER ST., SYDNEY
BRANCHES IN ALL STATES
FOUR POUNDS NET
Descriptive Booklet with Recipes free on Application

MANUFACTURERS—

SANITARIUM HEALTH FOOD COMPANY

Head Office: 45 Hunter Street, Sydney.

BRANCHES AND AGENCIES :

MELBOURNE, Victoria, Chancery Lane, 422 Little
Collins Street

ADELAIDE, S.A., 28 Waymouth Street

BRISBANE, Queensland, 186 Edward Street

PERTH, W.A., 103 William Street

AUCKLAND, N.Z., The Strand, Queen Street

WELLINGTON, N.Z., 83 Willis St. (over Shortt's)

CHRISTCHURCH, N.Z., 86 Cashel Street

HOBART, Tasmania, H. Moore, Liverpool Street

LAUNCESTON, Tasmania, J. Beck, Charles Street

On application to any of the above addresses our new 1913 descriptive booklet will be supplied free

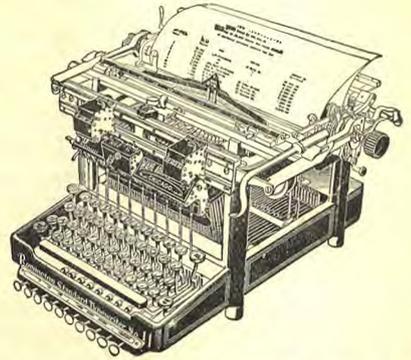
When replying to advertisements please mention "Life and Health."

REMINGTON Means TYPEWRITER

VISIBLE MODELS Nos. 10 and 11

The Result of 40 Years' Experience in Typewriter Manufacture

- No. 10A CORRESPONDENCE MACHINES
- No. 10C SPECIAL LEGAL MACHINES
- No. 11 INVOICING BILLING MACHINES
- No. 11 INVOICING, ADDING AND SUBTRACTING MACHINES



Built to More than Meet Requirements—They Anticipate All Possible Demands

Write or Call for Catalogues

CHARTRES PROPRIETARY LTD.

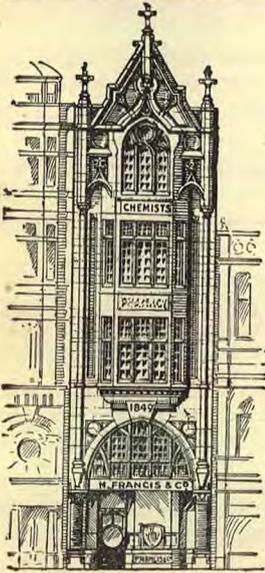
SOLE IMPORTERS

Remington Buildings, 375-77 Collins Street, Melbourne

200 Remington Typewriters used for teaching purposes at Zercho's Business College

H. FRANCIS & CO

CHEMISTS



And Importers of Air Beds and Cushions, Enemas, Silk Elastic Stockings, Bandages, Galvanic Batteries, Abdominal Belts, Trusses, and Surgical Appliances generally.

Price List Posted Free on Application.

Agents for FRANCIS'S PREPARED OIL for every description of Wounds, Bruises, and Strains in Cattle and Horses. 2/-, 3/6, and 7/-.

ORDERS BY POST promptly attended to, and despatched on day of receipt.

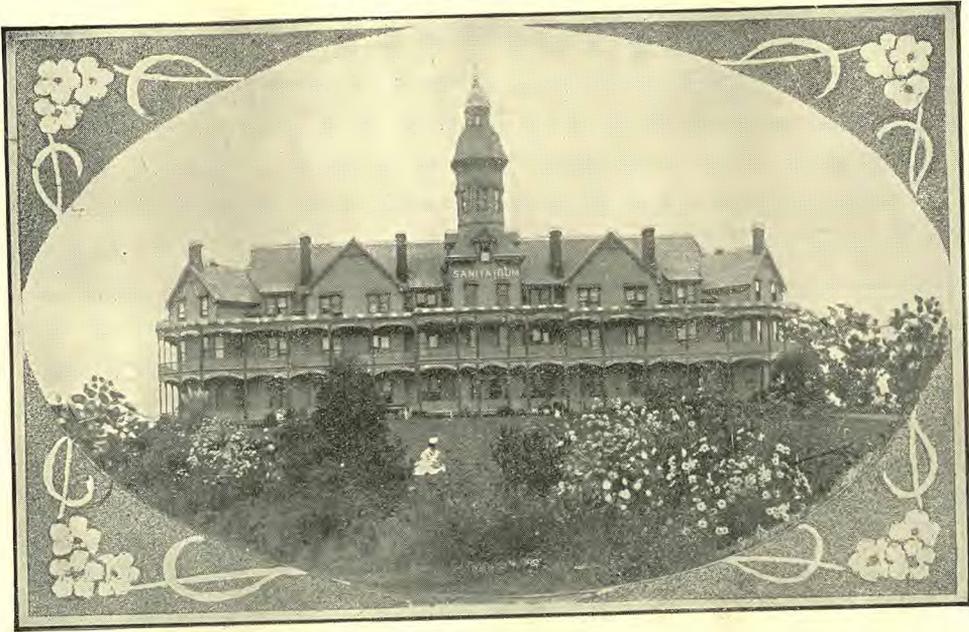
280 BOURKE STREET

Branch Pharmacy: 111 COLLINS STREET

New Building, 280 Bourke St.

The Sydney Sanitarium

Wahroonga, New South Wales



THE SYDNEY SANITARIUM, Wahroonga, on the North-Shore Hornsby railway line, is an ideal place to go for health, rest, and wholesome recreation. Delightful scenery, bracing climate, sanitary buildings and grounds, large orchard. Modern equipment for Hydro-Electro- Radio- Photo- and Masso-Therapeutic Applications; also Surgery and Obstetrics. Registered as a Private Hospital. Large staff of well-trained, kindly nurses and attendants. Resident physicians and surgeons. All Non-contagious Cases received.

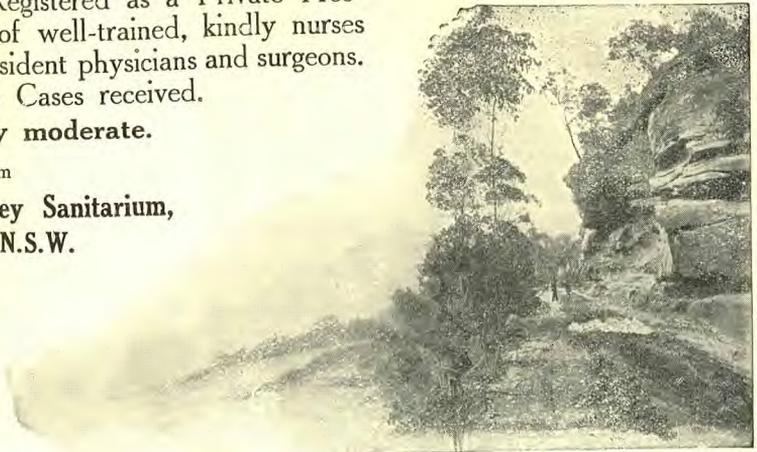
Rates very moderate.

Further information from

**The Manager, Sydney Sanitarium,
Wahroonga, N.S.W.**

TELEPHONES

Nos. 137 and 354
Wahroonga



One of the Beauty Spots near the Sanitarium

For Every Table Every Meal



GRANOSE BISCUITS

Are made from the choicest wheat, which has been so treated that all the nutrition contained in the grain is retained. The starch is perfectly cooked and dextrinised, and ready to be instantly dissolved in the stomach.

Manufactured by

The Sanitarium Health Food Co.

Head Office :

45 HUNTER STREET, SYDNEY



Free Sample and Price List on Application. Branches and
Agencies in Every State