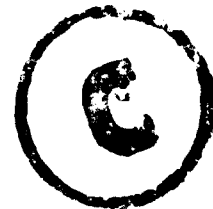


203

Arogya-Margam.

NO. 10, 11, 12. 1.

Jan. to April - 1939



22
L: 5-211, N38
N39.1 & 2
160.816

191 3934

191

M A



AROGYA-MARGAM

A MONTHLY JOURNAL DEVOTED TO
HEALTH & HAPPINESS PUBLISHED
UNDER THE AUSPICES

Vol. I

OF

No. 10

THE HEALTH PROPAGANDA BOARD, MADRAS

• **JANUARY** •
1939
•

SUBSCRIPTION
Rs. 1/4 per annum

"PANTHEON GARDENS"
PANTHEON ROAD
EGMORE :: MADRAS

Annas Two
per copy

**Health Propaganda Board,
Madras**

Invites the public, Students of Medical
College and Schools, of sanitary courses
and of Physical culture; Nurses, Doctors,
and health-workers to make use of our

Free Reading Room and Library

AT

Pantheon Gardens

PANTHEON ROAD,
EGMORE, MADRAS.

and at Town Branch:—

No. 57, THAMBU CHETTY ST.,
G. T., MADRAS.

Between 10 and 5 p. m., on all days
except Fridays and Public Holidays.

~~New~~ Year Greetings

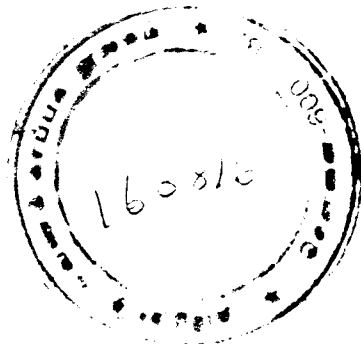
THE HEALTH PROPAGANDA BOARD sends its greetings to every one of the subscribers to 'Arogya-margam' and to the members of their family and wishes them, and every man, woman and child in this country

A Healthy and A Happy New Year.

The Board heartily thanks its subscribers for the general support they have given towards the birth of the 'Arogya-margam' and for the after-care so magnanimously shown by them. It appeals to every educated citizen whether in the city or in the remotest parts of the village to do some little propaganda during the New Year so as to infuse into the minds of the less fortunate and uneducated brothers and sisters the love and the craving to drink more and more of the milk of human happiness by means of a clean and a healthy life.

The Board sends forth its prayers to God that He will be pleased in His Infinite Mercy and Love to confer on the peoples of this country a larger measure of health, consciousness and of radiant health, thereby vouchsafing a better and a healthier nation.

.



CONTENTS.

	Page		Page
1. Sphere of Private Physicians in Public Health Work (Editorial) ...	315	12. Rheumatism-An Important Health Problem ...	328
2. Serum for Scorpion-bite ...	317	13. A Child's Life. American Parents' Ordeal ...	330
3. Importance of Social Service. ...	318	14. Hints from the Health Department ...	331
4. Dust Bin Nuisance ...	319	15. Public Services and Public Opinion ...	332
5. Marvels of the Body—3 ...	320	16. Quack Medicines: A Menace to National Fitness ...	336
6. What is Physical Fitness Campaign? ...	321	17. Healing Virtues in Vegetables ...	340
7. Nursing in India ...	322	18. Housing in Madras ...	347
8. You need Physical Culture to keep yourself Healthy and Happy ...	323	19. Food Contamination from Vessels ...	348
9. You should Know your Diet in Constipation ...	324	20. Notes on Public Health ...	350
10. The Development of Physical Education ...	325	21. A Study of Longevity ...	352
11. Why Does The Smoker Smoke? ...	327		

IMPORTANT

All the manuscripts for publication, books for review, Exchange of Journals and other correspondence relating to the Editorial Section should be sent to the HONORARY EDITOR, *Arogya Margam*, 57, Thambu Chetty Street, Madras.

Original articles are accepted with the express understanding that they are contributed solely to this journal. All matters published in *Arogya Margam* is copyrighted.

The manuscripts must be typewritten, and double spaced, and the original copy should be submitted. Blocks for illustrations will be supplied by us if the original illustrations are sent.

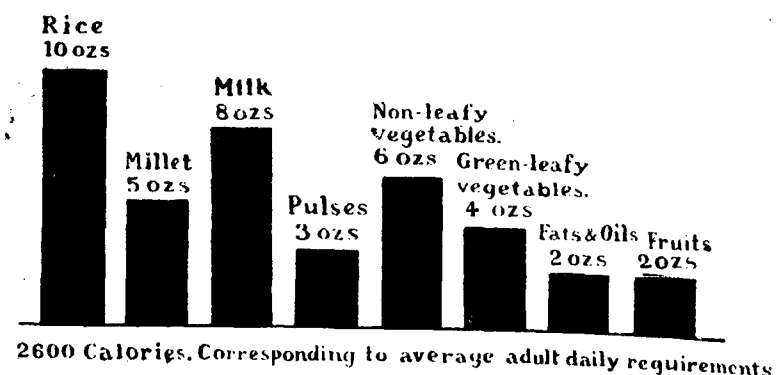
The Honorary Editor reserves the right to alter, delete, or make necessary changes in the matter sent for publication. No reasons will be given for rejecting articles.

All business correspondence, advertisements, subscriptions, and other payments should be made to the SECRETARY, HEALTH PROPAGANDA BOARD, Pantheon Gardens, Pantheon Road, Egmore, Madras.

ADVERTISEMENTS

Complete copy, instructions and blocks must reach this office not later than the 5th of every month in which the advertisement is to appear. It is understood that the old text (running) is to be printed, if no new copies of advertisement reach this office a month previous to the date of publication of *Arogya Margam*.

"WELL BALANCED" DIET



What little quantity of



taken daily helps to make your Diet "Well Balanced"

As it Contains **22.20 per cent of Iron**

which is needed by the body for Blood Formation

Regulates the System ★ A Pleasant Flavour too

SOLD WITH GIFT COUPON

Price Re. 1-14-0 per lb.

RASHID JAMSHED SONS & CO.,

H. O. BOMBAY 3

222, Govindappa Naicken St.,
MADRAS.

96, Palace Road,
MADURA.

56, Chakrapani Sannadhi,
KUMBAKONAM.

Sphere of Private

Physicians in Public

Health Work

(Editorial)

THE two branches of health, the curative and the preventive, are not things apart; the division is only artificial. They are inseparably joined in an essential unity. The conscientious work of private doctor among the masses is really an important part of preventive medicine and of public value.

Private medical practitioner who attends his patients conscientiously and thoroughly performs most valuable public health work. He aims not only to cure his patients but to keep them in health. He sees illness in its early stages and prevents the mild disorder from becoming a serious and complicated disease.

The very day he settles down as a practising physician he has, whether he likes it or not, a number of public responsibilities thrown upon him. He is responsible for certifying the cause of

death and for notifying infectious diseases. The numerous and various certificates to which he subscribes his name are all legal documents. The Food and Drug Act, the Health Act, The Education Act, The Workmen's Compensation Act and numerous other ordinances bring the Private practitioner actually into the sphere of public health work.

It is incumbent upon him not only to treat his patients to the best of his abilities but also actively to co-operate with the Health Authorities in trying to prevent the spread of the illness to other people. In the household he would indicate to the people the nature of trouble and the means to be adopted to protect others against infections e.g., in Typhoid fever, the medical man stresses the need for care in the disposal of the excreta and in the handling of the patient. In

Diphtheria, he calls for swab examination not only of the patient but of others in the household and explains the danger of infection.

By his attention to the above matters, the medical man is assisting the work of the Health Department and impresses on the people of the household of the necessity of the work of the local health authority, in their own interest. The preventive aspect is important and in this sphere, the practitioner is doing the spade-work of value.

In sanitation, the Medical practitioner has little direct function but often, he can, in the course of his daily work, be of great assistance to the Health Department. When he observes insanitary condition in the premises of his patients, he should point out to them of their failure to observe proper hygienic requirements. When he advises his patients on matters of drink and food, the practitioner is doing useful public health work. Wise advices are eagerly sought and invariably attended to.

In the Continent, the services of private practitioners are well recognised; so much so, that the Health Departments employ medical practitioners in a part time capacity as their officers of health. Their duty is to advise

the local boards on public health matters. Thus, opportunity is given to the medical practitioner to influence and to mould the public health work of the State.

Medical treatment is not merely a matter of looking at the tongue, feeling the pulse and then writing a prescription. It is rather a matter of carefully investigating the patient's symptoms, making a thorough examination of his physical and mental conditions and advising special examinations, wherever necessary, such as X-Ray, Bio-Chemical and laboratory. The last one which has developed since, by leaps and bounds, aids, if not, leads to the correct diagnosis—the basis for sound treatment. It is one of the major medical problems of the present day to ascertain the sphere of the private physician in the field of public health.

Conditions in India seem to be otherwise. The Government have yet to realize the most important public health work the private practitioner is doing every day in his practice. Time has now arrived when a large number of private medical practitioners could be employed on Honorary basis in Public Health Work. Mention has already been made by the Ministry of Health in Madras of the need for such co-operation.

Public Health work could be made easy if such co-operation from medical practitioners is encouraged by affording laboratory facilities to them in order to arrive at correct diagnosis of cases which is the basis of successful treatment.

"The time is not far distant when the health services will in large measure be staffed by general practitioners on a part-time basis, working scheduled hours. It is useless to expect doctors to take an interest in medical services in which they cannot take a responsible share."

The new Public Health Bill in Madras fails to recognise the important role played by private medical practitioners in influencing and moulding the Public Health work of the State. The

Private Physician has no place in the Public Health Board of the Presidency. Unless and until the most conscientious work of the Private Medical Practitioner turned among the masses with whom he daily comes in contact and which has got a great thing to do in the practical observation of the rules of general hygiene and sanitation, is fully recognised and chances are given to private practitioners for a responsible share in Public Health Work, we doubt any useful and practical benefit would be achieved in safeguarding the Health of the Country by widening Health Work as two distinct branches—curative and the preventive. It is essential that both should be inseparably joined in an essential unity. Private physician is an important unit in the Public Health administration.

SERUM FOR SCORPION-BITE

NATURE of November 12th, 1938, announces that the Pasteur Institute of Algiers, of which Dr. Edmond Sergent is Director, has been authorized by the French Government to sell a serum against scorpions prepared from immunized horses.

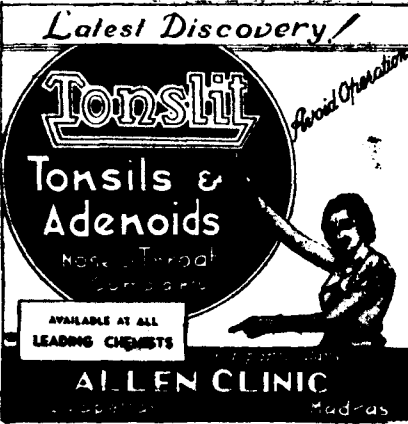
Importance of Social Service.

MANY forget the important social service rendered by 'Bhangis.' Instead, they are being hated and they are being dubbed as 'neechas'. Unfortunately that is the belief. But a mother does a 'bhangi's' work. When you were all young little things your mother did the 'Bhangi's' job for you. Do you consider her a 'neecha'. But there is something selfish about a mother being a 'Bhanghi'. She does it for her own child. You don't. I worship my mother and even so why should not I worship a 'bhanghi'? You have all come for the congress and your part of the work (sanitation) is the first and best work. Do your work with love and non-violence. If any visitor or delegate commits a nuisance don't fight with him instead, love him and teach him proper sanitation."

"Proceeding, the Mahatma observed that it was the primary duty of every one to be clean and also keep his surroundings clean. Those who did the 'bhangi's' work should first be their own 'bhangis.' You must know the full technique of the work and do it in a civilised manner. I have done the work of 'bhangi' and I have good experience of that work."

—'Ghandiji'

Latest Discovery!



Tonslit
Tonsils & Adenoids
Nose & Throat
Compounds

AVAILABLE AT ALL
LEADING CHEMISTS

ALLEN CLINIC
Madras

A New Oral Treatment of Biological Compound with assimilable Calcium, Iron and Phosphates.

GUARANTEES PERMANENT CURE for ENLARGED TONSILS & ADENOIDS
(Nose and Throat Diseases)
WITHOUT OPERATION

Stockists:

Madras:	{ Spencer & Co., Ltd.; Appah & Co.; Wilfred Periera, Ltd. & Dadha & Co.
Kumbakonam:	Kumbakonam Drug Stores.
Madura:	T. N. C. Nagalingam Pillai.
Alleppey:	Swamy & Co.
Bangalore:	V. L. Nathan & Co.
Bombay:	P. M. Zaveri & Co.
Rangoon:	Allianz Pharmacy.
Singapore:	Naina Mohamed & Sons.

Indians of some tribes used the Jimson Weed as a source of an anaesthetic in surgery.

Dust Bin Nuisance.

ONE cannot lose sight of Municipal dust bins kept almost in front of every house in the City.

How these refuse depots are useful in warding off diseases is a question which every one of us should know.

On the part of the public one could easily cultivate the habit of throwing outside whatever is dirty and dangerous to health.

Secondly the dust bin constantly reminds you of the causes of diseases and their dangers and how to prevent them by removing all sources of dirt and nuisance in the house you would be helping the Health authorities by keeping the Dust Bin in order.

This is one side of the picture. The co-operation from every member of the household is necessary. But there is another important point which I should like to bring to the notice of the Health Authorities. Negligence on the part of the subordinates of the Health Staff to keep the dust bins clean and tidy.

Take a round in the city streets, lanes and gullies. What do you see? Broken, leaky dust bins—over-filled dust bins—over-turned dust bins—filthy and foul

smelling dust bins—all open—uncared for and unattended to.

Very often, on Saturday evenings the condition will be hopeless. Nobody approaches them to clean. On other week days at least 2 times these are emptied. Who is responsible for this state of affairs to allow rubbish on public roads and near residential quarters to remain open to disease germs and further the spread of infectious diseases.

The Health Staff must pay more attention to see that Dust Bins are properly kept, properly cleaned 3 or 4 times a day and properly emptied. More men should be employed in the subordinate grade to take care of these primary sources of danger for the spread of diseases.

Dust bins should be well cared for. It should be properly covered and the contents should not be exposed to rain and sun. Every time the bin is emptied, it should be properly disinfected. In crowded localities and especially in residential quarters these should be emptied 4 times a day and protected from the mischief of street urchins, dogs, cats, cows and insects.

—"Incognito."

One of the modern wonders of crime detection: a garment or weapon once stained with blood, even though cleaned, will glow with greenish light in the dark when di-aminophthal hydrazide is sprayed on the invisible stain.

Marvels of the Body—3

THE CURRENT OF LIFE.

EVERY cell in the body receives its nourishment from the current of life, the blood, and discharges into it in exchange of waste products, which are carried to lungs, kidneys, or skin to be eliminated.

The blood is composed of a liquid portion, called the serum, and a cellular portion, comprising red and white corpuscles and the blood platelets. The serum contains eight per cent of salt, which gives it its characteristic taste, as well as a small amount of sugar, other food substances, and the so-called immune bodies, which have the faculty of destroying germs or neutralizing their poisons when they gain access to the body.

There are also in the blood various mineral salts, such as iron, copper, manganese for the use of the red blood cells, iodine for the thyroid gland, and calcium for bones and nerves. There are also sodium salts which have the very important work of maintaining the alkaline reaction of the blood at an almost constant point. Excess acids taken in our food or produced by heavy muscular exertion, and excess

alkalies, are immediately neutralized by these "buffer salts" as the accumulation of either would very soon result in death.

Of the blood corpuscles, the red cells are most numerous there being about five million in every drop. Their main function is to carry oxygen to the tissues. This is accomplished by a chemical union of the oxygen with the hæmoglobin, or red colouring matter in the blood.

The white blood cells are considerably larger than the red cells and are almost human in their action. Whenever a pus-producing germ invades the body at any point, these white blood cells rush to the scene and attack the invading germ. If the white blood cell wins the germ is engulfed and killed. If defeated it is changed into pus and other white corpuscles hasten to the attack. These white cells are, very appropriately, called the policeman of the body.

Yes, indeed, the current of life is a wonderful stream.

—"Good Health."

A new method of lengthening a leg shortened by infantile paralysis is being tried at the University of California Medical School, and is said to lengthen a leg one-sixteenth of an inch a day without discomfort.

What is Physical Fitness Campaign?

The Layman's Point of View

THE aim of the campaign for physical fitness is to increase the number of individuals with a healthy outlook on life. It is an effort to raise the health of the subnormal to normal, and that of the healthy to physical fitness.

Positively radiantly healthy life, not merely the negative freedom from illness, is the objective. Better health should make better citizens.

Keeping fit should be the normal way of living, and the success of the movement judged by the number who can walk three or four miles an hour, rather than the number who can run one hundred yards in ten seconds.

The campaign presupposes the existence of an adequate supply of pure water, efficient sanitary arrangements, food inspection, good housing, and enlightened public health administration. A high standard public health is essential for the promotion of physical fitness.

Physical fitness is dependent upon the exercise of the spiritual, emotional, moral and intellectual forces. Grief, worry, shock, despair, or privation may destroy physical fitness or prevent its attainment. A healthy mind is necessary for a healthy body.

The plan of campaign is arranged to cover six months, but it is intended that the boosting of the public health services shall continue until we have an A-I nation,

The speed and rush of modern life is reacting on the health of the people. Pride in creative effort and craftsmanship is being sacrificed to the soulless repetitive processes in industrial and commercial undertakings.

It is often asserted that one of the benefits of machinery is that it removes drudgery, but a firm employing girls for soap wrapping recently dispensed with the entrance examination, because it was found that the most intelligent girls were not the most suited to the work. An inspector of special schools in the London area declared recently that there were firms in London-making standard articles, which made a point of employing mentally defective girls.

It is little wonder that millions are endeavouring each week to find easy money to lift them out of the rut. It has been said that the difference between a groove and a grave is just a matter of depth.

If this is to be an all-in campaign, the problem of one and two-thirds millions of unemployed and the large numbers of old people who are below the poverty line must be tackled. There are vast numbers of poor people who suffer in silence because they cannot afford a doctor. There is a large amount of suffering which might be prevented, and thus assist the promotion of human happiness and well-being.

No person should be denied a doctor simply because he cannot afford to pay

for his services. What a boon it would be if those who are not entitled to medical benefit were able to choose a panel doctor to attend him.

Sir George Chrystal, K. C. B., Secretary to the Ministry of Health, has stated that as public health administrators we

are directly concerned with the personal welfare of every citizen. It is therefore our duty to see to the needs of what was formerly known as the submerged tenth.

—“*Journal of the Royal Sanitary Institute.*”

Nursing in India.

NURSING in India is still in an infant stage. This is due to the fact that female education is not so advanced as in Continental Countries. Indian girls do not come forward to join the services as their sisters in the West.

Yet there is another reason why this profession goes unfilled by Indian girls. Chastity is an important characteristic of every woman in India. A certain amount of stigma is attached if a lady ventures to take up the profession. Good family girls with requisite qualifications feel shy to enter the profession.

The above are some of the root causes for the poor response from Indian women to the nursing profession. The only remedy that would ensure their proper representation in the profession is education on a wide basis.

The present day economic conditions must go deep into the heart of every individual and no opportunity should be lost to get oneself sufficiently educated, self-dependent and bold to share any work that is thrown open to his lot. Women should not shirk work. The Healing profession would gain much if sufficient number of women take up the nursing lines.

—‘Reality.’

In a Pittsburgh skyscraper hospital, a pneumatic tube system carries messages, medicines, and charts quickly to any part of the hospital.

You need Physical Culture to keep yourself Healthy and Happy

PHYSICAL Culture is a gift of God meant for one and all. It consists of two different kinds of movements of the body. First, perfect physical movement, secondly that of quick movements of the body as in sports.

Physical Culture usually comprises of weight-lifting, boxing, wrestling, bar and ground exercises. Achievement of physical strength depends upon certain factors. Good nourishment is one such factor.

Climatic conditions have got a great thing to do to influence the body growth. Westerners take exercise throughout the year and the influence of cold upon body development is greater in Western Countries than in hot parts like India where people are not so strong as those in the West.

Rest is another important thing which we should always remember with regards to physical training. A good refreshing sleep lasting for 7 to 8 hours is essential to keep the body hale and healthy.

A physical culturist should also pay attention to personal hygiene. He should eat food regularly, answer calls of nature regularly and he should not overload himself.

Cold or warm baths taken daily with or without oil is very helpful to keep the body circulation active and free from diseases.

Cultivate the habit to perform a particular exercise giving a particular kind of development of the body. A wrestler will have a huge body, a player on Roman rings will have a good chest with well developed muscles.

India has yet to recognise the value and importance of physical culture. In Continental Countries every one including women have realised the importance of possessing a good physique and we should not be far off to cultivate the habit of developing a beautiful body, a beautiful mind and a beautiful character by taking regulated physical exercises.

L. S. NATARAJAN.

The ship's surgeon on one trans-Atlantic liner says that injecting atropine is a quick remedy for sea-sickness.

To bring medical aid to settlers in remote regions, Australia has had a Flying Doctor Service since 1928.

You should Know your Diet in Constipation

THE injurious repercussions of constipation on general metabolism and glandular functional activity are too well known to need stressing. The stagnating faeces in the lower bowel becomes a centre for the propagation of flora which produce toxins absorbed pari passu with the water of the bowel contents into the blood stream, resulting in general auto-toxaemia.

It is, therefore, important that the bowels should act at least once in twenty-four hours, especially so in pregnancy the nursing period, and in children.

Normal peristalsis of the bowels is maintained generally by the rhythmic contractions of the involuntary muscle coats, depending mainly on mechanical stimuli from the inert constituents of the moving bowel contents and in a less degree on nervine action. Evacuation is the result of a varying periodic involuntary muscular action aided by a voluntary effort of the abdominal muscles. The inert matter which acts as ballast or roughage in the bowel contents is mainly derived from the vegetable kingdom in the form of cellulose and fibre, provided by salad and cooking vegetables, fruit and the bran of cereals.

The researches of the late Professor Rowlands clearly established the fact that an optimum intake of Vitamin B-I is also necessary for the maintenance of bowel muscle toxicity, probably acting through nervine channels.

From these premises the formulation of diet for the promotion of normal peristalsis is clearly defined.

1. Cellulose.

An optimum of cellulose should be provided daily by

(a) *Salad vegetables*: Lettuce, Watercress, Radishes, Celery, Tomatoes, etc.

(b) *Cooking vegetables*: Greens, Turnip tops, Cabbage types, Spinach, Sprouts, etc.

(c) *Fruit*: either fresh, canned or stewed.

2. Fibre.

The daily needs in fibre can be supplied by the bran of whole cereals.

Wholewheat bread should be eaten instead of white bread, and if cereals are taken as a breakfast dish they should consist of the entire grain. The particles of bran act very effectively as mechanical stimuli to the nerves and muscles of the bowel, and usually a daily ration of such cereals with a fair proportion of fruit and vegetables every day will secure normal action.

As a general rule the wholewheat and other cereals should be finely ground, as if too coarse they are likely to cause irritation of the mucous.

3. Vitamin B-I.

(a) Vitamin B-I is supplied by the bran of wholewheat bread and cereals and also by the germ of the wheat berry which is present, and all foods containing the germ are sources of this vitamin.

(b) Edible yeast extracts are rich sources of Vitamin B-I and a daily ration should be included in the diet. A due proportion of water and fat are also indicated and a glass of warm water either plain or with citrus juice on rising is a great aid to a morning evacuation. —HEALTH PROPAGANDA BOARD, MADRAS.

The Development of : : : : : : Physical Education

PHYSICAL Education as seen in our schools to-day is much better than it was a few years ago, and yet one hears regrets that we do not see the huge organised displays of the Continent in our midst. That such are inspiring sights is true, but they are not a national characteristic and will never have the same effect as organised games, if and when the time comes when sufficient field space is available for all.

Further, such mass demonstrations are always given by selected individuals whose physique is good to begin with and do not give a real picture of the actual condition; a demonstration by puny individuals in the half-hearted way that many people (adults as well as children) conceive as physical jerks, would have a far more instructive effect.

Everyone needs exercise, which includes physical training, but the exercise that an individual wants cannot be gauged by watching a "Keep-Fit" class where every member is a trier and yet has the sense to omit particular examples which are burdensome to himself. The will to try is as important as the provision of accommodation. Half-heartedness will never do anything to

improve physique, nor will any apparatus unless used properly. It is apparent, therefore, that such training must commence in infancy and become a fixed habit if the individual is to benefit and that it must continue in degree through life. Some need more exercise than others, some can undergo greater physical strain than others without ill-effect, especially as the years go by.

The time is approaching when the medical profession will be expected to prescribe suitable exercise for the individual and further to be able to point out contra-indications where they exist. This is the one weakness at the present time with children; tables and programmes can never suit everyone, and consequently the poorer specimen do not make the progress needed. The full use of the body requires the full co-operation of the mind which must understand what the body is required to do and see that it is done in the right way. Physical exercise must, therefore, be adaptable to mentality rather than to age, for no one would expect tiny children to understand long or involved instruction. But this is the most important and yet difficult period of life, for bad habits acquired now are not easily eradicated. This is the time

when exercise means largely free play, when such lessons as proper breathing must be instilled and yet the child must not realise he is being taught. Even at this age the use of suitable clothing is important, but extremely difficult to ensure, especially when the burden of dressing or undressing children falls on an already over-busy teacher with thirty or more to prepare, footgear to change, garments to remove with the possibility of a real mix-up—in short, an almost impossible suggestion, were it not such an important one.

The preparation for exercise must begin at this age and be taught along with the need for the bath and the period of rest afterwards. These are matters of elementary hygiene which must be instilled now if real fitness is to exist later. As soon as the child can do these things for himself, this preparation should be insisted on, if the lessons are to have any permanent value.

The habit of changing clothing and footgear must be instilled as well as the benefits of the bath, whilst the period of rest after exercise should become routine. Education committees should, therefore, consider supplying suitable clothing to selected schools and installing shower baths in them. These facilities do exist in a very few schools, where they have justified themselves by greater alertness and eagerness.

Much of the physical exercise must be done indoors, therefore, halls or gymnasias will be needed. Whether such gymnasias can be used by children during the day and adults after school hours in order to avoid duplication will probably be a matter for consideration.

Another point of importance is the question of the best time of day. It is certainly not wise to take exercise in any form too soon after a meal, but in many schools every minute must be used if children are to get their share. It is not possible to exercise all the children at one time—halls and gymnasias are not big enough, therefore this part of health education must be spread over most of the school hours, and where this training must largely be done indoors it is essential that the principles of hygiene or the science that deals with the preservation of health shall be adhered to suitable food—easily digestible and assimilable—is equally important. Adults themselves know the lethargy produced after a meal, and children cannot be expected to be different.

There is a connection between food and fatigue and between fatigue and disease. Fatigue may be pleasant after suitable exercise and pass unconsciously into healthy sleep, or it may be so unpleasant that rest becomes impossible, and here exercise may be harmful. Mental fatigue is well recognised, for as Solomon tells us—"Much study is a weariness of the flesh." If, therefore, we are to improve national physique and nutrition, we must realise that the science of proper living must be observed in every detail and in every period of life, for the human body and the mind together are inseparable and yet are not treated with half as much care as a sewing machine. Health education can never be adequate till everyone takes part in it at work as well as at play, asleep as well as awake, with the

sense of comfort after a suitable meal under suitable conditions, as well as with the healthy appetite produced by healthy living.

We must never forget that armaments are only our first line of defence. Behind them must stand the health and prosperity of a nation that is proud of its national life.

It is all to the good that we should fight malnutrition and disease. But the

new phase of health policy, admittedly only a beginning, looks far ahead of that, to the positive building up of a strong and healthy race. When you think of health policy you think not first of hospitals, but of swimming pools and national parks, of milk for mothers and children, and of a real national food policy.

LORD DE LA WARR,
LORD PRIVY SEAL,
—"Better Health."

Why Does The Smoker Smoke?

WHY does the smoker smoke is a question anti-tobacconists often ask. It is a question which can only be answered by saying that he smokes because he likes it. He likes it partly because he likes the taste, partly because he likes watching his clouds of smoke, partly because he likes the rhythmic movements, or likes sucking the pipe, tapping his cigarette, alternately drawing in his smoke and then puffing it out again, filling his pipe, knocking it out, smelling his cigar, and a whole host of things which the smoker does automatically without conscious thought, and partly because he finds that when he smokes he feels at peace, with the world, and with his neighbour, partly because he associates it with good-fellowship and good companionship in fact,—because he likes it. It may be an idle

way of filling up an idle moment, but there are many worse ways. If he smokes in moderation it will do him no harm. Every man must find his own standard moderation, and there are commonsense rules to apply to smoking as to everything else.

I personally believe that pipes and cigars are healthier than cigarettes, partly perhaps because you smoke less of them, also partly because they usually contain more dust and impurities, their smoke is more irritating, more bits are swallowed, and perhaps because they are more readily inhaled, and possibly more nicotine is absorbed as a result. You must take simple precautions. Your pipe must be clean, first because the taste of the tobacco is better; secondly, because if it is not you swallow as well as inhale the

nicotine. If you are wise, you will not relight an extinct cigar once it is cold or relight a dead pipe; again, you will not do it if you have any appreciation of the taste of tobacco, and you should not do it because you get more nicotine if you do. If you get symptoms from smoking give it up. It is not so difficult to give up smoking as it is said to be. The anti-tobacconists talk about it causing obsessions and an irresistible craving for tobacco in the same way we talk about addiction to opium or cocaine. Smoking is a habit and, like all habits that are of long standing, is not easy to give up, but I think you will find, or have found, that when the reasons for not smoking are good enough it is not difficult to stop smoking once you have stopped the automatic habit of taking out a cigarette or lighting a pipe at the customary

times. Much of the difficulty some people have in stopping smoking is due to auto-and mass-suggestion. One may have a feeling of loss or regret, but there is no imperative craving for nicotine as such. You would find just as much difficulty in giving up other long-established habits—your morning cup of tea, your hot bath, or your extra half an hour in bed—and the man who says he will go mad if he cannot get a smoke is either dramatising his sensations or else is a study in psycho-pathology. Fortunately, there appears to be no need to give it up, since smoking reasonable amounts of tobacco does no harm, although you would be wise to avoid the principle of moderation of Mark Twain who said he had made a resolution never to smoke when asleep or when eating.

"New Health."

Rheumatism An Important Health Problem

RHEUMATISM must be considered an important health problem because of its frequency of occurrence, duration of affliction and great percentage of disability resultant therefrom. Rheumatism is one of the greatest single causes of disability in industry.

Many victims of rheumatism are partially disabled and slowed up, though able to carry on certain duties of their daily life. Others are completely disabled for a period of time, then sufficiently recover to resume full time labor, and another group are permanently disabled and unable to take any part in

the production of their own or their family's livelihood.

Because of this large measure of lost time in industry rheumatism has been extensively studied in the hope of evolving methods of prevention and treatment which will limit the economic loss.

Some interesting thoughts are advanced by Martinet on the causes of rheumatism and its frequency. He conceives the motor apparatus as contributing to the general functioning of the system in two ways: First,

its tissues constitute a part of the connective tissue, lymphatic and leucocytic defence system, and serves as a locus for the destruction of bacterial agents and the soluble organic and mineral poisons of bacteria. Second, by the functioning of muscle tissue, it takes part in the process of nutrition by using glycogen and forming lactic acid and other products of katabolism. Thus it is subject to invading infections and contributes to trophic disorders, one end-product of which is rheumatism.

This conception of the etiology of rheumatism brings at once to mind a possible field of preventive measures. First, the hygiene of the motor apparatus should be regulated with care, beginning in childhood, in all children, but especially in those who are the offspring of rheumatic individuals. There should be sufficient, but never excessive, regular daily exercise of all the motor structures.

The motor structures should be placed in a stage of better defence against external agencies, particularly exposure to cold, by stimulation of the skin functions. This may be accomplished by gradual hardening of the skin to exposure, vigorous rubbing and cold baths.

Also the individual with hereditary rheumatic tendencies should be protected against focal infections by hygienic care of the teeth, mouth and ears. Careful watch should be kept of the gastrointestinal tract and annexed glandular structures, the genital organs, endocrine glands, blood and urine, to prevent the harboring of infections in these localities.

The above outlined routine for preventive activity constitutes also the early part of the treatment of a case of rheumatism. In order to ensure an early recovery and to prevent as far as possible crippling consequences of the disease, a study must be made of the rheumatic patient with a view toward removing any source of focal infection and toward stimulating the general metabolism of the patient. As a rule rheumatic patients will be found to be undernourished and usually anemic. These conditions must be combated from the outset by dietary regulations, hygienic care with attention to physical surroundings, and exercise as far as is allowed by the rheumatic disability, and by tonic medication for overcoming the anemia and improving the metabolism.

Attention must be given to the morale of the rheumatic patient in order to obtain co-operation in the routine of treatment as well as to maintain mental and nervous equilibrium which is so necessary in advancing recovery in this disease. Encouragement must be given to the patient as to his ultimate recovery and renewal of his ability to support himself and those dependent upon him. It is almost impossible to bring about improvement in digestion and metabolism in a despondent patient. The effect of discouragement on the endocrine system is sufficient to retard metabolism and to nullify our best efforts to benefit such patients.

Fresh air, an abundance of good nourishing food, baths, massage and such exercise as is permissible must be a routine programme in the treatment of rheumatism as well as medication directed toward relief from pain and eliminating the infection present in the system. —"Medical Suggestions."

A Child's Life American Parents' Ordeal

A case has stirred public opinion in the United States and also here is that in which a "jury" has had to decide whether a child's eyes should be removed or whether it should be left to die.

Mr. Herman Colan, a Jewish Dentist of Chicago, and his wife, found that their five-week-old daughter, Helaine, was suffering from a malignant tumour, which affected the eyes and finally would threaten the brain. Specialists advised that if the baby's eyes were removed the tumour could be eradicated and its life would be saved. If not, the child might live, but would be an idiot. The mother declared that she would rather the baby die than be sightless. Her doctor father agreed with her. Mr. Colan wanted the child to live and he favoured the operation.

It was then decided to put the question to a "jury".

Three Rabbis, an X-ray specialist, an expert on diseases of the eye, and other medical men formed the jury.

While the jury was sitting, Mrs. Colan, who is very ill, changed her opinion that it would be best for the child to die and sent this note to the jurors:—

"Please do something to save my baby. My baby must live. I will gladly give up my eyes so that she can see."

The Jewish Rabbis were all in favour of saving the child's life at the expense of her eyes. The specialists were of opinion that the removal of the left eye would stop the disease and the operation was at once ordered. It was carried out and the report is that Helaine was "doing very well."

The baby is suffering from retina glioma, a growth of which was slowly penetrating to her brain where it would have killed her.

At first it was thought that it would be necessary to remove both her eyes to save her life.

The specialists decided to remove only the baby's left eye.

—"Hindu."

A bouquet of flowers is prescribed once a week for every patient in the University of California Medical Centre.

According to the Health Organisation of the League of Nations such athletic activities as fencing, boxing, wrestling, and long distance running are unsuitable for women.

Hints from the Health Department

Advantage of Walking

School play-grounds do not always give sufficient scope for real activity. I would suggest that schools be given permission to go for a good walk when fields are unfit for play, in fact, I would strongly advocate the inclusion of a weekly walk on all school time-tables. The slouching gait that one sees on the streets is, no doubt, due to lack of walking exercise. Some of the older boys are guilty in this respect. Although the time-tables at the schools are satisfactory I think that these older boys want more physical work, and walking should be part of it. They cannot all be expert at games so that when they leave school their physical activities are somewhat limited.

Posture of School Children.

It is useless for a school master to try and instil the essence of a good posture into a tired child who has neither the physical nor the mental energy to enjoy his session of physical training as most children do. The lethargic child with sagging abdomen and stooping shoulders is unfortunately only too commonly seen. If parents would only realise how easy a good posture is to maintain when the habit is begun early, and how much better the child looks and is, much more could be done. The child breathes more easily and more freely, and is less liable to respiratory diseases, his appetite is better, he is less liable to constipation and his whole mental make-up is more alert. Many factors are concerned with good posture, quite apart from physical training, including adequate sleep and food, good habits, suitable footwear, and the avoidance of obstruction to breathing, e.g., chronic adenoids or persistent nasal catarrh. Without the co-operation of the parents the posture of school children cannot improve. The teacher instructs the child for only a small part of the day; it is for the parent to encourage the child to continue the teacher's precepts out of school.

—"Better Health."

To give premature infants a better chance of survival, the Children's Hospital in Cincinnati keeps an air-conditioned room for them, with temperature at 84 degrees and humidity 65 per cent.

Public Services and Public Opinion

PROVISION for the instruction and care of the expectant and nursing mother is made on a comprehensive plan, but this plan is carried out in its completeness in very few parts of the country. Unlike some sixteen Continental and American nations, Great Britain has not ratified the Washington Convention of 1919, which secures to the woman worker leave of absence during six weeks before and six weeks after child-birth, with suitable benefit.

There are 1,599 local health authorities in England and Wales but among them there are only 2,737 officers engaged in health visiting, and of these only the equivalent of 1,911 are allocated to ante-natal work. Nor are all the health visitors specially trained for their duties. There are only 1,090 ante-natal clinics provided and maintained by local authorities, and an additional 250 maintained by voluntary organisations. I will not discuss the reasons, economic and administrative, for the inadequacy of the services beyond noting that so long as a public service relies for its authority on a permissive Act of Parliament, inequalities of adoption are bound to occur. Nevertheless, 2,29,549 women attended these clinics an average of rather less than four times each during 1933, and this total expressed in terms of the percentage of total notified births gives the relatively high proportion of 42·2 per cent. Since the provision available for ante-natal care and advice is so scanty, the advantage which is taken of it shows that there is already a well-defined demand on the part of the public.

It is not open to question that ante-natal clinics have a deterrent effect on both maternal and neo-natal mortality. I quote the case of Monmouthshire because it so happens that the society which I represent, the Save the Children Fund, was responsible for equipping sixteen ante-natal centres in that country, but similar evidence can be produced from all over the country. In Monmouthshire in 1929, the maternal mortality rate was 7·47 per 1,000 live births. During the next three years after the establishment of the ante-natal clinics, there was an appreciable and in the main steady decrease in the maternal mortality rate, and in 1932 this was 5·6 per 1,000 live births. The privations of subsequent years and the consequent under-nourishment of expectant mothers has had the effect of raising the rate again.

Then there is the question of the respective merits of confinements taking place in hospital or nursing home or in the patient's own home, on which there is a diversity of opinion, both public and professional. The tendency of public opinion, at least in urban areas, stimulated no doubt by the increase of the habit of dwelling in small flats, is indicated by the fact to which Sir Frederick Menzies alludes in his recent report on the maternity services of London, that approximately 60 per cent. of confinements during 1934 took place in hospitals, maternity homes or private nursing homes.

To discuss the merits of domiciliary and institutional treatment is not within the purpose of this paper, but it may be

assumed that their exponents have this in common—they will agree on the desirability of ante-natal care and advice. Those responsible for the direction of institutions do not fail to counsel their prospective patients to take advantage of their own or other public ante-natal services available, and, generally speaking, the private nursing home advocates, if it does not provide for, ante-natal supervision. The private practitioner, too, is obviously well advised from every point of view in encouraging his patient to see him from time to time during the months preceding her confinement. It may perhaps be noted in passing that there are springing up a number of small and cheap private maternity homes which, though they may conform to the requirements of the Midwives and Maternity Homes Act, leave much to be desired in the matter of professional co-operation and supervision. They are commercial enterprises which own their existence to a certain snobbish antipathy to taking advantage of the public services on the part of the people who nevertheless are not in an economic position to pay for an adequate alternative.

Somewhat akin to this feeling, but less unworthy, is the reluctance of not a few self-respecting women to accept for themselves or to impose on any children they may be compelled to take with them the discomfort and risk of mixing in the waiting room of the welfare centre with patients who have crude personal habits and a low standard of personal cleanliness and tidiness. Happily, the general standard of behaviour in such matters is improving and it will continue to improve with the

spread of that self-respect which is the concomitant of intelligent citizenship, but we have yet to travel a long way before we reach that state of affairs—surely the ideal to be aimed at—when mothers and expectant mothers will be able to take advantage of the public services established for their benefit with no more reluctance than the average citizen has for making use of the services of the public libraries or the Police force.

Besides the great general public, whose opinions are formed by the press, by radio and by official reports and pronouncements, the gist of which generally reaches them through these media, there is another public, restricted but potent, whose influence impinges on the good intentions of the young mother-to-be. Thanks to the Midwives' Acts and activities of the several professional organisations, we have long since seen the last of Mrs. Gamp, but Mrs. Gamp was not alone in her malefactions. There was always Mrs. Harris in the background, confirming her wisdom and supporting her prejudice. It was all very well for Betsey Prig to say "I don't believe there is no such person" as Mrs. Harris. Mrs. Gamp firmly retained her, and most of us have met her or observed the effects of her influence. She is the older woman, the aunt, the neighbour, the grandmother, sometimes the mother, or mother-in-law, who, clinging to her own receding life, seeks to live its earlier experiences over again in dominating the behaviour of the younger generation of mothers. She has little faith in standards and practices which were not current in her own

young days, and to get the satisfaction she desires she must see reproduced in the younger generation the same conditions, as near as may be, as those which belonged to her own maternal experiences. I suspect that it may have been this spirit quite as much as faith in the literal inspiration of the Bible which was behind the opposition to the use of anaesthetics in child-birth in the middle of the last century.

In many primitive communities, the old women of the tribe perform an important function in the instruction of the young. In the absence of written records and of scientific research, there is stored up in the memories of the grandmothers the accumulated maternal wisdom of the tribe. They are not only the midwives, but the ante-natal advisers of the younger women, and instruction begins not on the eve of maternity, but at the onset of adolescence.

How different is the gossip of the "old women of the tribe" in civilised communities, where so far from being fountains of knowledge they are a source from which the poison of prejudice is spready, vitiating the healthy influences which flow from the ante-natal and infant welfare clinics and the activities of such bodies as the National Baby Week Council.

It is sometimes said by cynics that the modern girl would rather have a car than a baby. Well, perhaps the car is safer for the community in some cases. At least you get a book of instructions with a new car and you have to pass a ministry of transport

test before you can get a driving license. No book of instructions is issued with a new baby and no test or license is required before undertaking the responsibility of parenthood. I will not discuss the advantages of tests for parenthood, but there is much to be said for the "book of instructions." New Zealand has, in effect, employed it for many years, for Sir Frederick Truby King's famous handbook *the Expectant Mother and the Baby's First Month* is issued by the Government to every young couple applying for a marriage license in the Dominion.

Public opinion must learn to take this question of maternity at least as seriously as it is learning to take the question of motor-driving, and the would-be or may-be mother must be encouraged to look on child-bearing and rearing as a skilled art. To change public opinion we must begin with the adolescent. To this end no girl who is about to leave school should be denied the opportunity of receiving lessons in mothercraft, supplemented, where possible by frequent visits to infant welfare centres. Such visits have the dual advantage of affording the girls useful ocular instruction in the care and management of infants and of their own health when the time for motherhood comes, and of developing a public opinion among those most immediately concerned, in favour of making use of the maternity and infant welfare services. This is a sound beginning towards combating the pernicious influence of the surviving representatives of uninstructed public opinion "the old women of the tribe."

It is an amazing thing that the mothercraft is not even mentioned in the Board of Education's official "Suggestions for Teachers" although housecraft is recommended as an essential subject, and the Hadow Report, which has had so great an influence on the re-organisation of our public educational system, says that "housecraft (i.e., cookery, laundry work, housewifery, repairing furniture, etc) should form an integral part of the whole school organisation and life," but makes no reference to mothercraft. It is no doubt a useful attribute of domesticity that a wife should be able to repair a broken chair or table, but her facility in such crafts will be of little consolation to herself or her husband, or benefit to the community, if meanwhile her children are languishing for want of maternal care.

Finally, the safeguarding of maternal welfare must be looked upon as one of the duties the individual owes to the community. In ancient Greece there were public processions in honour of expectant motherhood. The nearest we have got to that are festivals of childhood, such as our own National Baby Week and the Children's Days which are celebrated not in our own country, but in a growing number of other lands, notably some which were formerly among the most backward in the development of social welfare

work—such as Bulgaria, Turkey and, now, China. It is becoming a convention that such celebrations shall centre on the Declaration of Geneva, drafted by the founder of the Save the Children Fund and adopted by the League of Nations as the League's Charter of Child Welfare, and the essence of this declaration of the Rights of the child is that it is an obligation on all men and women to ensure to every child the "means necessary for his normal development" in order that he may be brought up "to devote his talents to the service of his fellows." I am reminded of that phrase of Bacon's in the *New Atlantis*, where he says "The King is debtor to no man, but for the propagation of his subjects "Children are a gift to the community, as we ought to be reminded every time we use that much abused word "proletarian," for the *proletarii* of Rome in "the great days of old" were those who served the State, not with money but with offspring. A Victorian sentimentalist wrote, "The hand that rocks the cradle is the hand that rules the world, "and it is an axiom of child welfare work that a healthy, happy mother makes a healthy child. Maternal welfare is therefore a fundamental factor in successful nationhood.

—"Mother and Child."

Children do not outgrow cross-eyes, says an Eye Specialist—the condition nearly always grows worse unless corrected by glasses, training, or an operation.

Quack Medicines: A Menace to National Fitness.

By

Rt. Hon. LORD HORDER, G.C.V.O., M.D., F.R.C.P.

WHEN it became known that I intended to draw attention to the enormous growth in the quack medicine trade I was warned that "They will say that if you as a doctor raise this subject you will be charged with trying to create a monopoly for your colleagues; you will be charged with depriving the poorer classes of cheap cures to the efficacy of which they constantly testify. "Now as to this question of creating a monopoly, may I state, what I believe to be true, that if there be a monopoly it lies with the trade, which at a cost of nearly as much as the total money spent on the whole of our hospital services, bleeds the public to the tune of between £ 25,000,000 and £ 30,000,000 a year? I am seeking to break this unscrupulous monopoly, a monopoly which successive Governments seem almost to have gone out of their way jealously to guard.

Now as to the position of the doctor, I feel sure that if the doctor thought only in terms of hard cash in this matter he would actually benefit from this unprincipled trade. The doctor has eventually more patients because of this trade, and not fewer. Especially would the surgeon benefit, for cases become serious in proportion as diagnosis and treatment are delayed. Ultimately even the undertaker benefits

sooner and oftener than he might. So, in striving to cleanse this Augean stable I am not acting in the interests of doctors, I am acting in the interests of that section of the public which is least able to stand up against exploitation poorer people who can less afford to lose money on health than any other section of the nation, and the straitened middle classes. People who are better off, but not perhaps less foolish, can afford to pay for any damage which their adventures into quack medicines may occur.

Another objection with which I propose to deal is expressed by the folk who say: "It is all very well to be destructive, but if the citizen does not send his coupon for his lung cure, and if he does not get his diagnosis by post for his kidney trouble, and if he does not get his gastric ulcer healed with a patent powder, what is there for the poor citizen to do? And that brings me to perhaps the most important point that I have to submit; we have something infinitely better to put in the place of those extremely dubious specifics. We have now available to the poorest everywhere one of the finest of health services in the world, and the slogan "use your health services" was one of the most intelligent slogans I have ever heard. Health services constantly expanding health

insurance services—these, I submit, are what the Government can and—must now encourage people to put in the place of this medieval witch-doctoring.

My main reason for pressing this matter at this time is my deep concern for the success of the concerted move that we are making towards national fitness. By fitness I do not mean muscular supremacy, I mean health as a basis for good citizenship and happiness. So men and women of all parties are converging on this objective. They are all of them genuinely moved with the desire to help. On the platform where the campaign for national fitness was launched there sat men and women of all parties. That was good. I suggest that anything directly bearing upon the basic health and happiness of the people is outside party politics. I know that it is commonly felt that in the realm of party politics there is no room for this question of how we should keep the nation fit.

On the one hand His Majesty's Government have launched a campaign to improve the national physique, have recruited all of us whose business it is to know something about health, have set aside subsidies for the purpose of education and demonstration in regard to fitness, and have spent quite a lot of money in health propaganda. Then, on the other hand, we have this campaign of quack medicines and food, totally uncombated so far by His Majesty's Government but led by very subtle and skilled generals, bent upon maintaining national ill-health, moral and physical, in order to have a ready market for their goods. For every hundred pounds that the Government

spends on making people health conscious quack medicine mongers spend a thousand in making them disease-conscious. We are trying to teach people the meaning of nutrition, and the money they might spend on food they are spending on quack medicines, or on very poor substitutes for good food. These are the considerations which led me to bring this subject before Parliament.

Colossal Profits

I spoke of the extent of the trade in quack medicines and of how our people spend nearly £ 30,000,000 annually on them, an amount which is almost the same as the sum required to maintain all the voluntary and municipal hospitals in the country. A famous group of patent and proprietary medicine vendors, catering chiefly for nervous and digestive disorders, has just budgeted for a sum of nearly £ 1,000,000 for Press Advertisements alone during the current year. This particular group covers some sixteen preparations if we exclude shampoos and dog and cat medicines. I see that it is about to buy the control of some six to ten more preparations. The profits on the deferred shares have risen from £ 40,000 to £ 280,000 in the past six years. In 1931 the price of the 5s. shares stood at 5s 7d. and in each of the past three years these shares have risen to above £ 3. These figures give some indication of the lucrative nature of the concern and of the great expansion of the quack medicine trade.

If this were a clean trade, and if people merely spent their money on it foolishly, that would be no matter for

criticism. But what is that is sold and bought? A few patented and proprietary things are good things, and the claims made for them are not unreasonable. A good many things that do little or no good and little or no harm are sold at fantastic prices. But now and again something is sold that does definite harm—not often, because an inquest is a thing that puts some of these people out of business more quickly than anything else, and for that reason dangerous drugs are as a rule avoided. All the same, there is nothing in law to prevent a vendor in this country from trading in some new drug not as yet on the poison schedule and concerning which experience of its action is required to discover the danger. In other words, the public is made, the experimental guinea pig, as it were, of the unscrupulous vendor.

But there is an enormous number of preparations which are fraudulent in the degree of the advertisement—fraudulent in the claims they make and very fraudulent in the way in which these claims change without any change in the nature of the specific, so called. The public is becoming slowly aware that certain diseases like cancer and hernia—rupture—are not cured by drugs, and the advertiser is quick to realise this. So disease conditions which are, for any reason in the public mind, made the means of selling the same old goods. For example, the subject of malnutrition is topical just now, and a number of preparations formerly advised to cure quite different conditions are now advised as a cure for malnutrition. A set of new preparations arises which claim to do the same thing. The subject

of vitamins having become somewhat popular, you will find that quite a large proportion of the quack medicine advertisements to-day claim that they contain "all the vitamins necessary for health."

Exploiting the Public.

Food substitutes are advertised in large quantity. There is no substitute for good food, unless it be better food. Some of us have quite recently become rather anxious about the prevalence of rheumatic disease in this country, and straightway the quack medicine vendors orientate their advertisements in our direction. In short the more these things change, the more they are the same thing. Advertising has become a specialised profession. The maker of quack medicine need no longer rack his own brains as to how best to overcome any reluctance the public may have in spending. He hands the matter over to the advertising specialist, together with a large sum the larger the better—which has been appropriated for this purpose and the thing is "put across the public" as they say. There is a rake-off for the manufacturer, a rake-off for the advertising agent and of course a rake-off for the newspaper in addition.

When we remember the enormous increase in the media through which the advertisement operates—newspapers, omnibuses, hoardings, wireless and aeroplanes now—we begin to realise also the appalling results which this mass suggestion must eventually have upon the country's health and morale. These advertisements have become a much graver danger than the medicines they sell. Fear is the chief

emotion they rely upon, so that much of this trade is, in effect, a huge form of blackmail. It is all very well to "vet" the medicine and reject its advertisement if harmful, which is claimed by some responsible news paper proprietors, but there is poison in the advertisement. A picture of an operating theatre, with the surgeon and nurses in their makes, says:

"Buy our invaluable ointment and you will escape operation, and the result is guaranteed."

There is another picture of a strong acid burning a hole in the carpet, which says:

"This is what is happening inside your stomach when it pains you. Take our tablets and you can eat anything."

"Of course everyone takes a laxative," says one advertisement "so why not ours?" And the wretched man who does not take a laxative begins to wonder if he can possibly be well without it. "Four out of five have pyorrhoea" which is not true, says another advertisement. But the chances are so heavily loaded against the reader that the goods sell. Then these questionnaires, how subtle they are! Imagine a sensitive woman reading these questions:

"Do you cry too easily? Do you ever get fits of dizziness? Are you often in fear of illness or breakdown? Have you ever been told you are anæmic? Are you extra sensitive about what others say? If 'Yes' is your answer to any of these questions, this is a sign of

dangerous weakness. Take it in time. You should begin with our tablets right away."

So I might go on almost endlessly. It is perhaps because some of our Continental friends have been reading our advertisement pages that they think that Britain has become decadent.

Coining Money out of Fear.

This of course is, in the language of the street, a ramp. It is not only demanding money with menaces, it is coining money out of the fears of the people. And it is not only the sick that are swindled, the well are swindled—for by what other word can we rightly stigmatise the deliberate promotion of credulity for the purpose of gain? I do not think that we can look at the advertisement columns of even the best newspapers and feel easy about the situation. In Continental Countries exploitation is forbidden. It is forbidden in the United States, in our own Dominions of Australia and Canada there are heavy penalties for making false and fraudulent claims, and even in South Africa last year a Bill was introduced whose terms were based on the recommendations of the Select Committee of this Country of 1914. It is humiliating to think that Great Britain remains complacent in face of this menace to the health of her citizens.

What is the remedy? With the best intentions, for which I give the reputable newspapers every credit, no censorship of their own will ever effectually deal with this nuisance. This voluntary effort has been on trial for more than twenty years, and

things are much worse than they were. If we expect the case of a few select papers, then the breathless, cut-throat race for advertisers the struggle for clients, will determine the issue against them. It cannot be otherwise. If only one paper outside the controlled area refuses to obey a code and there are many outside the controlled area—then the difficulty in such a case becomes intolerable. It is like people who want to be good but starve if they are good. Central or Government control would tighten up the situation at once. I earnestly trust that the people will support me in the efforts I am making to persuade His Majesty's Government to tackle it by a Government measure. The machinery would be easily forthcoming. I believe that in dealing with

this scandal, the Minister of Health would have the opinion of the country behind him and I think I have good reasons also for believing that the press as a whole would support him. A Bill dealing with this would be a most fitting corollary to the efforts that we are all making for national fitness. It would demonstrate clearly to the world that His Majesty's Government are really serious in regard to its health campaign. It would close a wide gap in our defences, a gap which is increasing month by month and through which at the moment the enemy is pouring and spreading havoc amongst our people. Once behind the lines there is no limit to the damage which this particular enemy can do.

—"Better Health"

Healing Virtues in Vegetables.

"The vegetable possesses all the essential food factors required for the process of health and growth. Vegetables yield minerals in abundance; they are the source of almost all our important vitamins. They furnish fat, carbohydrates and protein."

HEALTH-GIVING qualities in vegetables have been known and appreciated from very early times; scarcely ever has there been a race of men or animals on earth who did not like and habitually eat some sort of vegetable. There have been and there still are, certain groups of men who subsist entirely on vegetables. Among present day notables George Bernard Shaw is as noted for his vegetarianism as he is for his wit. He has attributed to his good health at an advanced age wholly to his vegetable diet. In the

animal kingdom there are quite a few groups of animals which live entirely on fruits and vegetables.

The vegetable is among the most useful type of food available. It possesses the essential food factors required for the process of health and growth. Vegetables yield minerals in abundance; they are the source of almost all our important vitamins. They furnish fat, carbohydrates and protein. Their water content is adequate. For these reasons it is possible for a man or an animal to live almost

exclusively on vegetables and be in good health.

In this article will be considered the health-giving virtues of some of the more common and important vegetables.

Sauerkraut.

GIL BLAS, the hero of the immortal novel of that time once evinced the desire, in his chequered career, to become a physician. He studied medicine for a while under one of the most illustrious physicians of his day. Among the most astounding impressions which remained in his mind after he gave up his medical career was one that when a physician prescribed a diet for a patient he invariably included the most insipid articles of food he could think of and invested them with the greatest of virtues. Gil Blas was right. For many years there was the strange conception that the more tasteless and characterless the food the more healthful it was.

When modern science began to look into the food question it was found that the most delectable of our foods were also the most healthful. Sauerkraut is of very ancient origin. Apparently a product similar to Sauerkraut was used by the Chinese. For many years Sauerkraut has supplied the Russian peasant with food-lime and food-iron during the long winter months when fresh vegetables were not obtainable.

In scientific annals Sauerkraut has held an estimable place for many years. It was Captain Cook who discovered its anti-scorbutic properties in 1776, and it is still being used on long cruises to keep sailors in condition. Physicians have been in the habit for quite some

time of giving Sauerkraut and Sauerkraut juice in cases of diabetes. Dr. Anders in his famous text-book "The practice of medicine" assigns to Sauerkraut first place on the vegetable diet for diabetes. At the Augustana Hospital in Chicago, Dr. Edward Ochsner used to give Sauerkraut and Sauerkraut juice in cases of diabetes.

The greatest and most beneficial effects of Sauerkraut are exerted in the intestines. This is due to the lactic acid content which physicians believe exerts a disinfecting influence. They have found that in many cases of intestinal catarrh, especially where large quantities of decomposition products are present, Sauerkraut has a favourable action. The pleasant and sour taste certainly has a stimulating effect on the appetite.

Metchinikoff, the great Russian physiologist, was very much interested in prolonging human life, and it was his belief that the intestines had much to do with shortening it. That is, the intestines were fertile grounds for breeding millions of harmful bacteria which shortened human life by many years. In order to prolong life an efficient intestinal antiseptic to reduce number of these harmful bacteria was necessary. Lactic acid was found to be of value in this capacity, and Sauerkraut contains quite a great deal of this acid. Metchinikoff used to tell about a man who reached the age of one hundred and three years, and who was relatively well preserved. He was a weaver who had always led a sober and thrifty life, but with one passion—he adored Sauerkraut and ate in great quantities, often

raw. Metchnikoff firmly believes that it was the Sauerkraut which was the greatest factor in prolonging the span of his life, because of the very efficient antiseptic qualities which this delicious food possesses.

PASTEUR, the greatest of all French bacteriologists, himself loved Sauerkraut and declared emphatically that it was the most useful and healthful vegetables on earth. Among the more recent authorities who have become convinced of the great value of Sauerkraut as a health food are Dr. William S. Sadler who confirmed the belief of Metchnikoff that Sauerkraut was a potent factor in preventing the growth of intestinal bacteria and Dr. Brokaw who used to say: "Spinach may be the broom of the stomach, but Sauerkraut is the vacuum cleaner."

Not only is Sauerkraut possessed of antiseptic qualities as far as the intestines are concerned, but it also exerts a soothing influence. Dr. Middleton has found that Sauerkraut is one of the most useful additions to the medical armamentarium in treating vomiting. This doctor treated many cases of vomiting due to various causes with Sauerkraut, and with good results. In several cases of **Hyperemesis Gravidarium** (persistent vomiting in pregnancy) surprising relief following the ingestion of Sauerkraut. Vomiting subsequent to **Paracentesis Abdominis** (draining off of excessive fluid from the abdomen) in a patient suffering from the tuberculosis peritonitis stopped after a small portion of Sauerkraut. Dr. Middleton also found that Sauerkraut put a stop to persistent vomiting due to heart disease.

Another physician, Dr. Hugo Friedstein, found that Sauerkraut was of value in ailments due to excessive uric acid in the system. This physician for many years was in the habit of prescribing the juice of raw Sauerkraut for all cases of derangement of the digestive organs, and in cases where the cause of the trouble was uric acid and excess of sugar, he obtained very gratifying results from this simple dietary procedure. It proved of value in gout and in the various forms of rheumatism.

Several years ago a medical journal, **clinical medicine** was interested in the various specific properties of Sauerkraut. Among other things it requested a group of women who were nursing their infants to report what the eating of large quantities of Sauerkraut did for them. They all invariably reported that the eating of this delicious food produced a noticeable increase in the secretion of milk.

Lettuce

From time immemorial the health-giving qualities of lettuce have been asserted. A sort of hieratic aureola of ancient nobility seems to envelop the plant. It entered into the Pascal meal under the law of Moses, along with the lamb and unleavened bread; the Roman believed that taken in the evening it was the most effectual means of securing a good night's rest, and the Thebaid anchorities owed to it their ability to "resist the demon of the flesh."

Although Hippocrates did no more than recommend the plant as a food, Dioscorides, Galen, Celsus and Oribasis, the greatest physicians in the dawn of

medicine, believed the juice of lettuce to possess properties similar to that of opium. Galen was in the habit of eating lettuce to combat the sleeplessness which tormented him in his old age. Celsus was in the habit of prescribing lettuce for consumptives.

History tells us that lettuce was the object of actual worship on the part of the Pythagoreans who gave it the name of "The Eunuch's Plant" on account of the sedative action which it exerted on the reproductive system. It was also by means of this same humble vegetable that Antonius Mus, physician to the Emperor Augustus, cured his imperial patient of some affection of the liver. By way of gratitude to the health-giving plant, Caesar's successor retained the habit of sucking the stem of the lettuce to stanch his thirst. The people testified their gratitude by raising a statue to him, close to that of Aesculapius, the God of Medicine.

As a sedative lettuce continued to attract the attention of physicians down through the centuries. In the Middle Ages Bartholemy the Englishman vaunted lettuce for the purpose of "taking away lustful ideas while sleeping." With the passing of years Drs. Etmuller, Murray, Vogel and Schellinger among others had remarked on the healthful qualities of lettuce. It was lettuce which Dr. Tael used to prescribe so faithfully in cases of nervous heart. Dr. Gompech found this same plant of value in the whooping cough and Dr. Tothamel prescribed lettuce for the relief of certain nervous symptoms and fevers.

In the United States, Dr. Cox, of Philadelphia, is remembered solely in connection with his work on lettuce. The juice of this plant he named **Lactucacarium**. Somewhat later another lettuce enthusiast took up his work, and made syrups of the juices which were used for a while as medicines. It was a French doctor, Aubergier, in 1850, who did more than any one else to glorify the health-giving value of lettuce.

Lettuce is to-day more popular than it ever was; it is among the most popular of our vegetables; it is the most essential ingredient in any salad worthy of the name. It not only tastes good, but it has minerals in abundance, and its vitamin content is high. It is not contraindicated in the dietary of any disease; it can be eaten by any one no matter how sick, with many benefits. Lettuce is deservedly the most popular of all leafy vegetables.

Garlic.

Garlic is one of the most interesting as well as one of the most ancient of our valuable foods. In spite of the pungency of its odour and taste garlic has been one of the most popular of our condiments for many hundreds of years. Khnoum Khoufouf, better known to history as Cheops, Pharaoh of the Fourth Dynasty (4500 B. C.) and immortalized as the builder of the Pyramids, was among the first to recognise the true virtues of garlic, for he decreed that all his workers had to eat regularly of it in order to gain added strength and to keep in fit condition generally.

Among the ancient Hebrews, despite their repugnance to this food which was designated by them as **Chumin** or **Sum** they consumed it in great quantities. The Greeks also were devotees of this flavoursome food, and Aristophanes thought that so much of it that he gave it a prominent place in his immortal play, *Lysistrata*. The Romans made great use of it as an alimentary antiseptic and tonic, much to the great disgust of the poet Horace. Garlic was also given as an excitant to Roman soldiers. The great Roman physician Galen claimed that the use of garlic was preferred to that of other aromatic condiments.

When the northern conquerors swept over Greece and Rome they made the acquaintance of garlic and they became so enamoured of this tasteful clove that they introduced it to the people of their own countries. It became a favourite with the French, and during the fifth century made frequent appearances in the writings of the poets. Henry IV esteemed it highly and used it frequently. Rabelais made his Pantagruel an addict to it.

As a medicine the great Hippocrates recommended garlic in infectious diseases and particularly prescribed it in intestinal disorders and upsets. Pliny and Galen in Rome used it widely for its health-giving properties, and they observed that it was one of the most popular remedies among the labouring classes who regarded it as a panacea for a great many ills. Dioscorides and Samnonicus, two ancient doctors of note, were great believers in garlic as a cough remedy.

In the 18th century Dr. Fuller again emphasised the value of garlic as a cough medicine, and made a special syrup of garlic juice for this purpose. In the 19th century Dr. Hanin continued to recommend garlic as a medicine of worth, and, Raspail, a great French authority, called it the camphor of the poor. Garlic has also been called the poor man's treacle. It was used for several hundreds of years as an "alexipharmic" a sort of medicine to neutralize poisons.

PERHAPS the most marked effects of garlic are produced on the intestines. As a worm expeller it has been used from antiquity. Garlic also has been found to have a soothing action on the various forms of diarrhea, and it is claimed by some that the intestinal flora may be changed by this vegetable.

As a stomachic garlic has been esteemed for many years. Some physicians are of the opinion that excessive stomach acidity may be modified by eating garlic, for relieving unpleasant sensations associated with the hardening of arteries and high blood pressure.

As a further evidence of the worm expelling powers of garlic it is interesting to recall that the peasants of Puerto Rico give garlic to their children for lumbricoid worms, and also apply it to the abdomen as a revulsive. They also use it as an inhalant in affections of the lungs.

Garlic has proved to be of value in certain diseases of the chest. It has been found to reduce the foetidity of the breath in pulmonary gangrene. Drs. Minchin and McDuffie have advocated the eating of garlic in tuberculosis

of the lungs. Dr. F. W. Crossman once said that if garlic were given in sufficient quantities it was a marvellous remedy in the treatment of pneumonia. This physician used garlic for many years in pneumonia and said that in no instance did it fail to bring down the temperature, as well as the pulse and respiration, within 48 years.

As garlic is an irritant and rubefacient it can be applied with great benefit as a poultice to the chest. Some doctors have advocated giving garlic in boiled milk in some cases of bronchitis and they have obtained good results from this simple procedure. Poultices of garlic applied to the spine have been recommended in infantile convulsions as well as in cases of gastrointestinal catarrh where the poultice is applied over the abdomen.

Garlic has been proved recently to possess real antiseptic and germ-killing powers. Dr. Lugianini proved that a piece of garlic diluted with water in equal parts hindered the development of cholera bacillus and that a solution of $\frac{1}{3}$ to 1000 would kill the same bacillus in adults in two minutes. Advantage has been taken of the germ-killing power of garlic by Dr. Minchin in the treatment of erysipelas, a dread skin disease. He used a mixture of fresh garlic juice with twice as much as olive oil. He painted this solution two or three times a day over the affected area and obtained very good results.

Garlic is one of the most healthful of all vegetables. It should be used more in the daily diet. It can be eaten in great quantities without the least upset to the system. Its odour should not be allowed to prove a drawback.

Carrots.

Among the most recently accepted vegetables as a distinct health food is the humble garden variety of carrots. As matter of fact, carrots were always highly esteemed as possessing health-giving qualities. The classical writers had quite a great deal to say about the curative properties of carrots. They almost invariably referred to the Cretan carrot and almost entirely to its seeds (fruits).

Around 1651 Culpeper expressed unbounded faith in the health-giving attributes of carrots. It was entirely due to Culpeper that carrots found a very important place in the changing formulas of the great theriacae (antidotes against poisonings of all kinds) from the time of Mithridates of Pontus down to the early issues of the London Pharmacopoeia in which carrots were recommended for compounding antidotes.

Carrots were much thought of by physicians for many years as a valuable antidote against poisons of every description. The ancient king, Mithridates, whose chief claim to fame lies in the fact that he was the champion poison-eater of all times, rated the carrot above all others as a vegetable of great powers in purifying the blood of its poisonous elements.

For a time the roots of the garden carrot—*daucus nostra*—as our great-grandfathers used to call it—were recognised as an official drug in the great London Pharmacopoeia, that collection of all worth while remedies. This great work has been published continually for several hundred years,

and carrot as a medicine was first mentioned in the 1809 edition and continued strongly in favour up till the edition of 1851.

Towards the end of the eighteenth century the roots of the garden carrot were recommended for use as a poultice for suppurating sores, and they seem to have been employed extensively—in fact, so much so that the remedy attracted the attention of physicians. Fresh and juicy carrots were grated and mixed with water to a suitable consistency and applied two or three times a day. It is stated that frequently “cancerous and phagedaenic ulcers” were cured by this means alone, and that generally there “was a great amendment to the state of the sore.”

The newly discovered use of the common carrot as an external remedy of such pronounced value attracted the attention of Dr. Richard Walker, of Oxford, who gave this remedy a great deal of thought, and published an account of his reflections in “Observations on the Remarkable Efficacy of Carrots in the Cure of Ulcers and Sores,” in 1806. He followed this up by writing in the Philosophical Magazine another article, “Observations on the Remarkable Efficacy of Carrots, under a new mode of application, in the Cure of Ulcers and Sores.” The new mode he adopted was to slice the carrots transversely (not longitudinally, as usually recommended) boil them until quite soft, and then beat to a moist pulp with pestle and mortar.

Dr. Walker’s account of his success with the carrot treatment is most impressive. He said that some have

thought that the beneficent results were due to the carbonic acid which the sore “imbibed” from the carrots. He thought it was to be ascribed to what he called the “mild anti-putrescent quality of the remedy.” In view of the light recently having been shed upon the remarkable activity of carotin (the pigment found in carrots) one wonders whether it has not been here that the “anti-putrescent” properties reside.

While the value of carrots as an external remedy has been highly regarded for many years, it is really its use as a vegetable of definite health-giving qualities that is now attracting attention. Within recent years biological chemists and physicians working in research laboratories have been directing their energies in dissecting the vitamins those very important food accessories. They have even gone further. They have discovered substances which are the fore-runners of these elements. These are the pre-vitamins. The most thoroughly understood at the present time is carotin, the substance which gives the carrot its colour and flavour, and which contains a great part essential food qualities of the carrot.

Thus carotin, the very soul of the carrot, can now be obtained as a very real substance, and in pure crystal form. When carotin is taken into the body, it is converted by the liver into Vitamin A, the anti-infective vitamin—the vitamin which aids greatly in preventing infectious diseases. It is not only the value in preventing infection, but it also promotes proper growth and development in children. It is of

distinct benefit in supplying the essential food element of adolescent children and nursing mothers. In patients recovering from operations and those who are anaemic carotin is being used with remarkable results.

The carrot is among the most valuable of vegetables. It contains not

only the important vitamins in abundance, but even the substances which are later converted into vitamins. It is a great food for the lessening of the chances of infection. Eaten in abundance the carrot is one of the most valuable of all foods.

“New Health.”

Housing in Madras

Mr. Chitale on a Ten-year plan

IN the course of his broadcast A.I.R., Madras, on “A Ten Year Plan in Housing for Madras” on Monday night, Mr. L. M. Chitale said that a house to live in is essential for all living beings even as food, but it has to be of a satisfactory type, if it should serve its purpose.

The housing problem in Madras, he said, as in general with all large cities, is intimately connected with the problem of congestion and over-crowding. Housing reform and decentralising and redistribution of population go together and unless these are simultaneously attempted, success is impossible. Relieving congestion within the city is the first essential step in any wise plan for reform and the most suitable way is to expand over the surrounding area. The level country around the city offers good scope for extension and the suburbs will have to be suitably planned and zoned. They should, however, be separated from the mother city by a belt of open spaces, gardens and parks to prevent their subsequent absorption into the overcrowded city.

Suburban development, he continued, needs planning and control if the evils of the city are to be prevented from developing in them. But equally essential for rapid their development is an efficient and cheap transport system of communication. Legislation, is, therefore, necessary to enforce satisfactory standard in housing conditions as in other countries. An All-India Housing Act is preferable to lend uniformity to building legislation in India, but provision for variations and adjustments in the provinces is desirable to suit the local conditions.

The environment and surroundings should be healthy. Mr. Chitale said open spaces, play grounds and parks should be distributed all over the city.

Large scale housing schemes for the different classes of the city population should be launched. It will be well to induce Insurance Companies to embark on housing programmes as an investment. Building Corporations and societies should be encouraged and building boards should be constituted.

If the poor are to obtain the benefit of housing reforms by suitable legislature on a sliding scale of rental values may have to be devised to prevent unjust enhancement. Slum clearance is a big problem needing much care and attention. But it is very necessary, if living conditions should improve.

A comprehensive programme to tackle all these simultaneously is necessary in Mr. Chitale's opinion. It is advantageous to chalk out a programme over a fairly long period of time. A ten-year plan for housing improvement in Madras is bound to bring about appreciable changes and it is worth attempting. A critical survey of housing condition in Madras will thus form

the first step in a ten-year plan of improvement. Sites and structures will have to be acquired. Unhealthy spots should be eliminated. These raise questions of compensation and finance. Legislation will be met with opposition from vested interests. Slum clearance will cause hardship to the poor. Strict enforcement of standards and regulations will give rise to individual hardships and resentment. But it is well worth the while facing all these difficulties. The benefits that accrue from healthy living, free from the risk of epidemics, comfortable and efficient with added years for every individual, is almost incalculable.

—“Hindu”

Food Contamination from Vessels

Madras Health Minister's Press Note

THE Government have issued the following Press Communiqué, giving information to the public regarding contamination of food through vessels used in Indian households:

The Government consider that the following information regarding the contamination of foods through vessels will be of use to the public and they accordingly publish it for general information.

Vessels for storing and cooking food form an important equipment in an Indian household. The vessels generally used are: (1) earthenware and soap stone (2) porcelain and enamel (3) glass and (4) metallic.

Earthenware and Soap-stone Vessels

Vessels made of earthenware are not only the cheapest but most hygienic. Practically they are unaffected by exposure to air or to the process of cooking. They do not unlike metals, enter into chemical combination with the food elements and deprive the food of its flavour. The only disadvantage is that these are easily breakable and require thorough and careful cleaning as the pores are not readily accessible. After use, they should be cleansed and exposed to air and sunlight for drying till they are again required for use.

Porcelain and Enamel Ware

Porcelain is not suitable for heating purposes. Regarding enamelwares only the better and costlier variety should be used. The glaze or outer white or coloured coating of these vessels sometimes contains fluorides and oxide of antimony which are poisonous. Fluorides give rise to teeth troubles.

Glass Vessels

These are not suited to our conditions. They break easily leaving sharp edges which would be a source of danger, especially to children. If these break, people should see that they are collected carefully, especially the small particles, with a wet towel, and thrown into public dust-bins or in a place far away from human habitation.

Metallic Vessels

As far as possible everyone should use only the minimum number of metallic vessels. Metals are all liable to corrosion, i.e., they are transformed on exposure to air and water into different chemical substances. These are more readily attacked by the food or water with which they come in contact. Under the conditions of cooking the metals themselves may rapidly go into solution in the food. The salts so dissolved might act injuriously on the health. However, if the metal surface is kept quite bright and polished, it is less liable to be attacked by the food constituents. The South Indian method of giving a coating of mud or starch before they are placed on the hearth for cooking and also the practice of cleaning first with a coating of tamarind and then scrubbing with ashes,

are based on scientific principles and should be adhered to.

Lead Vessels

Of all the metallic vessels those that contain lead are the most insidiously poisonous in character and consequently to be eschewed altogether. In the southern districts of this province especially in Tanjore, Trichinopoly and Tinnevely, women vie with one another in getting as many of these lead vessels (familiarly known as 'Iyya chombu') as possible. These, 'though supposed to be made of tin, actually contain lead in varying quantities. Lead salts are poisonous and some of them formed in the process of cooking especially soups (sambar, rasam and the like) in lead vessels impart a sweet taste. Lead salts are cumulative poisons. Their baneful effects are not produced at once. They are not thrown out of the system, but begin to accumulate little by little and ultimately are looked in the tissues and when sufficient quantity has collected, cause anaemia, constipation, stomach pain and a host of other ailments.

Copper, Brass and Tin Vessels

These, if kept clean, serve well for storing and transporting water, but copper and brass are not to be recommended for cooking purposes. Milk, if boiled in copper vessels, loses its flavour and is deprived of its Vitamin A. Brass vessels intended for cooking rice are generally given a tin coating. For reasons stated above, the tin should be quite free from lead. Further, tinning of the vessels is ordinarily delayed till the tin coating is peeled off. The corrosive action with such a pitted

surface is considerably increased and more of the metal is likely to be dissolved by food juices. It is essential that tinning should be done at very frequent intervals to avoid this possibility. Besides, tinkers generally add lead or zinc or both in tinning for the sake of cheapness and easier workability. These are poisonous and consequently the tinkers should not be allowed to use their own 'tin' for this purpose.

Aluminium Vessels

These can be used for boiling milk

and water. Generally speaking aluminium is the least toxic of the metals commonly used. If used for cooking especially in presence of salt and tamarind, they are rapidly attacked and lose their lustre which cannot be restored.

Note.—Though aluminium is regarded by most people as harmless still we should draw the attention of our readers to a booklet *—"The Danger of Food Contamination by Aluminium" by R. M. Le HUNTE COOPER, M.D., B.S., M.R.C.S., L.R.C.P., herein Aluminium is regarded as dangerous to health.

—"Health Propaganda Board."

* John Bale, Sons and Danielson, Ltd. This book is available for consultation by the public in the Health Propaganda Board's Library in the Pantheon Gardens, Pantheon Road, Egmore, Madras.

Notes on Public Health.

Population and Food Supply.

“BY subtracting the figure for deaths from that for births you get a rough figure of the annual increase in population. In 1936, India's population increased by 3,600,000 and during 1937 it is probable that a further 4 millions have been added to the total. The primary necessity of the human race is adequate food and the first step towards betterment of a low standard of living is to increase and improve available food supplies. Both the Central and Provincial Governments have made, and are making, great efforts to develop more scientific agricultural practices and to provide the additional food supplies required, but the whole question of

population and food supply demands the most careful study not only by politicians, economists and agricultural and health experts but by every member of the educated community. An improved standard of living is one of India's most fundamental problem.

Better Nutrition Campaign.

"Closely allied with this question is that of nutrition. It may interest you to know that the Government of India, through the Indian Research Fund Association, has been carrying out nutritional researches for over 20 years past, long before the subject was discussed by the League of Nations or by other international Committees. These researches have proved that a vast amount of malnutrition exists in

this country but considerable progress has already been made in the practice of preventive methods.

I can mention only one example of our activities.

During the past year a number of health officers from different provinces and States have been trained at the cost of the Central Government in modern methods of investigation and prevention of nutritional and malnutritional conditions and these officers have returned to their respective spheres qualified to put into practice the new knowledge they have acquired.

But, of course, nothing is more difficult than to persuade people to change their dietary habits and much time and effort will be required before marked progress will be achieved. Here again, education is of primary importance and provincial and State Public Health Departments must accept responsibility for carrying out the necessary propaganda and for extending the general nutritional campaign.

Deplorable Housing Condition.

"One new section of the present report deals with housing. The importance of housing in relation to the health of the people was pointed out years ago both by the Royal Commission on Agriculture and, perhaps even more strongly, by the Royal Commission on Labour. In a few restricted areas, commendable efforts have been

made and these have been reflected in the increased health and happiness of the workers concerned, but generally speaking housing conditions both in towns and villages can only be described as deplorable.

The individual Indian home is usually kept scrupulously clean, but the villager, like his prototype in other countries, sees nothing objectionable in the accumulation of refuse near his house nor is he aware of the danger arising from pollution of soil and water.

The fundamental improvements required cannot be carried out by legislation alone. These depend mainly on the demand of a higher standard of communal hygiene from the people themselves and on the development of an educated public opinion. Fortunately both are now gradually being realised, but side by side with the educational activities now in force, Provincial Governments and Local and Municipal bodies will have to take administrative action and encourage interest and activity.

"It is commonly stated that 'health is better than wealth' but I am afraid few give this old truism more than lip service. Is it too much to hope that what has been said will stimulate some, at least, of my listeners to take a greater interest in the health and welfare of their own country and their own people?"

—"Journal of South Indian Medicine."

Princeton University has acquired a rare Moslem Medical Book written in the tenth century and carried off from the near East by Crusaders.

A Study of Longevity.

THE chances of becoming a centenarian appear to vary greatly in different countries though the figures may be vitiated by the lack of accurate records of birth a hundred years ago. According to Basilievitch and others, the number of centenarians per million of the population is 12 to 13 in Norway, 5 to 6 in Denmark and Italy, 1.4 in Germany and only 0.6 in Czechoslovakia, while the rate in the R.S.F.S.R. is 125 and the highest figure (3792) is reached in the Abkhasian Autonomous Republic of the Georgian S.S.R. As exhaustive study has been made of twelve Abkhasian men, whose ages are said to range between 95 and 142. Clinically, the most obvious changes were atrophy of the skin with pigmentation, loss of fat, hypotonicity of muscles, and atrophy of the genitalia. A radiological study revealed pronounced atrophy of the jaw, even when many teeth remained kyphosis due to changes in the intervertebral discs, no osteoporosis and only slight decalcification of bones, and little evidence of calcification of the costal cartilages. Though the arteries were lengthened and tortuous, very little calcification was found in them. Renal function was evidently unimpaired, for the specific gravity of the urine was normal and there was no nitrogen retention in the blood. The blood pressure exceeded 100 mm. in only three cases, being 170,

180 and 200 mm. An investigation of the special senses revealed slight impairment of vision, mainly due to capacity of the lens and more marked loss of the sense of smell and of hearing, especially for high tones. The basal metabolic rate was low. The only abnormality observed in the course of biochemical investigation of venous blood was an excess of calcium over potassium. Blood counts showed polycythemia in one case only; six men gave counts of between 4 and 4.5 million red cells per c.mm., and the remaining five were distinctly anemic. The hemoglobin estimation followed the red cell count giving a normal colour index through the series. Most of the subjects showed a polymorph leucopenia. The erythrocyte sedimentation-rate was much raised, but no data are given to show whether this was due to the anæmia. Anthropometric, neurological and psychological data are also given. In spite of their great age these men were capable of leading an active life without undue fatigue and their memories were remarkably clear. The general conclusion drawn was that the physiological process of senility had affected equally all the organs and had not been influenced by any chronic disease other than malaria. Evidence of tuberculosis or rheumatism was entirely lacking.

—“Lancet.”

Health Education

We Publish

Coloured Posters
Booklets, Leaflets

We Lend

Lantern Slides
Films

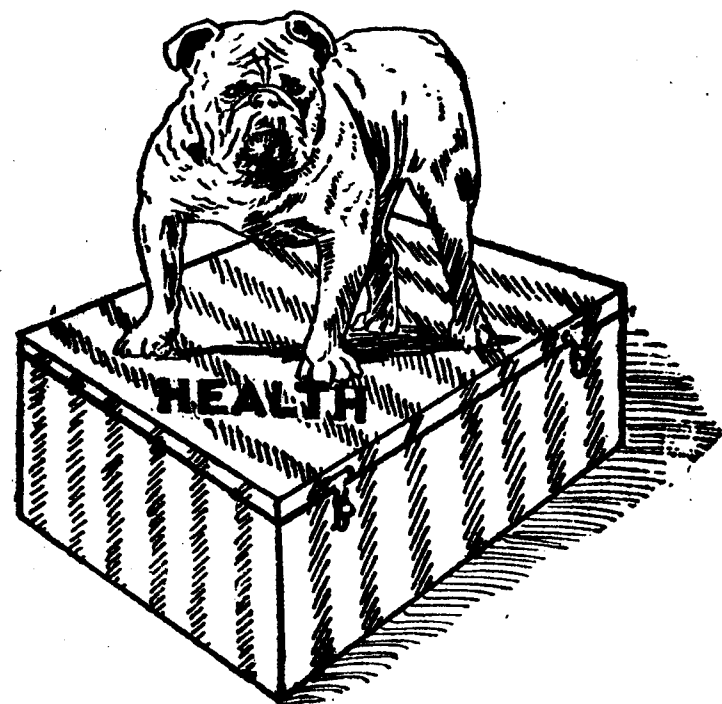
We Arrange

Health Exhibits, Lectures
Film Displays.

**Organisers of Public Health Education
are invited to write for particulars of the
services we offer.**

*Apply to
The Secretary,*

**HEALTH PROPAGANDA BOARD,
PANTHEON ROAD,
EGMORE, MADRAS.**



Is a Treasure
That Needs Well Guarding

Edited and published by Dr. U. D. Gopal Rao at No. 57, Thambu Chetty Street, Madras
behalf of the Health Propaganda Board, Egmore, Madras.

 The cover of the journal "Arogya-Margam" features a large circular emblem at the top containing a map of India. Below the emblem, the title "AROGYA-MARGAM" is printed in large, bold, sans-serif capital letters. Underneath the title, it says "A MONTHLY JOURNAL DEVOTED TO HEALTH & HAPPINESS PUBLISHED UNDER THE AUSPICES OF". To the left of this text is a box containing "Vol. I" and to the right is a box containing "No. II". Below this, it reads "The Health Propaganda Board, Madras". The month "FEBRUARY" and the year "1939" are prominently displayed in the center. At the bottom, there are three sections: "SUBSCRIPTION Rs. 1/- per annum", "PANTHEON GARDENS PANTHEON ROAD EGMORE MADRAS", and "Annas Two per copy".

AROGYA-MARGAM

A MONTHLY JOURNAL DEVOTED TO
HEALTH & HAPPINESS PUBLISHED
UNDER THE AUSPICES
OF

Vol. I No. II

The Health Propaganda Board, Madras

FEBRUARY
1939

SUBSCRIPTION Rs. 1/- per annum

"PANTHEON GARDENS"
PANTHEON ROAD
EGMORE MADRAS

Annas Two per copy

Health Education

We Publish

Coloured Posters
Booklets, Leaflets

We Lend

Lantern Slides
Films

We Arrange

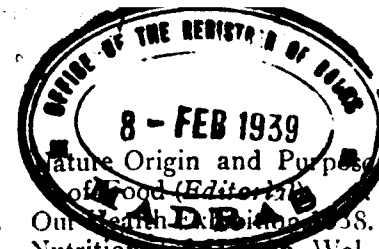
Health Exhibits, Lectures
Film Displays.

Organisers of Public Health Education
are invited to write for particulars of the
services we offer.

Apply to

The Secretary,

HEALTH PROPAGANDA BOARD,
PANTHEON ROAD,
EGMORE, MADRAS.



CONTENTS

	Page		Page
1. Nature Origin and Purpose of Food (Editorial)	353	7. Invalids and Children should Wear White Clothes ...	378
2. Our Health Examine 1938.	355	8. Marvels of the Body—4 ...	379
3. Nutrition and Human Welfare ...	357	9. Going to the Pictures and all that ...	380
4. Food Value of Rice ...	361	10. What the Mouth Reveals? ...	382
5. Diet and Nutrition in India.	369	11. The Body's Gateway ...	385
6. How Solar Rays could Give Everlasting Health to You ...	377	12. Habits as Friends and Enemies ...	387
		13. Your Skin! ...	389

IMPORTANT

All the manuscripts for publication, books for review, Exchange of Journals and other correspondence relating to the Editorial Section should be sent to the HONORARY EDITOR, *Arogya Margam*, 57, Thambu Chetty Street, Madras.

Original articles are accepted with the express understanding that they are contributed solely to this journal. All matters published in *Arogya Margam* is copyrighted.

The manuscripts must be typewritten, and double spaced, and the original copy should be submitted. Blocks for illustrations will be supplied by us if the original illustrations are sent.

The Honorary Editor reserves the right to alter, delete, or make necessary changes in the matter sent for publication. No reasons will be given for rejecting articles.

All business correspondence, advertisements, subscriptions, and other payments should be made to the SECRETARY, HEALTH PROPAGANDA BOARD, Pantheon Gardens, Pantheon Road, Egmore, Madras.

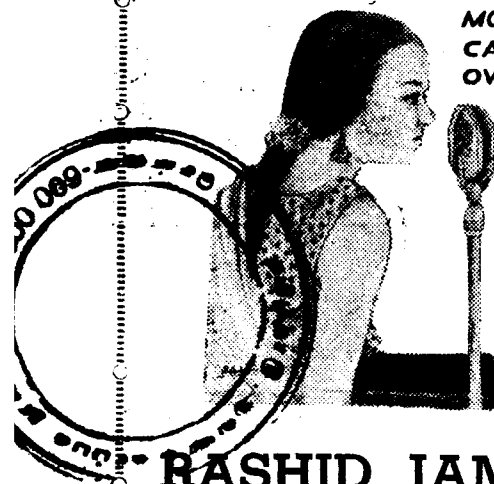
ADVERTISEMENTS

Complete copy, instructions and blocks must reach this office not later than the 5th of every month in which the advertisement is to appear. It is understood that the old text (running) is to be printed, if no new copies of advertisement reach this office a month previous to the date of publication of *Arogya Margam*.

SAUERKRAUT

In our January issue, at p.341 in the course of an extracted article from *New Health* entitled "Healing Virtues in Vegetables", the evidently German expression for a vegetable substance, viz, "Sauerkraut" appears. Some of our readers have written to us regarding the identity of the vegetable and we find that "Sauerkraut" means "salted and fermented chopped cabbage."

Contains **22.20% Iron** **Regulates the System**
A PLEASANT FLAVOUR ★ GOOD TASTE



MODERN GIRL THINKS THAT SHE
CAN BE BEAUTIFUL IF SHE
OWNS A RICH TOILET.

BUT
**I SAY BEAUTY IS
NOT SO FLAT.**

The right road to Beauty is to
Get rid of Constipation "the Beauty-
Killer"

Sold with Gift Coupon

Price 1-14-0. Per. lb.



RASHID JAMSHED SONS & CO.,
H. O. BOMBAY 3

222, Govindappa Naicken St.,
MADRAS.

96, Palace Road,
MADURA.

56, Chakrapani Sannadhi,
KUMBAKONAM.

A Prosperous New Year.

All Wish You to be Hale, Healthy and Prosperous.

But Few will tell the Real Secrets which practically

Keep You always Happy and Cheerful.

You find those openly expressed in "Arogya-Margam" which
is priced only Rs. 1-4-0 per annum so that all could read
and enjoy life.

Be a Subscriber to-day.

Apply to

SECRETARY,

HEALTH PROPAGANDA BOARD,
PANTHEON ROAD,
EGMORE, MADRAS.

Nature

Origin And Purpose

Of Food

(Editorial)

WE all know that living things
are undergoing constant
change. This change is necessary
both for the growth and develop-
ment. So it could be said that
change is a necessary and constant
condition of life and activity.

Normally in all active beings
constant changes take place and
there are losses proceeding from
within and gains accruing from
without to compensate for these
losses. Otherwise body ceases to
live on account of inactivity.

Gains from without are deriv-
ed from what we call food and
the purpose of food is to supply
the living organism with the
substances necessary for the
growth and repair and for the
production of execution of those
forms or modes of energies which
we speak as its functions. Per-
fect and complete food for any
living thing must necessarily com-
prise one of the elements of which
its tissues and all the solids and
fluids of its body are composed.

When its composition is simple,
its food may be simple. The
most simple vegetable organism
requires for their food nothing
beyond water and the gases of the
atmosphere.

But when we consider the food
of man we find them of a complex
nature. In the whole vegetable
kingdom there is nothing to be
found comparable to the functions
of digestion in the higher animals.
Most elaborate both mechanical
and chemical processes are called
into operation in the appropria-
tions of the complex substances
they take as food. Those pro-
cesses are comprised in what are
known as the functions of diges-
tion and assimilation. So we may
define food as any substance
which when introduced into the
living organisms can minister to
the maintenance of its structure
and its activities and a perfect
and complete food for any living
body will be one which comprises
all the elements which enter into

composition of the tissues, juices and secretions of the body as well as those which are needed for the maintenance of the chemical changes connected with its functional activity.

Food is needed to supply the elements necessary for the maintenance of these chemical changes which are essential to the development of animal activities such as muscular and nervous action—heat formation, nutrition, secretion, assimilation and reproduction.

A substance in order to be suitable for food must not merely possess the elements indicated, it must also contain them in a mode or combination which enables them to be appropriated, *i.e.*, to be digested and assimilated by the organs of the body it is to feed. It is characteristic of the members of the vegetable kingdom that they are able to feed inorganic substances. Animal organisms are unable to do so. They are dependent on vegetable organisms to provide them with food that they can appropriate.

In considering the origin of food we learn how the simplest vegetable forms grow and feed on the constituents of the atmosphere the carbon and nitrogen of their tissues being derived from the carbonic acid and ammonia always present in the air. The

animal unable to construct organic substances from inorganic matter is dependent on the vegetable kingdom for its food.

Compositions of these inorganic foods prepared by the vegetable kingdom show the following elements—carbon, hydrogen, oxygen, nitrogen, sulphur and phosphorus. Of these, nitrogen is the important and essential element for all living things.

Science has found that every structure in the body in which any form of energy is manifested such as motions—chemical or electrical action is nitrogenous. Nerves, muscles, glands and various liquids in the body are nitrogenous.

Simplest form of vegetable life derive their food from the atmosphere in which they live and grow, the elements of the carbonic acid and the ammonia and the water always present therein, sufficing for their nutrition and growth. Under the influence of the solar rays vegetable organisms prepare and store up organic compound suitable for the food of animals. The higher vegetable forms in addition to above elements present in air are able by their roots to absorb and use as food the inorganic salts of the soil.

Animals in the process of nutrition and in the development of

their various forms of energy fed upon—that is to say appropriate, these products of vegetable life convert them into other organic compounds or decompose them in the process of nutrition with the aid of the oxygen absorbed from the air into simpler substances which are in course of time restored to the atmosphere, soil and

revolved into the simple elements from which they originally proceeded.

A thorough grasp of the nature, origin and functions of the food which is our daily wants both in health and disease would keep one and all always guarded and healthy and resistant against the disease.

Our Health Exhibition 1938

VERY important and most valuable and practical lessons on health and hygiene could be learnt from the large number of charts on contagious diseases such as Cholera, Small-pox, Syphilis, Tuberculosis, etc., etc., and sanitary exhibits such as a model house, a model street, a model child-bearing room, a model well and a model latrine which Public Health, Municipal and voluntary organisations display during fairs and festivals in almost every nook and corner of our towns and villages.

Visitors to Madras would not have failed to visit the Health Propaganda Board Stall during the Park Fair Exhibition held in the South Indian Athletic Association grounds during the Christmas

Season, 1938, and also at the Pantheon Gardens, Egmore, during the Pongal Festival.

It is our desire that those who visited our Health Exhibition would carry home and spread among their friends and relatives the good impressions on health and hygiene which the various exhibits must have produced in their minds.

The most common causes that bring on Tuberculosis which is responsible for a large percentage of deaths could easily be prevented by timely treatment and timely health advice. Our charts explaining how early marriage, improper diet and unwholesome milk would bring on Tuberculosis must have produced necessary impression on the

public mind to safeguard their lives by drinking pure milk drawn from a healthy cow, avoiding early marriages and taking nutritious food.

The sanitary models showing a model house, a bore-hole latrine, a cow shed and school would not have left the visitors unimpressed with the necessity for keeping themselves always clean, healthy and happy.

A beautiful body, a beautiful mind, a beautiful character, these are the three essential characteristics which every one of us should possess in order to be successful in life. The display of posters on *Arogya-margam*, the official organ of the Health Propaganda would not have been missed the visitor's eyes. The pages of *Arogya-margam*, the official organ of the Health Propaganda Board, contain the fundamental principles of how

one could achieve the above characteristics.

We earnestly hope every one of you should go in for a copy of this popular Journal which is priced very low so that it could reach the masses at large. If you are not already in possession, please write for a copy to the Secretary, The Health Propaganda Board, Pantheon Road, Egmore, Madras.

Valid statistical reports pointing out the need for watchfulness of one's health and the fruits of scientific research in medicine affording easy ways and means of prevention of diseases should not go unminded and we are sure every one should imbibe the Health Principles and other educative and most instructive ideals which such exhibitions and shows would impress on the public mind at large.

Dr. J. F. Davidson (M.O.H., Somerset) points out that while school meals and milk for children play their part in the general improvement of nutrition, the basic requirement necessary for lasting good must be obtained in the ordinary every day feeding in the home. He continues: "The mothers of to-day, and, much more important the mothers of to-morrow, must be taught how best to use their house-keeping money to the greatest advantage to the family. Without training and experience, women cannot be expected to reach a satisfactory standard."

— "Better Health."

NUTRITION AND HUMAN WELFARE.

THIS is neither the time nor place to enter into any detailed discussion of the physiological bases of nutrition. Probably too much has already been published along these lines. To-day we are faced with the problem of arousing interest, individual and national, in the application of the principles upon which good health depends. To not a few it would appear that physical exercise is all that is required; but fortunately to many more it is apparent that the development of a sound body depends primarily upon good feeding. This by no means rules out exercise as something of real value to the human body, but we must beware of putting the cart before the horse. It will be admitted by most that while health, mental ability and effective activity are determined by heredity, nevertheless they are influenced by the environment in which the individual or the race has to exist. A bad environment will certainly undermine whatever good the bio-chemical interrelation of our genes may have accomplished for us. The best that is in us may easily fail of its full and free development, but on the other hand, we may find, that despite inherited handicaps, good nutrition and a favourable environment may mitigate much of the evils to which we may be doomed. It has been said that communities of men, women and children are in equilibrium with their environment, that is to say, they live at a level of health and physical fitness which is determined by their food supply. That this is true can be seen

by a survey of the staple diets of peoples all the world over. The studies of Sir John Orr and Dr. Gilks on the diets of the Masai and Kikuyu tribes in Central Africa, of Sir Robert McCarrison and Dr. Aykroyd into the comparative values of racial diets in India, and the numerous researches into dietary deficiencies in Great Britain and the United States of America all go to show, that, for any race, the important dietetic factors are first-class proteins, vitamins and mineral salts. The lack of these factors, in whole or in part, leads to individual and national ill-health; there may be no gross malnutrition, only a fall in the level of existence to something which is definitely below that possible to the innate capacities of the individual or race. There is always a relation between the effective activities of a race and its food supply. The whole history of man is an example of this. How man in his most primitive state may have lived we can only conjecture; his mode of life, his dietary habits cannot have been far removed from those of his pre-human ancestry. As a carnivorous being he showed a surprising advance in mental and physical development, which resulted in the production of implements calculated to improve his mode of life. The hunter had meanwhile learned the art of agriculture. And so to-day we still have races differing from each other in virtue of their mode of life, which is largely determined by the geographical availability of their basal foodstuffs. These differences in the mode of life and physique of races and

communities in relation to their respective diets have in many cases been very striking and have indeed given some valuable leads to scientific thought in the investigation of dietary deficiencies.

To-day it is not necessary to ask if there be a problem of nutrition, for it requires no great knowledge of the varied conditions under which so many people live, in crowded cities and unproductive rural areas, in the East and in the West, to be convinced of the existence of such problem. The important question which confronts us is, do all sections of the population of any country obtain that quantity and quality of food which, in the light of the newer knowledge of nutrition, can be regarded as adequate? The question is applicable to all countries and the answer is invariably; no. Scientific knowledge of the facts of nutrition must go hand in hand with the production of the essential food stuffs and their economical marketing. The practical application of scientific knowledge of nutrition in terms of national welfare demands that the distribution and the cost of essential foods be controlled. It demands one thing more and that is knowledge of the food values and costs of the main articles of diet common to place or community. This subject of nutrition is one not only of scientific but of public interest and it should be a live subject to all who take an intelligent interest in the health of the people as a whole. It cannot therefore be dissociated from the training of the young in any land. Here is an aspect of the problem only too easily overlooked, one about which it is quite

easy to talk but perhaps not quite so easy to put into practice. But since the health of a nation depends upon the health of its children, it is but reasonable that children should be taught the principles of hygiene the elements of cooking and the food and energy values of the principal food-stuffs. A far too narrow view has, in the past, been taken with regard to what constitutes a good elementary education. In Great Britain many of us are decidedly heartened by the breadth of view which is now being taken in certain authoritative quarters. Education is now no longer regarded as essentially a training in the classics or the philosophies. Such a training affords a great and wonderful return to those who are capable of benefiting by it. But that is university education and we cannot all go to universities. Indeed it would not be well for any country if a University Arts Degree were regarded as the only hall mark of education or culture. I am sure that there are many, whose life's work is to handle students, who could name not a few men who persistently refuse to realise that their vocation is neither medicine nor science. Why is it that we find young men of ability, even if it be narrowly limited, wasting valuable time because of the obsession that a B. A. degree will work wonders for them? It is because we have in the past placed too much emphasis on the training of young minds to retain masses of information in order to jump examination barriers as a means to an end. That type of education has no place for nutrition and physical fitness in its curriculum. Nutrition is of the

vital interest to the child and it is the child who must be educated in the principles of nutrition. Therefore when we think of education we must think in terms of boys and girls and of working men and women too; and we must never forget that all education has or should have political consequences. There is a national or social as well as a personal purpose in education. This means that no boy or girl should leave school without the possibility of having his or her interest quickened in biology, hygiene, history, geography, sociology as well as in languages. No boy or girl should leave school without some knowledge of those factors which contribute to the betterment of social conditions. It is upon such a basis that we proceed to the important task of unfolding and inculcating the duties of citizenship. To this should be added teaching in the elementary principles of nutrition, food economics and dietetics. Naturally there will be some who will question the advisability of so doing but on reflection its value will be fully apparent. How many girls leave our modern schools with any clear-cut ideas concerning the nutritive value of butter, milk, cheese, sugar, meat and vegetables? Is there any reason why children between the ages of twelve and fourteen years should not receive instruction in the relative costs and values of the commoner foodstuffs and in the methods for their preparation for consumption? If they can understand the intricacies of the grammar of their mother tongue and can contrive to arrive at the correct solution of arithmetical puzzles, then surely they

will be able to understand the simple facts of nutrition. To those who may think such a curriculum rather curious, if not absurd, I would put the question, "What is the purpose of education?" A question not to be confused with the purpose or requirements of a professional training. In my opinion education fulfils its essential requirements, when it sets boys and girls or if you wish young men and women on life's way, fitted to carry on the work they may choose and capable of adding their influence to the building up of a sane, equitable and just political structure. In a word education cannot be dissociated from child-welfare, education cannot be dissociated from its political consequences. The health of the nation, physically and politically, depends upon the health of the child, and health, physical and mental, depends upon good nutrition. Good nutrition demands a sufficient income, an ample supply of suitable food, a knowledge of foodstuffs and how to cook them, good housing conditions freedom from hereditary disease, the correct adjustment of the child, particularly the emotional child to his environment, opportunity for games and leisure to exercise the mind along whatever lines may appeal to the growing child. Good nutrition is thus dependent upon many interrelated and interdependent factors, but the greatest factor of all is food. The unequal distribution of food is just as vital a problem as the unequal distribution of wealth. This matter of the distribution of food raises the controversial question as to whether children should be fed by educational or other authority. Certain members of the Education Committee of the

London County Council maintain that, not only slum children, but all middle class children should be given dinners in school. Since local authority, through medical, surgical and dental treatment in schools, takes care of the physical ailments of children, it is suggested that authority should now assume a similar responsibility with regard to the prevention of illness, by seeing that children receive the proper food and are trained in the habits of correct eating. The attack on malnutrition may prove to be costly but the results to be attained, for example, the diminution in financial loss due to ill-health, the increased efficiency of the nation, etc., will amply repay all the time, energy and money spent upon it. Where malnutrition cannot be treated at home, because of a lack of money or knowledge, or of the power on the part of the parents to make use of imparted knowledge, or where mothers are employed, then it must be treated in the schools, in the dietetic clinics. To have free access to a good meal in a school dietetic clinic is just as important as having free access to a dentist's chair in a school dental clinic. We agree that parental responsibility must not be destroyed or in any way lessened, but we must not forget that parents must be helped in the exercise of their responsibilities. To give indiscriminately free milk or free dinners to school children, may, in some cases, increase parental irresponsibility and decrease the spirit of independence and initiative in a certain type of child, but I am quite sure that dietetic treatment upon medical advice of malnourished children in

our schools, will neither increase irresponsibility on the one hand nor decrease initiative on the other. At least we can give the child the benefit of the doubt. Malnutrition is a national evil and must be combated by every means in our power. And further these means must not be confined to school medical clinics, they must include all activity which aims at the abolition of slums, the better housing of the working classes, the abolition of unemployment, the creation of a weekly wage in relation to the standard of living and the education of our children in the elementary principles of healthy living.

The physical welfare of a nation requires more than school organisation, it demands a comprehensive policy which should be inspired and guided by a Ministry or Council of Nutrition. A national food policy will certainly demand the active correlation of the Ministry of Health, the Board of Education and the Ministry of Agriculture. Further it will demand a much greater statistical knowledge of the production and the consumption of the energy-giving and protective foods than we at present possess. This is a matter which is still in embryo. In such a country as India, the Provinces will each have their own particular problems and provincial authority would be well advised to encourage the training of men in the whole science of nutrition, both in India and in Great Britain. Research Institutes, such as those at Coonoor and Pusa, could well be duplicated. There is however, no reason for making research centres other than central institutions, one of which

should act as an Imperial Bureau. No one who has lived in India can fail to be impressed with the tremendous possibilities for scientific work in Nutrition in that vast country. Her research Institutes are world famous and justly so; they have for many years pointed the way for the correct attack upon disease, and in virtue of their geographical position they must play a great

part in the scientific elucidation of the still unravelled mysteries of human nutrition; they, as well as the Government in all its various policies concerning the welfare of the people, have a part to play in developing to the full the political and social life of the people in India.

—*"Indian Medical Journal."*

Food Value of Rice

RICE is the most important grain crop of the world and is the staple food of hundreds of millions in India and the East in general. Indeed among the foods of men, it holds the foremost place. Nearly five hundred billion of pounds of rice are being produced annually throughout the world and this production is double that of the second grain crop, wheat. Over a third of the total cultivated area of India is under rice. There are several varieties in existence and, in addition, a large number of new varieties are being evolved every year at the different research stations throughout the country. Some varieties recommend themselves by high yield, others by good milling quality, keeping or cooking properties, fine taste, pleasing appearance, fitness to a variety of soil and climatic conditions, resistance to pests and diseases, ease of harvesting, and in various other ways.

The attempts of the breeder have all along been along the lines of improving hereditary qualities such as the above and very little attention has been directed towards producing nutritively superior varieties. In fact, rice, in spite of its extensive use, has been generally considered to be poor as an article of diet. We shall now set out to examine whether there is any foundation for this frequently expressed opinion, by comparing the nutritive value of rice with that of other common cereals and its place in an ideal dietary.

Nutritive Value of Rice

Composition of Rice in comparison with that of other cereals: The nutritive value of any food material is estimated from a knowledge of its content of total nutrients such as proteins, fats, carbohydrates and mineral matter and the losses these sustain in the course of their assimilation in the body.

Carbohydrates predominate in rice as in all other cereals. Protein is somewhat low compared with many other food-stuffs and as sources of fat and mineral matter, cereals are second only in importance. Nevertheless, the high concentration of cereals in proportion to bulk and the ease with which they can be transported and stored place cereals in the front rank of human foods. They form the principle source from which man's energy requirements are met.

Chemical Composition of Rice is variable: In spite of the bewildering number of rice varieties, the average values for the different constituents such as proteins, fats, carbohydrates and mineral matter fall within a remarkably close range. However, it has been observed recently by the present author that the composition is more variable than has hitherto been supposed. Thus proteins vary from 7.0 to 11.0 per cent., phosphoric acid from 0.6 to 1.2 per cent. and lime from 0.06 to 0.11 per cent. Of especial significance is the observation that the coloured and so-called coarse varieties are generally richer in the essential nutritive elements than the white and fine varieties which fetch the highest price in the market. Also, with such varieties, polishing has to be done to a greater degree than with the fine ones before a white grain results. They thus contain thicker bran layers than the others. Besides, the coarse types of rice do not usually possess good milling qualities. It would therefore follow that under the ordinary conditions of milling, the extent of loss of bran and of bran constituents will be less from coloured and coarser rices

than from the so-called superior varieties.

From results of extensive feeding experiments with animals it has been shown by the author that the growth-promoting qualities of different varieties of rice are essentially related to their protein and mineral contents. There is no doubt that, other things being equal, the variety of rice which contains larger amounts of albuminoids and minerals such as phosphorus, calcium and iron is more valuable. The present popular favour however is, as already observed, for fine-grained and white varieties which are generally poorer in essential nutritive constituents. The reason for this apparent anomaly is not far to seek. The plant breeder has only been catering to the popular demand for the fine, white and high yielding varieties. Nutritive value has yet no place in his scheme. The result is that he has gone on selecting or breeding varieties which are predominantly starchy and poor in other important constituents. If, on the other hand, the public awaken to the realization of the situation and demand nutritively rich varieties, the position will soon be reversed. The so-called coarse and inferior varieties will take their right place on top of the table. Further research will no doubt reveal the existence of varieties which are richer than those so far reported and perhaps even surpass wheat in regard to essential nutritive constituents.

That rice is an inferior grain, poor in necessary food factors is a stigma rather unfair because human fashion has sought certain external characteristics and selected only the poorer varieties.

Rice Proteins: Although the average protein content of rice is somewhat low compared with that of other cereals, it must yet be borne in mind that the nutritive value of any article of diet is not wholly determined by the absolute amounts of the essential constituents, but rather on that part of the latter which is assimilated. Fundamental work with pure proteins fed to young albino rats as the sole source of protein of an otherwise adequate diet has demonstrated that the requirements of maintenance and normal growth depends on the amino acid make-up of the proteins themselves. The most important of these amino acids are generally said to be histidine, lysine, tryptophane and cystine. The proteins of rice have been known to contain all the essential amino acids and, indeed, in its general amino acid make-up, they more nearly resemble the majority of the proteins of animal tissues, soya bean and milk than do the proteins of maize and wheat. The higher biological value of rice protein would serve to explain the extensive use of rice as an almost exclusive article of diet in spite of its somewhat low protein content.

The Minerals in Rice: Cereals contain between one and two per cent of mineral matter and, although the occurrence of a number of "trace" elements have been recorded, phosphorus is, perhaps, the most abundantly represented. The phosphorus occurs mostly as phytin in organic combination and in this form is not easily absorbed by the animal organism. This point is of some significance in connection with the production of rickets resulting from excessive cereal consumption. The ratio of

calcium to phosphorus in a diet is an important factor affecting their availability in nutrition. In rice this ratio is approximately 1:10, a proportion not well suited to the needs of the animal body which are met by foods with a calcium phosphorus ratio of 1:1 or 2. Hence, supplements of calcium in the form of milk, vegetables and other food articles favourably influence the assimilation of the phosphorus compounds of rice. Vegetables, in particular, contain more calcium than phosphorus and have therefore an unbalanced mineral ratio just opposite of that in rice. The addition of vegetables to a ration containing rice would therefore greatly balance the mineral ratio. Vegetables are also a good source of *phytase*, an enzyme which can hydrolyse and render available the phytin of rice. The culinary practices also greatly increase the availability of the phytin and other minerals in rice.

Very recent work has shown that supplements of calcium to a rice diet greatly increase the biological value of the proteins as well.

The iron content of rice is rather small; yet, as a source of this valuable constituent, its importance cannot be ignored in view of the fact that rice occupies a very large proportion in a rice dietary. It is noteworthy that, in the writer's experience, most coloured rices have been found to contain more than two to three times the quantity of iron normally present in rice varieties.

Fats and Vitamins in Rice: Though rice oil is considered to be nutritious it is of no significance as a provider of calories but the small amount present in

the whole grain occupies prominence as the carrier of the important Vitamin E. Rice is not an important source of Vitamin A but it certainly contains some. Rice has long been recognised as amongst the richest sources of Vitamin B—the anti-beri-beri factor. It has been mentioned that cereal grains contain no Vitamin D but it would appear that although the dormant grain is inactive, the precursor of Vitamin D is present in the ungerminated seed and that the active substance is liberated in the seed during germination.

Rice can be Enriched by Suitable Manuring: Certain sections of scientific workers incline to the view that the nutritive constituents of a grain cannot be appreciably increased by manuring. It would however appear in the author's experience that improvements in the quality of rice by increasing the protein and mineral contents of the grain may be effected by judicious control of fertilizer applications. Both organic and mineral fertilizers evoke the necessary response, the effect being more striking in the case of the latter. The best mode of fertilizing would be to apply the manure in instalments during the life of the crop and up to about two months after planting (*i.e.*, the flowering period). Increase in protein content to the extent of about 20 per cent. have been observed. In field behaviour, it has been experienced that the yield is also improved by such applications.

Duration of Crop and Nutritive Value: There is a common belief that long duration crops are more nutritious than short duration ones. They are supposed to draw better on the soil nutrients than

the latter. Judging from chemical composition alone, some of the short duration crops are even richer than the commoner long duration ones. Growth experiments with a number of rice varieties have shown that the variety of rice which contains larger amounts of albuminoids and other minerals is the more valuable. It would therefore follow that duration is not a safe criterion of nutritive value.

Dry and Wet Cultivated Rices: Rice is generally wet cultivated but there are certain dry cultivated varieties which are grown on the west coast, in some of the agency tracts, in the east coasts in Chota Nagpur and elsewhere. Dry cultivated rices are popularly believed to be more nutritious than wet cultivated ones. Working with experimental animals, Sir R. McCarrison came to the same conclusion but more recent work by the author would not entirely support this view. When the same variety is raised under dry as well as wet cultivated conditions, the grains from the latter are invariably richer in proteins and minerals than those from the former. They also induce better growth in young rats.

Parboiled Rice is more Nutritious than Raw Rice: Considerable amount of attention has, in recent years, been drawn to the high anti-neuritic and nutritive value of parboiled rice even after some milling. It has been shown that during the process of parboiling the endosperm of the grain swells and imbeds some of the bran constituents such as the anti-neuritic vitamin and proteins and minerals so that these constituents are generally preserved in

the grain even after polishing. Further, parboiled rice of commerce is prepared only from coarse varieties which do not mill well when raw and since these latter contain more of proteins and minerals than ordinary fine raw rice specimens of the market, this may also have a bearing on the nutritive value of parboiled rice. A further point to be borne in mind is that parboiling renders the exterior of the grain tough and hence it is less easy to polish parboiled rice to a high degree; commercial parboiled rice is usually undermilled, also because parboiled rice cannot be made to appear perfectly white as is the case with raw rice with any amount of polishing.

The Problem of Unstored Rice: It is a matter of common experience that rice prepared out of freshly harvested paddy is unfit for consumption and sells at a discount in the market. Although there is as yet no means whereby new rice can as such be distinguished from stored rice yet the difference between the two becomes manifest on cooking. The one cooks to a shapeless pasty condition swelling scarcely to twice the volume of the original uncooked rice, while the other cooks to a fine fluffy consistency, the volume of the cooked product being four to five times that originally. This process of curing after harvest is necessary before the rice is rendered fit for consumption. Long duration crops are believed to require less period of storage than short duration ones. Storage changes are hastened when the paddy is kept under-ground or in air-tight containers. Refrigeration retards improvement on storage. It is believed that storage results in a

widening of the capillaries of the rice, grain and consequent imbibition of greater amounts of water on cooking. Recent work at Bangalore, carried out by the writer, has shown that the pastiness on cooking, of unstored rice is due to the presence in the grain, immediately after harvest, of an enzyme capable of "liquefying" starch. This enzyme becomes dormant and inactive when the grain is stored for sometime. There is also a progressive change in the make-up of the starch itself during storage. Consumption of unstored rice also causes certain digestive disturbances. This is essentially due to the fact that such rice presents less reactive surface to the action of the digestive ferments than rice prepared out of the well-stored grain.

Rice is an Article of Diet.

The Polishing of Rice: In recent years, no aspect of the rice industry has engaged as much attention as that of milling. With the march of progress from primitive to modern conditions, there has been an increasing demand for a rice that is white, not merely on account of its more attractive appearance on the table, but also because of its finer texture and superior keeping and cooking qualities. In pursuit of this objective, the processes of modern milling have been so elaborated as to remove everything that may impart a brown tinge to the rice grain and so detract its appearance; as a consequence, that traditional methods of stone-grinding and hand-pounding have gone entirely out of use even among peasant communities.

In considering the nutritive value of rice, the feature of outstanding importance is the high concentration of essential constituents found both in the outer coat and in the germ or embryo. The outer envelope or bran and the germ portion together constitute nearly a sixth of the whole grain, the remainder being the endosperm of polished rice. They contain more than a half of the mineral matter of the grain, a fourth of the proteins and practically the whole of the vitamins and fat. It is just these portions which are removed in the process of milling. Is any more argument needed in favour of the use of whole unpolished rice?

Why Polished Rice is Favoured: In spite of the recognized nutritive superiority of unpolished rice, there is a general and widespread preference for polished rice. The reason is not far to seek. Apart from its pleasing appearance, polished rice cooks more easily than the unpolished one. It also digests more rapidly. In the raw condition, it has far better keeping quality and can be easily stored for long periods and transported over long distances without any appreciable deterioration. This last quality is the one which appeals to the largest section of both producers and consumers. It is in fact the chief reason which militates against the introduction of any major legislation to check the wholesale replacement of unpolished rice by the polished product.

Digestibility of Unpolished Rice: There is a general impression that unpolished rice is very difficult to digest. There is no doubt that some

of the bran constituents exercise an inhibitory action on the digestive ferments, but the difference in digestibility between unpolished and polished specimens is so small that it is insignificant in practice. Unmilled rice is richer than polished rice and must, therefore, be taken in small quantities.

Deteriorative Changes of Shelled Rice on keeping: Fully polished rice keeps very well. It undergoes little deterioration during storage and, if reasonably well preserved, is also comparatively free from insects. Unpolished or unmilled rice on the other hand, does not keep well, at any rate, under the ordinary conditions of storage. This problem has been the subject of investigation by the writer and it may be stated that as a result of storage, the rice bran which contains highly unsaturated fatty acids undergoes rapid and day-to-day deterioration. The outer coatings of the unpolished grain contain a very resistant fat-splitting enzyme and under the action of moisture and this lipase, the bran is easily decomposed resulting in a mixture of free fatty acid. Desiccation combined with air-tight packing can be successfully employed for the preservation of unpolished rice. A second method of dealing with the problem will be to shell paddy by means of suitable hand hullers in instalments as and when required.

Mode of Preparation of Rice: The mode of preparation of rice for the table is too well known to require any description. The throwing away of the water in which rice is boiled during cooking has been repeatedly condemned

by health propagandists as this involves the loss of some valuable constituents. Happily, some improvement has taken place in regard to this, for, in most well-regulated households, only enough water is used which enables the rice to swell to its proper consistency. Even where a certain excess of water is used for cooking, the gruel is frequently fed to cattle and not thrown away.

Objection should also be raised to the preliminary process of washing before cooking because it is even more wasteful especially in regard to loss of phosphorus. In most parts of the country, rice is washed till the washings are no longer milky. Washing is no doubt an efficient way of getting rid of foreign impurities, but the losses are considerable especially when reckoned with the losses on polishing. It should be possible to replace this cleansing process by some system of dry cleaning such as sieving and winnowing.

Rice vs. Wheat.

There is thus no scientific basis for the fashionable and frenzied enthusiasm for a wheat diet and for the equally frenzied condemnation of a rice diet. If the comparison is made on the basis of identical dietary, dietary proportions of the whole grains of either wheat or rice, no evidence can be adduced to justify our placing the one in a higher nutritional category over the other. It is true that wheat is richer in regard to proteins and minerals but, as already observed, rice proteins is more nutritious. Besides, there are certain varieties of rice which compare favourably with wheat in regard to composition. As a staple food, rice

has a calorific value higher than that of wheat. Rice is inherently much more nutritious than it is commonly believed.

It is also possible to enhance the nutritive value of rice by suitable systems of manuring and by alterations in our food habits. The poor quality of the rice, as ordinarily eaten, is traceable to choice of wrong varieties and refined conditions and to the practices of washing and cooking involving considerable loss of nutritive elements. There is great need for the public in regard to (1) the use of unpolished rice, especially from coloured and coarse varieties known to be rich in nutritional ingredients, and (2) changes in ordinary culinary practices which will minimise loss of these constituents.

The one feature which distinguishes rice from wheat, indeed, from all other cereals, is that it is predominantly consumed in milled state. It is absolutely essential to do away with this wasteful process. No one article of food represents such a large proportion of the country's food supply as does rice. It is a crop of the country and a very large number of good yielding varieties have been evolved at the different breeding stations. The farming practices of the crop are very familiar to our agriculturists. Rice protein has a high food value, higher than that of wheat and, as indicated above, its composition compares favourably with that of wheat. Let us therefore urge the need for popularising the use of this article and for improving its culture and general quality.

Rice in A Well-Balanced Diet.

As with other cereals, the nutritive importance of rice lies primarily in its fuel value and a diet which includes rice is imperfect unless it is a good mixed diet. Advanced civilisations and educated communities normally subsist on a diet which, in addition to cereals, includes milk, vegetables, fruit, fish and meat. These foods are not only far richer in minerals and vitamins than cereals, but contain them also in proportions more suited to the body's needs. Unfortunately, conditions are not all ideal. Either ignorance or poverty or a combination of both has led to much that is deplorable in the food habits of certain sections of almost every community. Through indifference to their health value or on account of their high cost, the "protective foods" have not found their proper place in many every day dietaries. The alternative has been to rely on the cheaper carbohydrates, foods of cereals, excessive consumption of which have adverse

effects upon health resulting in beri-beri, scurvy, pellagra, and other diseases. It would therefore be infinitely in the interests of public health to improve the conditions of our live-stock and increase the production of the nutritionally superior commodities, viz, milk, butter and eggs. An increased milk supply is one of the greatest needs of South India particularly, and every effort should be made to develop the country's Dairy Industry. For a number of reasons of which perhaps the most important is the insufficient land available for pasture or fodder crops, it is difficult to envisage a large immediate increase in milk production. It is a happy thing to note that the recently established Central Fodder and Grazing Committee of the Imperial Agricultural Research Council are devoting a good deal of attention to the provision of more and better grazing grounds.

—*"Indian Medical Journal."*

Latest Discovery!

Tonslit

Tonsils & Adenoids

Nose & Throat Complaints

AVAILABLE AT ALL LEADING CHEMISTS

ALLEN CLINIC

Madras

A New Oral Treatment of Biological Compound with assimilable Calcium, Iron and Phosphates.

GUARANTEES PERMANENT CURE for ENLARGED TONSILS & ADENOIDS

(Nose and Throat Diseases)

WITHOUT OPERATION

Stockists:

Madras: Spencer & Co., Ltd.; Appah & Co.; Wilfred Periera, Ltd. & Dadha & Co.

Kumbakonam: Kumbakonam Drug Stores.

Madurai: T. N. C. Nagalingam Pillai.

Alleppey: Swamy & Co.

Bangalore: V. L. Nathan & Co.

Bombay: P. M. Zaveri & Co.

Rangoon: Allianz Pharmacy.

Singapore: Naina Mohamed & Sons.

DIET AND NUTRITION IN INDIA

AMONG all the demands which the body makes for its proper functioning, food is of outstanding importance and to-day it is increasingly realised by the Government, medical profession scientists and the general public that correct nutrition may profoundly affect the well-being and social value of the individual. Research workers engaged in the study of the relation between faulty food and diseases are emphatic in their opinion that food is of paramount importance in the causation of disease. In recent years, considerable attention has been directed to the adjustment of diet for different deficiency diseases and to the question how a well-balanced diet containing all the constituents (proteins, fats, carbohydrates, minerals, vitamins, etc.) could be made available to the masses at a price which is well within their means. Calorific value of food-stuffs which at one time was the basis of all the dietetic studies is now relegated to the background and more attention is being paid to proteins, fats, carbohydrates, vitamins, etc.

Since there is a tendency to make good the shortcomings in the diet spontaneously when the family purchasing power increases, the main condition in the improvement in the popular nutrition is an increase in that purchasing power. In comparison with this all the other factors are merely secondary, though naturally they retain their own importance. The most serious cases of under-nourishment are

found in families whose earnings are casual and precarious and hence quite insufficient, so that they live in conditions approaching beggary. Hence we meet with cases of "unemployment" which are chiefly attributable to the insufficient development of economic life and to the concentration of the population in the towns which is excessive in proportion to the demand for urban labour. This drift from villages to towns is steadily increasing, but although this phenomenon does not seem to have assumed serious proportions in this country, compared with other countries, it creates problems of public importance which cannot be ignored, especially so far as they concern children, whose sufferings are the more cruel in so much as they are completely undeserved and seriously endanger the physical and moral future of our race. The necessity of assisting poor children demand far more energetic measures than at present undertaken by the special child-welfare organisations. This work must be extended to country parts where practically nothing has been done for child-welfare. These are some of the general aspects of the problem which is beyond the scope of this paper.

How best could the malnutrition of our people be solved? There are, as is well known, two ways of approaching, the problem (1) by dietetic survey of the various provinces in India, accompanied by a systematic clinical examination of the children residing in these areas, (2) by chemical analysis and

animal experimentation of the diets. In recent years considerable amount of work is being done in both directions, but still there is a vast field of unexplored material for further investigation.

The staple article of diet in India is one of the following cereals; rice, wheat, barley, maize, millet, etc. All of them are eaten while rice alone is subjected to a process of refinement before it is being eaten. Again, there is a growing tendency on the part of the general public to go in for white flour and white bread. It has been shown by a number of workers that considerable portions of the nutritive constituents of rice which are mainly stored in the outer layers are lost during milling and polishing. And further, our culinary practices are such that not an inconsiderable portion of the nutrient factors are lost during the process of washing and cleaning, so much so, that in the final form in which rice is eaten, it is practically devoid of all its nutritive constituents.

According to McCarrison, there is a general fall in the nutritive value of the cereals that are eaten as we proceed from north to east, south-east and finally south, this fall probably reaching its lowest limit among the rice-eaters of the Provinces of Bengal and Madras. Again, the intake of animal fats, animal proteins and proximate principles (vitamins and minerals) decreases. The diet of the Pathans consists mainly of meat, flesh and fat of sheep or goat, supplemented with a little milk whereas the diet of Sikhs consists mainly of wheat and milk products supplemented

with a little meat. In Madras, Bengal and Kanarese speaking parts, the people are mostly vegetarians while only a few of them take fish and mutton. Corresponding to this fall in the nutritive value of the food-stuffs eaten, there is a marked contrast between the stalwart and healthy races of the north (Punjabis, Pathans) and the poorly developed and supine races of the east and south (Madrases, Bengalis, Travancorians & Mysoreans).

These factors bring out clearly how food can affect the physical efficiency and well-being of animals and men. The importance of the lacto-vegetarian diet consumed by some people in northern India, among whom are to be found some of the finest specimens of mankind, is also brought about by the above facts.

Diet and Deficiency Diseases

It is well known that faulty diet is responsible for many deficiency diseases like xerophthalmia, Bitots' spots, phrynoderma, angular stomatitis, peptic ulcers, scurvy, rickets, pellagra, osteomalacia, beri-beri, nutritional oedema, goitre, etc. It is certainly one of the factors responsible for the high degree of child and maternal mortality in India. It is indirectly responsible for the high degree of mortality due to tropical ravages like malaria, dysentery, kala-azar, leprosy, tuberculosis, pregnancy, anemia, etc. McCarrison compared the relative value of the various diets with the frequency of distribution of certain diseases per 1000 of sick persons in those areas. His results are reproduced in Table I. (*Vide next page*)

Table I (McCarrison)
Distribution per 1000 sick persons.

Racial Division.	Relative value of the diets as measured by the growth on young rats.	Pulmonary Tuberculosis.	Leprosy.	Beri-beri.	Gastric and Duodenal Ulcer.	Dysentery.
North India ...	233	1.60	0.30	0.02	0.05	13.50
Central India ...	220	1.01	0.84	0.02	0.18	13.75
Bombay ...	198	2.01	0.70	0.02	0.06	15.00
Bengal ...	180	2.12	0.96	1.50	0.30	19.80
South India ...	155	2.65	2.95	1.03	2.60	19.20

The above table shows clearly how in the province where the diet is least nutritious, there is highest incidence of disease.

Dental caries is widespread among Indians whose diet is mainly cereal in composition and practically free from Vitamin C and fat soluble vitamins. Lathyrism and night blindness are quite common in Central and United Provinces and Bihar whereas eye trouble and other skin diseases are often met with in South India and Ceylon. The occurrence of stone in the bladder is mostly confined to the wheat-eating communities of the north and it was shown by McCarrison that it is due to a deficiency of Vitamin A and improper proportions of phosphorus to calcium in the diet. Since the major population in India consumes rice, and since it is deficient in calcium, diseases associated with calcium deficiency are common in India. Goitre is found in certain regions near Himalayas where the soil is supposed to contain very little iodine.

Diet Surveys and Deficiencies in our Diets

Damager and Widdowson made a diet survey of 120 families consisting of 730 persons of the wheat-eating communities, Mohammedans, Sikhs and Hindus, in a relatively prosperous region of North India accompanied by a physical examination of school children residing in that area. It has been found by analysis of the diets that the intake of calories, fats, proteins, carbo-hydrates, calcium, phosphorus, iron and vitamins is quite adequate when considerations are made on the inter-national scale of consumption units. The results of the clinical examination of school children show that only one child was actually classed as "bad". Wilson, Ahmed and Mullick making a clinical survey of 1250 school-children in Ferozepore (Punjab) remark: "The children do not show any signs of deficiency as far as present clinical experience goes due to a gross lack of balance in the diet particularly in regard to the protective foods." It is

therefore clear from the diet studies that the physical condition of the people studied are by no means unsatisfactory and the experiments of McCarrison on the excellence of Sikh diet is well borne out.

The diet survey of a number of families in Calcutta, by Wilson, Ahmed and Mullick seems to indicate that there is a wide-spread deficiency

of animal and total proteins, animal and total fats, calcium and to a lesser extent, phosphorus. Their main contention seems to be that the Bengali diet is deficient mainly in animal and total proteins.

Recently, W.R. Aykroyd compared the food supply of the Madras Province (1933) per capita with that of Japan (1927) and United Kingdom (1934). His results are given in Table II.

Table II (Aykroyd)

Nationalities.	Proteins.			Fats.			Carbo-hydrates.	Calo-ries.
	Animal.	Vege-table.	Total.	Animal.	Vege-table.	Total.		
Madras Presidency, 1933.	2.6 6.1 %	40	42.6	1.3 3.4 %	36.5	37.8	398.5	2068
Japan, 1927	15.9 10 %	72.6	88.6	3.5 20 %	14.2	17.7	537.0	2732
United Kingdom, 1934	45.0 52.8 %	41.0	87.0	109 87.9 %	15	124	425.0	3246

According to Western standards body must have at least 100 grams of protein of which at least 50 % must be from animal source. So also in the case of fats—about 50 % must be of animal origin. Again, in Western diets the carbohydrates contribute only about 60—70% of the total caloric value of the diet whereas majority of Indian diets contain excess of carbohydrates that constitute about 70—80 % of the total caloric value. It is evident from the above table that our diets are deficient in total and animal proteins, total and animal fats.

Aykroyd and Krishnan have carried out the diet survey of some 44 families

consisting of 274 persons in South India. Of them 32 families were living in Mayanur, a village about 36 miles N. W. of Trichinopoly. It was stated that milk was absent from the diet of 31 families. The remaining families consumed only very little quantities of milk. The above authors while making a clinical examination of school-children of Mettupalayam, Coonoor and Calicut, remark that only 25.7 % of the children was 'selected'. Most of them were suffering from deficiency diseases like angular stomatitis, Bitot's spots and phrynoderma. These children were getting practically no milk in their diet. Further they

have shown that when they were given skimmed milk powder in addition to their usual diet, they showed a greater increase in weight and height than the group which did not receive this supplement. Hence, it is almost clear that the South Indian diet is lacking in one or more of the factors contained in skimmed milk powder, namely, calcium salts, proteins and Vitamin B-2 complex. Later on, the above authors demonstrated that when rats were fed with a poor Madras diet supplemented with calcium lactate, they registered a higher increase in weight

than the groups which received casein, soya bean, and yeast as supplements. The above observation has been confirmed by the work of Pal and Singh who find a better growth by rats when the poor Madras diet is supplemented by calcium lactate but not by sodium phosphate. But when both salts were given simultaneously, the effect was more marked. In Table III are given the results showing the average weight, length of the body, length of the femur of the rats when they are fed on a poor Madras diet and poor North Indian diet with various supplements.

Table III (Paul and Singh)

Diet.	Madras Diet.	Madras diet plus Calcium Phosphate.	North Indian Diet.	N. I. D. plus sprouted Bengal gram.	N. I. D. plus calcium lactate.	N. I. D. plus calcium lactate plus sprouted Bengal gram.
Wt. of rats	74.7	120.3	102.1	119.5	115.3	126.1
Average length of animals	25.5	30.5	29.25	30.10	31.1	32.0
Average length of femur	2.23	2.62	2.46	2.56	2.65	2.26

When the poor North Indian diet is supplemented with sprouted Bengal gram of calcium lactate the rats increase in weight but when both are given, effect is more marked, probably showing that the poor North Indian diet is deficient in proteins as well as calcium salts.

Recently Rao and Ranganathan have carried out the diet survey of the students of the Indian Institute of Science Hostel, Bangalore. Table IV gives the chemical composition of the diets and Table V gives the biological value of the proteins of the various diets.

Table IV (Rao and Ranganathan)
Daily Intake by the individual.

Mess.	Pro- teins.	Fats.	Carbohy- drates.	Cal- cium.	Phos- phorus.	Cal- cium.	Amount spent on food per day.
Madras I ...	79.7	83.3	422.4	0.868	2.436	2800	9-10 As.
II ...	69.9	...	...	0.731	2.212	...	...
Bombay (Parsee).	119.9	162.8	292.1	1.481	2.894	3109	14 As.
Punjab ...	95.4	165.2	331.1	1.764	3.604	3199	13 "

Table V (Rao and Ranganathan)

Food.	Protein level per cent.	Biological value per cent.	Digestibility per cent.	Available protein per cent.
Madras diet I *(Vegetarian) ...	12†	39	78	3.7
Madras diet I ...	5	66	56	1.9
II ...	10.75†	68	64	4.8
Bombay (Parsee) ...	18†	71	86	11.0
" (Non-vegetarian) ...	10	93	98	8.9
Punjab ...	14†	80	87	9.7
(Non-vegetarian) ...	10	73	86	6.5

* In this case, coffee decoction was included in the diet.

† These represent the average percentage of protein present in the diets taken in their respective messes.

It is evident from Table IV that the quantity of protein in the Madras diet is much less compared to other diets and the fat content is almost half that of Bombay (Parsee) and Punjab diets. The amount of carbohydrates consumed by the Madras is much more than the other two. It can be seen from Table V that the Bombay (Parsee) diet proteins have got the highest biological value, digestibility co-efficient and net protein value due to the presence of a large proportion of milk and milk products, eggs and proteins of animals origin. Next comes the Punjab diet, due to the larger share of wheat, which

has a biological value of about 62, and milk. Last comes the Madras diet even though rice with a biological value of about 83 forms the major part of the diet.

It was thought that the low biological value of the proteins of the Madras diet

might be due to low content of calcium in the diet. Hence, calcium in the form of calcium carbonate was added to the diets and the biological values were determined. Table VI gives the results obtained with the addition of calcium carbonate (2 %)

Table VI (Ranganathan and Rao)

DIET.	BIOLOGICAL VALUE %		DIGESTIBILITY %	
	Without Calcium.	With Calcium.	Without Calcium.	With Calcium.
Madras I ...	39	68	78	89
Do II ...	69	86	56	89
Bombay (Parsee) ...	71	81	86	84
Punjab ...	80	87	87	83

As can be seen from the above table, there is an increase in the biological value of the proteins of the diets on the addition of calcium—this increase being very significant in the case of Madras diet (39-68; 69-86). This probably indicates that the low figure for the biological value of the Madras diet might be due to the non-availability of calcium in the diet. The availabilities of calcium and phosphorus in the diets have been determined by Ranganathan and he gets a low figure for the Madras diet (50) and a high figure for Punjab diet (81). It is interesting to note in his connection that the addition of Calcium enhances most the biological value of the proteins of the diet whose calcium availability is low. Judging from the results obtained so far, it is

clear that calcium has got an all important role in nutrition. However, further work is in progress to confirm the above findings

There seems to be therefore a widespread deficiency of calcium, animal and total fats, animal and total proteins and vitamins in our diets. The diets of the South Indians seem to be mainly deficient in calcium salts and Vitamin B-2 complex and to a lesser extent, animal proteins and fats. The ordinary diet of the poor people in Northern India is deficient in proteins as well as calcium salts. The investigations by the various authors indicate that the general public do not have a proper knowledge of nutrition. No doubt the poverty of masses is certainly a matter of importance for nutrition workers.

Nevertheless, there is sufficient amount of justification to say that "improperly constituted food and not merely insufficient food is the bane of India."

There are of course obvious difficulties in the way of recommending milk as a supplement to our dietary since it is far beyond the reach of the masses whose daily budget on food may be even less than $1\frac{1}{2}$ annas per day per head. Recently, Aykroyd has shown that skimmed milk powder which can be obtained at a reasonably cheap cost, now that the Government of India have removed the duty on it, can be used as an effective supplement to our diets. What the average person wants to know is: what kind of foodstuffs and how much of each he should use per month and how he should prepare them with the money he can afford to spend on food. The information supplied in the paper by Aykroyd and Krishnan which gives a number of well balanced diets, for less than Rs. 5 per month can be used as the basis for propaganda work in villages.

Conclusions

From what has been said above it is clear that there is a widespread deficiency

in the diets of our people throughout India as revealed by the very many deficiency disease exhibited by our people. Further, the high rate of mortality due to tropical ravages like pulmonary tuberculosis, leprosy, kala-azar, etc., makes it clear that our people have got the lowest power of resistance to infection.

Now diet surveys are being carried on accompanied by a systematic clinical examination of the children consuming those diets. The results obtained so far indicate that our diets are deficient in animal and total proteins, animal and total fats, calcium salts, vitamins and to a lesser extent phosphorus. Skimmed milk powder can be used as an effective supplement to our diets.

The final solution of the problem lies however in raising the economic level of the peasant. But at present, propaganda work must be carried on explaining to the villagers as to how they can obtain a well-balanced diet at a price which is well within their means.

"The use of a properly constituted diet is a sure means of attainment of physical efficiency and health"—McCarrison.

—"Indian Medical Journal."

The Great Wall of China, over 2,000 years old, is 1,400 miles long, 24 feet high, and 20 feet wide. It winds like a serpent over mountain and valley, at time attaining an elevation of 4,000 feet. It is said that during the period of a hundred years in which it was being built the million workmen who had part in the construction were cast into the rubble between its outer and inner shell.

How Solar Rays could Give Everlasting Health to You

WE hear much, now-a-days, of the Ultra-violet and Infra-red rays of the Sun, produced artificially by electricity, which proves that the Sun has got these specialised rays, existing within the ordinary rays, having great healing and germicidal properties. It has been scientifically proved that the Sun's rays have got the power of destroying germs in infected articles when these are exposed to the Sun for a few hours. This germ-killing power is attributed to the special active rays of the Sun, called the Ultra-violet rays, which have also the power of healing many diseases of the skin and other ailments. The Sun also has got life-giving properties in its rays, for without them no life can thrive either plants or animals. It is well known how the young plants lose their colouring matter and vitality, when they do not get proper sunshine.

It will be interesting to note, that the ancient Hindus (Arya Rishis) conceived of this knowledge, that the Sun had great health-giving properties by means of some special rays in him. This has been given expression to in the many verses and mantras enchanted by them,

in eulogising the Sun, for instance, in the famous Gayatri mantram in the Rig Veda, it is sung as Tat, Sabitooh, Varenym vargya, which means the most sublime and superior rays of the Sun. It may be inferred from this, the Arya Rishis believed or realised by Tapas, that there were certain specialised rays in the Sun which were more potent than others and were more active than the rest. The ancients also knew that the Sun's rays had got healing and purifying properties, which is evident from the mantram, uttering obeisance to the great planet as, Om! Namo, Vibavatey Bramhan Vasvate, Bishnu Tejasay, Jagat Sabitrey, Shuchaye, Karma dayeeney. It is clearly stated in this verse, that the Sun purifies the whole world and infuses life in all objects. What is proved by science to-day, was realised by the ancient sages in the early days of human knowledge! Of course, the ancients invoked the blessings of the Sun for their mental and spiritual uplifts, as they thought less of their bodies, which used to keep much healthier than now, owing to climatic and other conditions.

—"Health."

One hundred and fifty years ago it took nine farmers to feed ten townsmen. To-day, because of mechanics in farming, one farmer can feed twelve townsmen.

Radium is worth 25,000 times as much as gold.

Invalids and Children Should Wear White Clothes

IN sanatorium and hospitals, particularly in sanatoria for tuberculosis, the wearing of white clothing should be made a regulation practice.

The value of Sunlight in the treatment of disease is now so well established, every pains should be taken to secure to every sick person the full benefits of the Sun's rays. Thin, white clothing permits the transmission of a sufficient amount of light to influence nutrition to a marked degree. Invalids should never be kept in dark rooms nor allowed to remain constantly in the shade or behind ordinary glass windows. It is not to be forgotten that living in a room lighted by ordinary glass is equivalent to living in a dungeon so far as the ultra-violet rays are concerned, for window glass almost completely excludes this precious source of life and energy.

Besides wearing white clothing, invalids should spend several hours in a day in the open air exposed to the open sky. The direct rays of the Sun are of the highest value, but the light reflected from the sky and from clouds is also beneficial. Even under the shade of a tree or other shelter, if some portion of the sky is visible, really beneficial effects may be received.

Growing children, especially, should be clothed in white or light coloured garments. Children need light to enable them to grow and to form healthy tissues as much as do plants. Plants grown in the dark are frail and slender.

Their tissues are tender and lack toughness of fibre. This is why we like our celery blanched. Children raised in the shade are rickety, puny and an easy prey to germs, especially to germ of tuberculosis, and they are likely to die early. Two-thirds of the population of the United States live in cities and nearly all are suffering from lack of contact of the Sun with the skin. Simply exposing the skin of the face and hands to the Sun is not sufficient. The skin area varies, of course, with the size of the body, but totals for the average adult fifteen to twenty square feet. The skin area of the face and hands is less than one-tenth of the total.

It is evident, then, that those who wear heavy or dark coloured clothing get little actual contact with the Sun's rays, even though they may spend most of their time in the open air. Small children ought to wear as little clothing as possible in the summer season so as to allow their bodies to become well browned in contact with the Sun and air.

It is the conviction of the writer that the general adoption of white clothing, both summer and winter, would favourably influence to a marked degree, the health of the nation. Growing children, invalids, and persons compelled to live indoors, would be especially benefited by the wearing of white clothing. The famous Grecian philosopher, Pythagoras, dressed in white clothing, as did his

pupils and followers. The famous Count Rumford wore white clothing for the very reason given above. The natives of all hot countries wear white

clothing, as do the polar bear and the fox of the Arctic regions.

DR. JOHN HARVEY.
—"New Health."

Marvels of the Body—4

HOW WE SEE

THE eye is one of the greatest marvels of the human body. Two eyes working so harmoniously that the images they register are one instead of two is surely evidence of the work of a Master Creator rather than some slow evolutionary process.

The photographic camera has been copied from the eye. The diaphragm and lenses, as well as the sensitive photographic film to receive the rays of light, all have their counterpart in the eye.

Rays of light entering the eye are controlled first by the automatic contraction or dilatation of the pupil depending upon whether the rays come from objects nearby, or from a distance.

The size of the pupil is controlled by the contraction or dilatation of a muscle body called the iris. This muscle tissue reacts to the stimulation of light rays, dilating in the dark and contracting in the light. The same procedure is adopted with the diaphragm of a camera in order to get properly exposed photographs.

It has been shown that this muscle diaphragm of the eye will not only respond in the living body but the pupil of an excised eye will similarly react to a stimulus of light, and more remarkable still, a small piece of this iris muscle cut free from the iris will continue to respond directly to light.

When the rays of light have passed through the pupils they are focussed by a living lens upon a small area in the back of the retina called the sensitive spot. This small area, one quarter of an inch in diameter, is more sensitive than the rest of the eye and receives most of the images. The retina, which is comparable to the photograph film, consists of the nerve endings of a forward projection of a portion of the brain called the optic nerve. No human mind can conceive how the rays of light act upon this sensitive organ and set up electrical impulses that are carried to the brain and interpreted as vision.

—"Good Health."

GOING TO THE PICTURES AND ALL THAT

“WHAT excitement there was when some time ago we read about infected water causing typhoid fever in Croydon. For months the papers were full of the medical tests and investigations. But when the public reads what the pictures are doing to our children, how films poison their minds and characters, they remain inert. They even ask with surprise, ‘What is wrong with the pictures?’ From the standpoint of the child almost everything is wrong.”

The Cinema is the most powerful educational influence in our world. A select group of American scientists and scholars have for two years investigated the question of how ‘The Pictures’ react on children of various ages. They have tested the figure Problem from every angle, and their findings are shown by a series of books on ‘The Influence of the Moving Picture,’ published by the Macmillan Company. We read of ‘emotional responses,’ ‘the social attitude,’ ‘morals, crime and delinquency.’ These books cover every angle of the child’s cinema going from his physical reactions in the picture palace to those accompanying his dreams after the cinema, and finally the inner psychological responses which are so indefinite intangible and delicate, and yet comprise the essence of intellectual and spiritual life. The investigators conclude that where the child, at least, is concerned the pictures penetrated to the very roots of individual and social character.

As therapist and psychological assistant to a juvenile law court I have had

approximately the same experiences as these scientists, and would like to warn the public of the dangers which the ‘pictures’ hold for our children. If you have a number of children at home for the holidays, and don’t know what to do with them, it is very tempting to give them 6d. each to go to the cinema. They will be delighted, you will have some peaceful hours at home, and the children will come back flushed and enthusiastic. Then perhaps you ask ‘How did you like Freddy Bartholomew as David Copperfield? Isn’t it a sad story?’ and they look at each other and say, ‘Oh, Mummie, we must have gone to the wrong cinema, we only noticed it when we were inside. It was ‘Crimes in the Air’ that we saw, but it was marvellous.’

As a rule children tell you very little about what they saw at the pictures. Partly because they do not understand what they see and partly because the pictures follow each other so rapidly that the children cannot combine them in a coherent story. What they come home with and retain are certain features and conceptions, which are in harmony with their own longings, ambitions, likes and dislikes.

Thus a six-year-old boy who had been sent to me for pilfering told me that he had seen a film of ‘Ali Baba and the Forty Thieves,’ and said, ‘There was a wicked man who was killed, but the forty thieves were not killed.’ In his unconscious mind he drew the conclusion, ‘Why should I stop pilfering if thieves go unpunished?’ Not every

child has the opportunity of talking to somebody about the wrong conceptions he brings home from the cinema. A little girl of seven who saw Walt Disney’s ‘Snow White’ two months ago has ever since refused to eat an apple, ‘because the old witch might have poisoned it.’ She may not have been fond of apples before she saw the film, but it gave her a justification for her antipathy.

Why are children afraid of murderers and burglars? Not because they read of them in the papers, but because they see them on the screen. It is what we see rather than what we hear or read that sticks in our memory, and the conditions under which we see it; the warmth and comfort, colour, mystery and excitement help to make the impression almost indelible. The timid child reacts with fear to such pictures; the courageous, adventurous boy is thrilled and eager to imitate. On investigating juvenile delinquency we find that 70 per cent. of all the ‘crimes’ were first conceived in the cinema. Detective stories and thrillers carry no immediate danger, but it is definitely dangerous to let children crime films.

You may say that the division of films into U and A classes gives protection against juveniles seeing things not intended for them. But have you ever stood at the entrance to a cinema showing such films and seen the number of youngsters waiting for some obliging adult to take them in? In the company of an adult a child may see any film, and even if you refuse for the child’s sake, the next comer will not be so particular. As a result a child can see

what films he likes. For the thousands who read rubbish millions go daily to the pictures. Their influence is unequalled and overwhelming and presents a problem which cannot be neglected.

Not only the child’s mind is bound to be damaged in the cinema his physical health and nervous system suffer likewise. How often have I seen children become so excited by a picture which is vividly real to them as to be brought to the verge of hysteria! Now and then a little patient is brought to me with what we call a ‘tick’ some conclusive gesture, contortion of his face, or blinking of the eyes. Often this can be traced back to a film consciously or unconsciously imitated. After this experience I even disapprove of ‘Micky Mouse’ films for the highly strung children of our time.

Why is there no children’s cinema in London? Probably because it would not pay. Few parents take children to the cinema for the child’s sake. Usually they go because they want to see a film, and have to take the children along, since otherwise they must be left at home alone. Educational films such as ‘The Life of the Lobster,’ ‘The Danger of the Blue Bottle,’ the growth of flowers, which are marvels of modern science, are only occasionally smuggled in between two thrillers, and when shown in schools are not much appreciated by the children because their taste has been split by the rubbish they have been allowed to see.

From the standpoint of the child almost everything is wrong, very often the subjects themselves, and nearly

always the way in which they are handled. When I hear adolescent boys and girls shrieking with delight over a film in which murder is justified, adultery excused, and seduction taught, I wonder what will become of the younger generation.

Is there no way out of this difficulty? The only one I can suggest is the boycott. As the pictures have become a business rather than an art, a public boycott of noxious films might cause

producers to look for better ones. Parents are the people who can enforce this boycott. If once they understand that the pictures as a social problem are their responsibility, they will find a means to ruin bad films and richly reward good ones. Despite many things that are beyond our control now a days, parents still have the possibility of helping to form their children's characters by the exercise of prudence and wisdom.

—“*New Health.*”

What the Mouth Reveals?

SCIENTIFIC methods for the detection and diagnosis of disease have made rapid strides in recent years. There are now few parts of the body which are inaccessible to the X-rays, while biochemical tests can afford an accurate record of the functioning of many of the vital organs. More and more the tendency is towards the use of mechanical aids to diagnosis; nevertheless, the five senses of the doctor do still, and must always, play the preponderating part in the examination of the sick patient. Careful observation can never be replaced by the tests of the laboratory.

These few introductory remarks have been made to emphasise the important fact that a sound estimation of the health of body can be made by an intelligent use of our special senses. People, to-day, who are interested in the maintenance of good health, should also be able to perceive the early signs of disease. Now, there is no part of the

body which affords more instructive information on the state of general well-being and on the condition of the internal organs than the mouth. In any illness, inspection of the mouth is an essential feature of the doctor's examination. It is amazing how much the mouth can tell in relation to health and disease.

Let us commence with the lips. Dryness is a fairly common complaint. This is nearly always a sign, may be the only sign, of stomach disorder. The existence of dryness of the lips should always lead to investigation of the cause of the indigestion. In anæmia pallor of the lips is constantly present. Blueness of the lips is a more serious symptom, and if constantly present is indicative of defective aeration of the blood as a result of advanced bronchitis accompanied with heart weakness. Cracked lips may arise in connection with head colds, while in children this condition may, arise from the nervous

habit of biting the lips and from exposure to cold winds.

Of great diagnostic significance is the state of the tongue. Quite often it is possible to detect of a comparatively serious illness merely by inspection of that organ. The tongue is also a very useful guide to the course and progress of certain diseases. Furring of the tongue is generally looked upon as an indication of some disturbance of the gastro-intestinal tract. The most common abnormality is the whitish-grey or brown coating which is associated with constipation and dyspepsia. It is also observed in nervous depression and in anæmia. In feverish states coating of the tongue is well marked. The degree of furring depends to some extent upon the dryness of the mouth; in other words, upon the deficiency of saliva which follows fevers with profuse perspiration. In severe and prolonged fevers and in conditions of marked prostration the fur becomes dry, brown and crusted. This is always interpreted as an unfavourable sign.

A large pale flabby tongue easily indented by the teeth, and with a thin white coating, is frequently observed, and is met with in persons subject to dyspepsia, especially when due to dietetic and alcoholic indiscretions. In contrast, a red tongue with sharp red tip and edges with a slight white coating in the centre is usually indicative of subacute gastritis and irritable dyspepsia.

Quite clearly the tongue is a remarkable guide to health but it should be noted that there are individual peculiarities in the character of the tongue. A slightly furred tongue may co-exist in some people with perfect health, and it is to be remembered that smoking to

excess often leads to dryness and furring of the tongue. As regards treatment of these conditions it is obvious that the root cause must be attacked. There is old saying that a red tongue requires alkalies and a white tongue acids. In this matter, however, it is best to obtain medical advice. A dry tongue is associated with poor appetite and deficient stomach secretion and therefore the sufferer should drink plenty of fluids.

A few words on ulcers of the tongue. These are important because, being as a rule trivial, they are apt to be neglected but occasionally they may be, of a malignant or cancerous nature. Simple ulcers result from some local irritation such as a jagged tooth or ill-fitting denture. Removal of the irritant and the application of some antiseptic such as borax and glycerine will rapidly lead to the disappearance of the ulcer. An ulcer which persists and for which there is no obvious cause should call for immediate expert examination. Malignant ulcers are characterised by their hardness and uneven surface and their tendency to bleed. Early treatment is essential if an extensive operation is to be avoided.

The state of the gums is also a useful indicator to the health of the body. Pallor, as already noted, is always present in anæmia while a stippled blue line on the gums is characteristic of lead poisoning. Sponginess occurs in scurvy and in mercurial poisoning, and bleeding is liable to arise in any blood disease and in pyorrhœa. In fact, bleeding of the gums on brushing the teeth is one of the earliest signs of the latter condition, and its occurrence necessitates urgent preventive treatment if the pyorrhœa is to be cut short and the teeth saved. Pyorrhœa is a serious form

of focal infection, and the slow but constant drainage of poisons into the blood stream can have grave repercussions upon the health of body and mind.

Inflammation of the mouth is called stomatitis. It is revealed by redness, swelling and tenderness of the mouth membrane, and is usually accompanied by offensive breath odour and an increase of salivary secretion. In young children this condition may arise during dentition or it may be caused by a parasitic infection called "thrush". This latter affection most often occurs in badly fed children living under unhygienic conditions. It occurs as white spots, like milk curds, and is very contagious. Fortunately, thrush readily yields to mild antiseptic treatment, and to improvements in the diet and general health. Mouth breathing may also give rise to mouth inflammation and in these cases the root cause, which is most likely to be adenoids, must be removed.

In adults bad oral hygiene, a want of cleanliness, especially if there is a co-existing low state of health, may lead to inflammation of the mouth. Excess of tobacco and alcohol, too hot and too highly seasoned foods are other contributory factors. Gastro-intestinal derangements, especially when accompanied by constipation are apt to predispose to stomatitis, while certain drugs, notably mercury, arsenic, and iodides, may produce soreness of the structures of the mouth. In the management of this affection it is essential that the cause be sought and removed. This may require the scaling of teeth, the extraction of septic stumps, or the removal of septic adenoids or tonsils. Then antiseptic lotions must be applied. After every meal the mouth should be thoroughly cleansed

with a soft brush and all debris got rid of by repeated rinsing with warm water containing carbolic acid 1 in 100 or hydrogen peroxide. If there is much swelling glycerine of tannic acid is a useful remedy. Finally, attention to the general health is imperative.

In considering the mouth in relation to health and disease, we must take into account the breath. Normally, the breath should be quite free from any kind of odour. Offensiveness of the breath is very common and arises from a number of causes. A want of oral cleanliness alone can lead to foul breath, but most often the chief factor is decayed teeth and pyorrhœa. It is surprising how even a carious cavity in a single tooth can make the breath smell unpleasantly. Gastric disturbance and constipation are the next most common causes, and offensiveness of the breath is greatly increased if heavy smoking is associated. Chronic catarrh of the nose and of the throat may lead to this symptom, while any septic condition of the lungs is unable to lead to foul expiration. In children an unpleasant breath is often a sign of septic tonsils and adenoids. Persistence of this symptom in a child demands careful specialist examination. The control of offensive breath is naturally dependent upon the cause, but a great deal can be done to mitigate this socially unpleasant symptom by scrupulous attention to the hygiene of the mouth. Occasional applications of strong antiseptics are inadvisable: they may even be harmful. Regular use of the tooth-brush and tooth paste after every meal and last thing at night, and frequent rinsings of the mouth with a mild antiseptic are the best practices to adopt. Fresh hard fruit such as

apples or pears should be eaten frequently, smoking restricted, and the bowel function made to operate regularly and efficiently.

It could be emphasised again clearly and accurately that the mouth mirrors the state of the health of the body. And conversely it must be emphasised that body health is closely linked up with mouth health. Morbid conditions

of the mouth are very common to-day largely as a result of our civilised habits of eating, drinking and existing in relatively ill-ventilated, dusty, enclosed spaces. No one in these modern times can afford to neglect the care of the mouth. From our earliest days we must establish a ritual of mouth hygiene if we are to enjoy good health and longevity.

—*"New Health."*

THE BODY'S GATEWAY

IF parents would only realise this fact, that the mouth is the gateway to the body and every particle of food must pass through the mouth and come into contact with the teeth, perhaps they would then take more care of the children's mouths.

If these be clean and healthy all is well, but what if the teeth are dirty and septic, as in many a case—obviously all food must be contaminated and will undoubtedly carry with it matter which is definitely harmful to the system. These diseased teeth bring in their train an unhealthy body and a sluggish mind, and if the condition of the mouth be septic then neighbouring parts, such as the tonsils and adenoids may also become infected. Such conditions must hinder the child greatly in his or her school work.

Unfair to the Child.

So it is seen why it is necessary to encourage parents to have any defects that may be found in their children's mouth dealt with before it is too late. Often these conditions are seen during inspections and a number of children who have again and again been referred

for treatment are found with nothing done, either privately or at the clinic. This is grossly unfair to the child who often has to suffer the consequences.

The greatest difficulty with children is to get them to clean their teeth. Over and over again children attend the clinic to have their teeth cleaned, and later on one finds them just as bad. It is just as essential for children to have clean teeth as to have clean hands and faces.

Clean Teeth Do Not Decay.

It is generally true to say that clean teeth do not decay unless, of course, there are constitutional causes, and if children could be encouraged to clean their teeth and eat foods which exercise their teeth and jaws the incidence of dental decay would be much reduced.

It would be very encouraging if parents would get dentally minded and see that their children do clean their teeth, and when any treatment was necessary to make every effort to have it done. What pain and suffering would be obviated if these things really happened.

—*"Better Health."*

HABITS AS FRIENDS AND ENEMIES

HABIT, said some sage in the dim past, is second nature. It is as well that it is so, for things we can judiciously relegate to the realm of habit make life easier and more efficient. Without habit as a friend, we should have to be learning all our lives the simplest things. Imagine what a burden life would become if we had to think consciously the right way to put on our clothes every morning, to take only one instance. Habit comes to our aid and enables us to put on each garment without wasting a second of time or calling into play any mental effort.

Then think how awkward and trying it would be if we had always to exercise the mental strain and conscious awkwardness whilst driving a motor car that we have to exert while learning. If one had always to watch the movements of the fingers when playing the piano, using a typewriter, or knitting a garment, any sort of efficiency would be impossible. We should be as clumsy as monkeys.

There are hundreds of acts we do every day better by leaving them to our subconscious minds—which is what we really mean by saying an act has become a habit.

These actions have become automatic because every mental and nervous process produces a lasting effect, which influences subsequent mental and nervous processes. In other words, a memory path has been imprinted on the brain. This memory path is then

followed unconsciously so that we are able to dress ourselves in the morning while thinking about the things we are going to do during the day.

Habit may be said to form character. Those ways of acting and thinking which combine to make character rest upon the same principal of psycho-physical retentiveness which is the foundation of habit. Hence the stamp which the Army, Navy, The Public Schools and Universities put upon their members.

Every one of us has formed habits which are distinctive, and yet we may have become so accustomed to them that we are not even fully aware of their existence.

There are habits which are our enemies—bad habits. The commonest habits are nervous habits, like thumb-sucking infants—starting in early childhood because of insufficient healthy activities and playmates—persisting usually because the parents unwisely call attention to it instead of ignoring it. The child may use the habit as a means of defying its parents.

Other common habits of the nervous type are biting the finger nails, sucking pencils, giggling, blinking the eyes, etc. Nail-biting is said by some psychologists to be found mostly in aggressive people who can find no external outlet for their aggressive emotions and so work it out on their finger-nails. Usually the sufferer grows out of it. Some nail-biters only resort to it when they are concentrating



Slim Beauty in 3 weeks

Why Natex
Reducing Food
makes such rapid
slimming SAFE

All Natex Foods are guaranteed to be entirely harmless and free from drugs, chemicals, gland extracts and herbal extractives of any kind. They are guaranteed to contain nothing but the natural vegetables specified in the lists of ingredients published from time to time. Made by Modern Health Products Ltd., London, they are most efficacious in cases of Malfunction of the Liver, Skin troubles, Blood Impurities, Anaemia, Debility, Rheumatism, Nervous conditions, Stomach Impurities, Hyperacidity, Gland troubles, Constipation, Catarrh, Uro-genital troubles, High Blood-pressure, and many other ailments, for every one of which there is a special remedy in the Natex Health Foods range and these foods are equally beneficial to men, women and children. Send for descriptive book *The True Story of Natex Foods* which will be sent FREE OF CHARGE and without obligation by applying to

Sole Agents For India:— Messrs. ISSA-SONS, P. O. Box No. 830, BOMBAY.

on some mental activity. When the conscious mind is busy subconscious habits come out to play.

Professors, nervous people, elderly spinsters and bachelors are prone to mannerisms, known as habit-spasms, such as eye-blinking, head-tossing, throat-clearing and face-twitching. These habits were originally conscious responses to a need. The eyes were blinked to relieve the strain of intensive reading; heads were tossed to ease a tight collar or fling a lock of hair from the eyes; throats were cleared because of the individual suffering from chronic throat or chest ailment; facial muscles twitched because of nervous muscular strain.

At first it was a necessary response; later it became a superfluous habit. It is not easy for nervy people to break these habits, and, naturally, the longer they have been indulged in the more difficult are they to break. The exercise of will power is not of the slightest use in breaking these troublesome nervous habits; the best method being to relax deliberately every time you catch yourself at it.

As habits are formed in the subconscious mind, which does not possess reasoning powers but is as blind as instinct, very foolish habits can be formed.

Many persons have the habit of touching things as they pass along the street. If they break the habit they are disquieted. Dr. Johnson was such a one, and if he missed tapping one of a series of posts in a street, he would go back and begin all over again. Some people have the habit of constantly looking round with quick, nervous glances. They are always wondering if anyone is watching them. Many women develop the hair-patting habit. They

put it right a thousand times a day, though no one can ever see any difference. They do this unconsciously; it has become a habit.

Habits such as these are formed through reiterating, through doing a certain thing repeatedly. Fighting such a developed habit requires determination, a positive attitude, a strong desire for a new thing which is to replace the old. In getting rid of any bad habit the desire to conquer it must be greater than the desire for the habit. When one truly desires to get rid of an undesirable habit, half the battle is won.

It is then only necessary to use the imagination. To break an old established habit it is necessary to furnish the subconscious self with some fresh suggestions, and through these fresh suggestions impress the subconscious mind in such a way as to eliminate the habit.

Thus, a person anxious to give up a bad habit should create in his mind a picture of himself not needing to give way to the habit. He should analyse the attractions which the habit has for him, and draw the natural conclusion that it does not benefit him in any way. Treating objectionable habits in this way is much better than the exercise of what the sufferer imagines is great will-power.

Good habits can be such loyal friends that it is well worth cultivating them. Let us form the habit of turning out a good job in all the things we have to do in our daily lives. A soldier walks upright without effort—it is a habit. Similarly, each one of us could do our various duties well in just as effortless a manner when we train ourselves rigidly to good habits. A good habit saves brain and bodily movements.

—“New Health.”

YOUR SKIN!

A DOCTOR DISCUSSES A SUBJECT WHICH IS VERY NEAR TO US ALL

“OH, Doctor! You must be mistaken. Surely my child does not have that kind of a skin disease. I have always kept him so clean. You must be mistaken!” Thus the anguished mother pours out her unbelief. Much as we would like to believe to the contrary, the fact remains that skin diseases are no respecters of persons; rich and poor alike are often affected. By this we mean that the skin, standing as it does between our body's interior and the outside world, is a faithful reflector of adversity from without and from within. The medical man whose job it is to interpret Nature's handwriting in the skin is called a dermatopathist, or skin specialist.

Soaps and Personal Hygiene.

In an article of this length it would be impossible to discuss or even mention the names of the known skin diseases, for of these there are over three hundred main varieties! It will be more helpful to talk over a few points regarding the every-day things one needs to know about the skin. What is the best way to care for normal skin? What kind of soap is it best to use, or should one dispense with soap and use only cold cream? These are the questions one often hears.

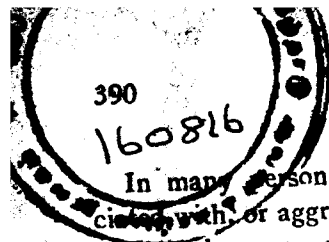
As a general rule, the normal skin, at least the exposed parts, should be washed daily with soap and water. The kind of soap used does not make a difference. On the list of excellent

soaps we would place Palm Olive, Lux, Knight's Castle and Pears. Of course, there are also many other good soaps, but we could not mention them all here. Many elderly persons and others whose skin is very dry will find ordinary soaps irritating. The best soap to use in such cases is a super-fatted soap. Gibb's fatty soap is an excellent one, and by its use the excessive drying out of the skin oils is avoided. Most highly-scented cheap soaps are irritating to the skin and should not be used.

The normal healthy skin should contain colour enough for most people's taste. No “touching up” should therefore be necessary. If your complexion is “Muddy” there is probably something wrong underneath and you should go to your doctor and have the cause removed.

Blackheads or Acne.

Many young adolescents are afflicted with that disfiguring disease called, Acne. The newspapers are filled with Acne cures and the remedy-mongers reap a rich harvest from the sale of their supposed “cures.” Actually Acne is nothing more nor less than the infection of certain germs in the oil ducts of the skin. As a result of this infection the mouths of the ducts become swollen leading to stopping up of the oil gland. The gland goes on secreting oil and distends the duct, producing a blackhead, or more correctly a comedo.



AROGYA MARGAM

In many persons Acne is often associated with, or aggravated by, an excess of starchy or carbo-hydrate food, dyspepsia, constipation, and lack of fresh air and exercise. Certainly the above conditions frequently occur in young persons who oft-times are irregular and indiscreet in their habits of eating and general hygiene. There is no evidence, however, that the presence of Acne signifies any trouble with the blood. The use of so-called blood-purifiers is therefore usually unnecessary and irrational. In fact, certain drug mixtures taken internally may actually result in aggravating the Acne already present.

Treat from Inside as Well as Out.

The proper treatment of Acne is first to improve the general health of the individual. The diet should be corrected so as to overcome constipation; outdoor exercise and sunshine should be encouraged. Most people have the notion that young persons afflicted with Acne will "grow out of it," so that nothing can be done in particular. It is quite true that most cases of Acne will clear up their own accord with advancing age. However,

the disease may then be so widespread that it leaves the face permanently scarred. It is therefore as well to treat such cases early.

The first point in external treatment is to use plenty of soap and hot water to remove the excessive oil from the skin. Next apply sulphur lotion, preferably prescribed by a physician. The lotion is dabbed on the face two or three times a day after washing and drying, and allowed to dry on the skin. The white powder remaining should then be rubbed into the openings in the skin with the finger-tips. The skin becomes rough under this treatment, and then a change to an ointment should be made.

The comedos should be expressed, using a small spoon-shaped instrument with a pin-sized hole (not larger) in the centre. The finger nails should never be used to do this, as they may cause the infection to be carried into the skin, resulting in a far worse condition.

Sometimes the doctor may order ultra-violet light, and this is useful in many cases. If the case is very resistant to treatment X-rays may be used with good success.

—"Good Health."

* * *
A special railway "medical" train" is to tour the United States this year to teach small town doctors the latest advances in medical science. It is to be financed by the American College of Surgeons, the Red Cross, and one of the major railroads and we will call for a complete train fully equipped with staff doctors. It will make stop-overs of several days in smaller communities.

Edited and Published by Dr. U. D. Gopal Rau at No. 57, Thambu Chetty Street, Madras, on behalf of the Health Propaganda Board, Egmore, Madras.
Printed at The Artisan Press, No. 17, General Patters Road, Mount Road, Madras.

BE CLEAN

Keep body, mind and spirit clean,

Thus Health you will find and Life serene,

And without pain and without fear

You will live for many a year.

Let us be clean,

Clean every wit,

Then who can healthier be?

Clean hands, clean heart,

Clean, strong and fit,

Who healthier then than we.

—The Health Propaganda Board, Madras.

NEW PUBLIC HEALTH BILL IN MADRAS

HEALTH EDUCATION OF THE MASSES
IS AN IMPORTANT ITEM IN THE PROGRAMME

HEALTH PROPAGANDA BOARD
MADRAS

PUBLISHES COLOURED

POSTERS, BOOKLETS

LEAFLETS

LEND :

LANTERN SLIDES

FILMS

ARRANGE

EXHIBITS

LECTURES

FILM DISPLAYS

ON
HEALTH
SUBJECTS

Organisers of Public Health Education are invited to
write for

Particulars to :—

The Secretary,

THE HEALTH PROPAGANDA BOARD,
EGMORE, MADRAS.

CONTENTS

	Page		Page
1. Your School-Going Child and His Food (<i>Editorial</i>)...	391	13. Hot Weather Comfort ...	404
2. Milk—The Essential Food.	392	14. Are You Hiding Small-pox Cases?	407
3. Milk for Malnutrition		15. Why Should Milk be Pasteurised?	408
4. Milk Supply for School Children	393	16. The Health of the Mother.	409
5. Poverty and Nutrition		17. Breathing for Fitness ...	412
6. Dust Bin Nuisance in Our City	395	18. Dangers of Vaccination ...	414
7. Reduction of Maternal Mortality		19. Sunstroke ...	415
8. Holy Waters of The Ganges	396	20. Fighting Malnutrition Among Students ...	418
9. Don't Take the Risk of Consulting Your Doctor by Telephone ...	397	21. Tuberculosis ...	420
10. What is Cancer? ...	398	22. Vital Indian Health Problems ...	421
11. Diarrhoea: Its Causes And Treatment ...	399	23. Education and Discipline...	424
12. How to Overcome Constipation Naturally and Permanently ...	401	24. British Ideals of The Profession And The Public ...	426
		25. Hospital Odour and Noise.	427
		26. The Influence of Noise on Health ...	428

IMPORTANT

All the manuscripts for publication, books for review, Exchange of Journals and other correspondence relating to the Editorial Section should be sent to the HONORARY EDITOR, *Arogya Margam*, 57, Thambu Chetty Street, Madras.

Original articles are accepted with the express understanding that they are contributed solely to this journal. All matters published in *Arogya Margam* is copyrighted.

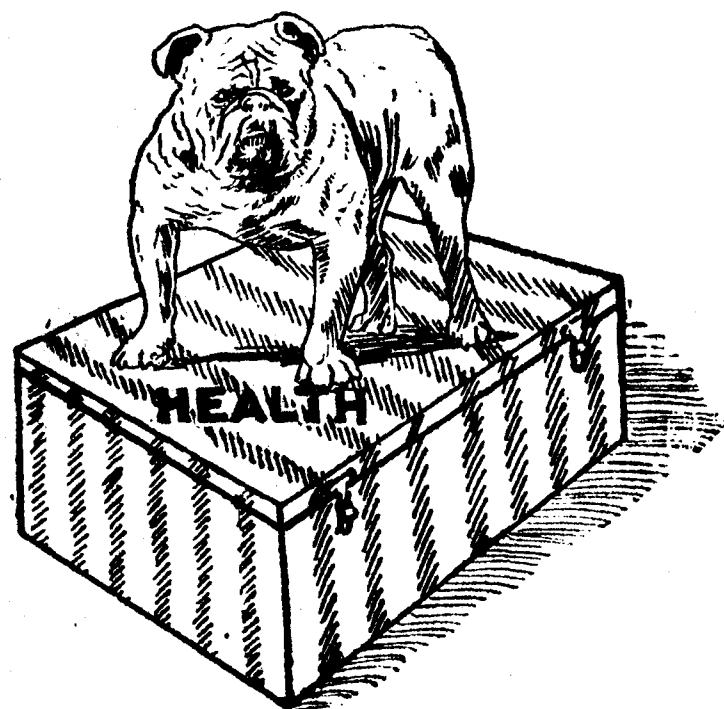
The manuscripts must be typewritten, and double spaced, and the original copy should be submitted. Blocks for illustrations will be supplied by us if the original illustrations are sent.

The Honorary Editor reserves the right to alter, delete, or make necessary changes in the matter sent for publication. No reasons will be given for rejecting articles.

All business correspondence, advertisements, subscriptions, and other payments should be made to the SECRETARY, HEALTH PROPAGANDA BOARD, Pantheon Gardens, Pantheon Road, Egmore, Madras.

ADVERTISEMENTS

Complete copy, instructions and blocks must reach this office not later than the 5th of every month in which the advertisement is to appear. It is understood that the old text (running) is to be printed, if no new copies of advertisement reach this office a month previous to the date of publication of *Arogya Margam*.



Is a Treasure
That Needs Well Guarding

1206 3934

KEEP IT WELL
IN HAND

HEALTH

AROGYA-MARGAM

A MONTHLY JOURNAL DEVOTED TO
HEALTH & HAPPINESS PUBLISHED
UNDER THE AUSPICES
OF

Vol. I

No. 12

March 1939

The Health Propaganda Board, Madras

• **MARCH** •
1939

SUBSCRIPTION
Rs. 1/4 per annum

"PANTHEON GARDENS"
PANTHEON ROAD
EGMORE :: MADRAS

Arnas Two
per copy



WITH
A PLEASANT FLAVOUR AND TASTE IN THE DIET
Simplifies Digestion: Contains **22.20% Iron** needed by the body
 for Blood Formation

RASHID JAMSHED SONS & CO.,
 H. O. BOMBAY 3
 222, Govindappa Naicken St., 96, Palace Road, 56, Chakrapani Sannadhi,
 MADRAS. MADURA. KUMBAKONAM.

Reduced Offer!
 Copies of
FILM ON TUBERCULOSIS
 entitled
"BETTER LATE THAN NEVER"
 prepared for
 THE HEALTH PROPAGANDA BOARD
 by Lt. Col. J. R. D. WEBB, O.B.E., I.M.S.
 Can be had now at Rs. 326/- per copy (4 Reels)
 From the
HEALTH PROPAGANDA BOARD,
 "PANTHEON GARDENS,"
EGMORE, MADRAS.

Your School-Going Child and His Food

(Editorial)

PERHAPS very few parents would realise the importance of paying due attention to the food of our school-going children. It is not that we purposely avoid attention to this factor but it is the usual and the most common but very serious error on our part not to think a while how our babies suffer from serious diseases due to improper attention to spacing their food in their tender age.

One cannot neglect or look down upon the period of childhood which is the foundation on the strength of which depends all human progress and welfare.

We cannot also ignore the natural conditions that are favourable for growth and welfare during this period. The human body with all its organs—brain, liver, lungs, bone, glands, etc., is in a more advantageous ground for growth and development during this period than in adult age. Commonsense would tell us that every tissue in the body—every organ—every structure is in a process of growth. It is the plastic

stage in life which could be moulded as you would plan. It is the imitative stage, when healthy impressions about the greatness of human soul—functions of the human body and human brain could be produced on the young growing brains.

Naturally your own experience in life would convince you that a child requires something to eat every two hours. This is the natural interval and anything above would help to lower the vitality and anything below would tend to over-eating. On an average 2 to 2½ hours of feeds are essential to the proper growth of our babies.

Hence it is very very important that we should carefully guard our children and help their growth and development by proper and regulated food. Good growth and development depends not only on the quality of the food you give but how you give them. What is the interval you allow between feeds?

What we neglect is not much of the quality and quantity but

the spacing of food—the time that lapses between feeds. How many hours continuously our kiddies are kept in schools without food, how the period of hunger is masked by environmental factors present in school atmosphere. How is it during Saturdays and Sundays and other holidays when they are at home they take food more frequently than during school days. Is it not possible to regulate the spacing of food on school days? This is the point which must receive the attention of every parent and the educational authorities.

Do our school-going children get this kind of regulated food? Certainly not. They are kept in closed doors from morning 9 to 1-30 continuously for 4 hours without food and only half an hour leisure is allowed to gulp in their midday meal.

This long period of 4 to 5 hours when children are kept without food must receive our serious attention and something must be done to break the period by a

suitable food which could easily be provided without much cost.

A cup of pure milk given to our children at 11 A. M. in the morning in all schools would be very refreshing and congenial and adds to their comfort and well-being.

It is needless to reiterate the good and nutritious value of milk. Every scientific research worker, every one interested in health and welfare of a nation extols milk as the only food which satisfies all the requirements of a properly balanced diet.

Our country is a land with plenty of milk and honey. What we need is organised institutions where pure milk is supplied. The authorities concerned must put their heads together and in addition to the educative propaganda by way of Health Conferences—Exhibitions—Health talks, etc., they must organise ways and means to provide good and nutritious milk to all children in schools and colleges on a wide scale in the forenoon.

MILK—THE ESSENTIAL FOOD

It is recognised by all health authorities that milk is an essential food for the nursing and expectant mother and for young children. It is a food which Nature has provided for the nourishment of the young at its most rapidly growing stage, and it contains all the ingredients essential for growth and maintenance of life.

—“Better Health.”

MILK FOR MALNUTRITION

The milk in school scheme is probably one of the most important measures ever introduced to improve the health of the school child. Authoritative medical opinion maintains that an adequate diet should contain a minimum of one pint of fresh milk daily. For this reason it seems desirable that every child who exhibits the slightest indication of subnormal nutrition should receive a double ration daily.

“Better Health.”

MILK SUPPLY FOR SCHOOL CHILDREN BOMBAY SCHEME

Bombay Municipal Corporation has put forward a scheme to supply milk to undernourished and needy children attending Municipal schools. It is estimated that the cost for the first year will not exceed Rs. 31,000. To ensure that the milk supply be put as beneficial use as possible and that the children entering school for the first time should get the first benefit, instructions are being issued to examine first the newcomers and issue milk to those who are suffering from malnutrition.

Poverty and Nutrition

IN the House of Commons on November 14th, 1938, Mr. Pethick Lawrence, on behalf of the Labour Opposition, moved an amendment to the address in reply to the King's speech regretting the absence of any reference to the serious problem of unemployment, and the failure of His Majesty's advisers to recognise that the real strength and prosperity of the people depend upon the full use of the resources of the country and upon an equitable distribution of wealth. The Labour Party welcomed the announcement of the new cancer campaign, but they thought that a still more urgent need was the taking of drastic steps to cure the cancer in the body politic of the State itself. There was an artificial shortage of food, supplies from abroad were being excluded, home output was being limited, and in some cases food was being deliberately destroyed. If this policy went on it would render the inventions of science and the increased command over nature which man had acquired and the abundance which they should bring, a curse rather than a blessing to mankind. The scientific men who had brought the question of malnutrition to the front had rendered a valuable service to mankind.

Dr. M'Gonigle, the Medical Officer of Health for Stockton-on-Tees, had said that city children were five times as great sufferers from anæmia as the children of the professional classes. City children were ten times more liable to bronchial diseases than children of the professional classes. Sir John Orr had shown that the average height of a large sample of boys taken from the public schools was six inches greater than that of a similar sample of boys from the elementary schools. Mortality figures for this country given in a book published by the League of Nations showed that the prosperous districts had a corrected death rate 30 per cent., below the average, whereas poorer districts showed a figure 40 per cent. higher than the average. He did not think that anyone denied that malnutrition was largely responsible for these differences. The Prime Minister in his speech the previous week had suggested that one of the main causes of malnutrition was not lack of purchasing power, but ignorance and possibly negligence on the part of the mothers in the spending of their money. That was a very comfortable doctrine, but the statements of medical officers did not substantiate it. The position of the Government in regard to the condition of the people was that when money had to be expended on rearmament,

there was necessarily a conflict between guns and butter.

Mr. Elliot, Minister of Health, replied that it became more and more difficult to disentangle the tasks of peace from the tasks of war, even with the great peaceful Ministry which he represented, but the King's Speech gave proof of the effort of the Government to produce both guns and butter.

Feeding of School-Children and Others.

Mr. Elliot joined with Mr. Pethick-Lawrence in the tribute he had paid to the work of eminent scientists on the question of nutrition. The interest taken by the Government in this question was ridiculed by the fact that the number of free solid meals provided by the local education authorities had been more than doubled in the last ten years. The milk-in-schools scheme had proved a triumphant success. In the last year 200,000 more children had been drinking milk under the scheme, of whom some 50,000 or more had been getting it free. Apart from the question of sufficiency of food there was also the wise choice of food. The Labour Party were too apt to suppose that any statement made by a scientific man about the choice of food was meant to cast a reflection on some class of the community.

—"Lancet."

Sunstroke is usually due to an interference with the evaporation of perspiration from the skin.

Child-bearing, if skillfully done, is advantageous to the health, well being and beauty of a normal woman.

Dust Bin Nuisance in Our City

IT is a very unpleasant sight in our streets and lanes to witness a number of dust bins kept in a reckless manner not at all satisfying the sanitary conditions absolutely necessary for these refuse depots on public roads and lanes.

A walk in the streets of George Town on Saturday evening and Sunday morning and invariably on some week days too would not fail to draw your attention to the horrible and most absurd way the dust bins present themselves to your eyes.

In the first place they are without a cover—exposed to sun and rain. Secondly they are usually overturned. The bins proper will be in one corner and the refuse will be widely scattered, a play ground for flies, rats, cats, dogs and street urchins.

Worst of it is beggars in the streets make a careful scrutiny of the contents and keep everything scattered.

Can something not be done to stop this most harmful source of disease germs? What is it that prevents to keep

the dust bins tightly closed and watched and emptied regularly and kept always clean and attractive by proper disinfectants?

All of us wish for a beautiful city—beautiful roads—beautiful buildings—beautiful beach. Why not we make this most important place—dust bin depot beautiful and clean first. Does it cost much? Certainly not.

What is needed is a careful watch. This would train the house people to be careful in the disposal of the house rubbish. They would know that they should carefully deposit the rubbish within the bins. Beggars, street urchins, dogs, cats, cows could be kept away and the contents could be carefully emptied and properly disinfected.

We earnestly hope that with the advent of the Public Health Bill one of the steps in the programme of educating the public would be to provide a neat and clean dust bin carefully guarded by the authorities and kept clean and tidy.

—"Incognito."

Latest Discovery!

Tonslit

Tonsils & Adenoids

Nose & Throat Complaints

AVAILABLE AT ALL LEADING CHEMISTS

ALLEN CLINIC

Royapettah Madras



A New Oral Treatment of Biological Compound with assimilable Calcium, Iron and Phosphates.

GUARANTEES PERMANENT CURE for ENLARGED TONSILS & ADENOIDS
(Nose and Throat Diseases)
WITHOUT OPERATION

Stockists:

Madras: Spencer & Co., Ltd.; Appah & Co.; Wilfred Periera, Ltd. & Dadha & Co.
Kumbakonam: Kumbakonam Drug Stores.
Madura: T. N. C. Nagalingam Pillai.
Alleppey: Swamy & Co.
Bangalore: V. L. Nathan & Co.
Bombay: P. M. Zaveri & Co.
Rangoon: Allianz Pharmacy.
Singapore: Naina Mohamed & Sons.

Reduction of Maternal Mortality

In England, it was recently recognised that doctors who attend on Midwifery cases should have specialised in that line and that general practitioners are not quite competent to deal with such cases. As a result of an agitation in the country, the Minister of Health in England has now communicated with local supervising authorities on method that may be adopted in order to secure that the best obstetric aid is available for expectant mothers on occasions when midwives have to call in for a doctor (Ministry of Health Circular 1705. 10. M Stationary office 1 d. nett). The recommendations are that a panel of doctors who will be available for the service should be drawn up for the area of each authority and that a small advisory committee should be set up to advise the authority in regard to the operation of the arrangement and on any alteration that may be deemed necessary in order to secure and maintain a high standard of obstetric practice. It is hoped that the adoption of arrangements on these lines will help in reducing the present maternal mortality rate in England.

Will Madras move in line with this?

—“The Health Propaganda Board.”

Holy Waters of The Ganges

India's Sacred River Helps Medical Science

THE river Ganges is considered by the Hindus to be sacred, and they affirm that its water is pure and cannot be contaminated. We would consider it to be reeking with filth all the time for at Benares, the principal holy city in India, millions bathe in the river every day as a religious privilege and duty. Sewage, dead bodies and all sorts of refuse are also thrown into it.

Yet it is a striking fact that ships leaving Calcutta for England take their water from Hughli River which is one of the mouths of the filthy Ganges, and this Ganges water will remain fresh all the way to England. On the other hand, ships leaving England for India, find that water they take on in London

will not stay fresh till they reach Bombay, the nearest Indian Port, which is a week closer to England than Calcutta. They must replenish their water-supply at Port Said, Suez or Aden on the Red Sea. It is because the water of the Ganges is sacred that it will remain fresh during the journey from India to England, and is the water of the Thames so unholy that it will not remain in a fresh state until it reaches India?

Strange though it may seem, the probable answer is that the water of the Ganges remains fresh because it is so filthy. Certain recent bacteriological discoveries at least tend to prove the assumption.

—“Hindu.”

Don't Take the Risk of Consulting Your Doctor by Telephone

THE risks of consultation by telephone were revealed at the inquest on Lady Rankeillour on April 28th, 1938. A patient had been suffering from a skin disease—her teeth had been extracted and she was under the care of a nurse who had been attending her since last November. Her medical attendant was paying her a visit once a week. The nurse, to summarise the evidence she gave at the inquest, telephoned to the doctor that the patient was unable to sleep. She asked his advice and mentioned the possible use of paraldehyde about which he had spoken some time before. She understood the doctor to say that she give 6 oz. in 8 oz. of paraffin. She had not given paraldehyde to a patient for 16 years and she did not remember the dose. She wrote down what she understood to be the doctor's direction. She asked if she could obtain it without a prescription and he said “Yes.” She then asked a chemist for 20 ozs. in a bottle. She administered the dose of 6 oz. in paraffin by the mouth before giving $\frac{1}{2}$ gr. heroin

by hypodermic injection. She found next morning that she could not wake the patient. The doctor was hurriedly communicated with and he at once denied that he had ordered a dose of 6 ounces. He was sure he had said “6 drachms” over the telephone, while the nurse evidently had no doubt that he had said “6 ounces.” Dr. Jhon Taylor, pathologist, who stated that death was due to syncope, informed the coroner that the official dose by the mouth was from $\frac{1}{2}$ to 2 drachms. The coroner repeatedly pressed the nurse about the disappearance of the piece of paper on which she had written down the doctor's instructions. The witness, who was naturally distressed, could say no more than that she had torn it up. After all, as she pointed out under pressure, the note was in her own handwriting and she could have written another one if minded to deceive the tribunal. The family of the deceased generously abstained from accusing any of the parties of negligence. The inquest brought out the fact that paraldehyde is neither a

poison on the Poisons List nor a dangerous drug within the 1920 Act. There are no restrictions in obtaining it. The chemist who supplied it was understood to have told the nurse that 6 oz.

was a large dose and that he thought the maximum was 2 oz. He was aware that it is a drug which is somewhat flexibly administered.

—“*The Lancet.*”

What is Cancer?

IT is a kind of growth in the human body presenting specific signs and symptoms and producing very dangerous effects.

It is not caused by any specific microbe as in the case of Syphilis and Tuberculosis. It is neither infective nor contagious.

There is something peculiar in this disease, which deceives one and all. Medical science has revealed that excess of irritation on any part of the body has the tendency to bring on cancer—inadequate food is another factor pointing out malnutrition.

Cases that come under observation show the specific places where the disease occurs and which point to the chief causes.

Lips, cheek—tongue—breast—generative organs—are some of the common situations in the human body where cancer occurs. From this we can easily judge that what we said before that some irritation somewhere in the body is the important thing we have to look for.

We said we get cancer in lips—tongue—cheeks, etc. You know the most common habit in our people of chewing

betels and tobacco beyond moderation. It is not uncommon to find our men and women too constantly rolling their tongue in the mouth with a lump of tobacco and betels. It is this lump together with the excess of work given to the muscles of the jaw render the soil devitalised and brings on degeneration of the tissues underneath resulting in a localised lump which later on begins to bleed, render the mouth unhealthy and swollen and has a great tendency to systemic infection.

So also in breast feeding. Our mothers are very fond of feeding their babies very frequently without any sense of regularity of the feeds and hygienic principles. Constant feeding brings on irritation of the breast muscles and the result is cancer. The same thing holds good in some of the internal organs—like liver, stomach and anal canal. These are very delicate parts in the body which get easily devitalised when irritative influences are brought upon them. Such as eating excess of hot things—alcoholic and smoking habits beyond moderation.

The characteristic symptom of cancer is that it is painless at first and this is often neglected.

Doctors speak of many types—some yield rapidly to treatment and some do not at all yield.

What we actually should know about this wretched disease is:—

1. Avoid all sources of irritation.
2. Avoid all bad habits—excessive smoking—eating tobacco—eating hot stuffs and straining when answering calls of nature.

3. Consult your physician for the disease has 2 sides—one the fatal and the other mild and curable. It requires very careful diagnosis and prompt treatment—success depends on early diagnosis and treatment.

4. Don't hide the disease especially cancer because of its painless nature at first.

—*Health Propaganda Board.*

Diarrhoea: Its Causes And Treatment

DIARRHOEA means too frequent evacuation of the bowels. It may be a symptom of a serious condition or it may be merely a slight reaction of the system to a temporary irritant. In either case it should always be interpreted as an effort of the body to adjust an offending condition.

The causes are described as primary or secondary. The primary causes are the simple causes. Eating immoderately, eating without discretion, as with unripe fruits, the partaking of articles of food which are of doubtful quality, such as milk, fish, etc., and erroneous dietetic habits generally act as inciting factors. Apart from physical causes mental and emotional crisis may produce diarrhoea. Grief, worry, mental strain and emotional upsets are quite common causes, although their effects are probably always related to a low state of general health and a toxic condition of the system.

Definite Disease Conditions.

Secondary causes of diarrhoea are other definite disease conditions. The

toxic substances which are developed in such a bodily state are passed into the bowel, which hastens their removal by watery and frequent evacuations. This may happen in all kinds of serious chronic diseases, like Bright's disease, diseases of the heart, lungs, etc. and occurs also in the infectious complaints.

Apart from the frequent movement of the bowel, there may be other symptoms. Sharp, colic-like pains over the abdomen may signal the attack, and there may be nausea or vomiting. In very acute forms there may be a slight rise in temperature and a good deal of prostration may be experienced. Similar symptoms may be found in the chronic condition, except that the attacks may not be so violent, and the general condition shows greater signs of strain.

A Repugnance which must be Respected

Those who are interested in discovering the region of the alimentary tract which is affected may be willing

to waste a good deal of valuable time in searching for details which are of minor importance, so far as the main issue is concerned. Effective treatment is the one essential, however, and in no case is it more important to realise that it is the patient and not merely the symptoms which must be treated.

In the acute form of diarrhoea all forms of food must be withheld. If there is nausea and vomiting, it is sometimes a good plan to give warm or hot lemon water, but as a rule neither liquid nor solid food is desired, and this repugnance should be respected. It is a common error at such times to resort to drastic purges, like castor oil and calomel. These agents are harmful, and especially so at such a time. By withholding food, acute attacks are usually quickly controlled. The only other active treatment required is to wash out the bowel once or twice a day. Use a douche of warm water, and give the bowel a good cleansing. This is particularly helpful if there is pain in the lower bowel during evacuation, but in any case it cleanses and refreshes the colon, affording the sufferer the required relief.

More Constitutional Methods For Chronic Conditions

It is important to insist that nothing should be taken to stop an acute attack of this kind. No one can tell how much trouble follows in the train of such preventive measures. After-care is a matter needing special attention, and two or three days spent in taking nothing but ripe

fruit juices will give the whole alimentary tract a rest and sharpen the digestive processes.

If the complaint has developed into the chronic stage more constitutional methods will have to be employed. The patient should rest in bed for a few days, and the douche should be used over a period of a week or longer. The diet should be restricted to fruit juices and baked apple pulp. In this way the intestinal flow will undergo considerable change, and a more healthy blood condition will be established.

Advantages of Nature-Cure Methods

This should be followed by a period of very careful dieting. It will be wise to avoid foods which irritate, and for this reason, skin and seeds of foods must be left alone. Probably the best plan will be to take one meal of soft, ripe fruit with milk, one meal of cooked vegetables, with egg or cheese, and another of dry starchy food such as rusks or twiced baked bread, with very tender raw salad. When the condition has been overcome a little meat may be added, if desired.

The advantage of Nature-cure methods of treatment in these cases is that they not only enable the bowel to restore its normal function, but assist materially in building up the general health, thus helping to eradicate from the body other disease-conditions from which the patient may be suffering.

—Reproduced through the Courtesy
of the "Health for All" Magazine,
London.

How to Overcome Constipation Naturally and Permanently

ONE of the worthy objects of any Health Journal is to promote bodily efficiency.

One of the chief reasons why so many persons suffer from bodily inefficiency to-day is because they do not observe certain elementary rules governing their digestive system.

From a bodily point of view, two of the most important things in life are the taking of food for the maintenance of the body and the elimination of the waste products of the used material.

In the past it was considered improper to discuss the working of these vital organs; the stomach, and intestines, or bowels, as they are sometimes termed. Hence, to-day, many persons remain in complete ignorance of how the digestive system functions and in consequence they suffer from listlessness and lack of vitality generally, from poor appetite, and constipation with resulting absorption of poisonous products into the system. Or they try to correct matters by the use of drugs, and so produce purgation which is worse.

Give your digestive system and your body generally a chance to function along the lines laid down by Nature, and good health will come to you naturally. It is the object of this article to show how this may be achieved, and how the bugbear of constipation or intestinal stasis, can be

avoided and overcome. In the first instance, a brief description of the digestive machinery is necessary.

What Happens to Your Food

As soon as the food is swallowed, it enters the stomach, where it remains for about three hours undergoing partial digestion. The stomach then expels its contents into the small intestine where digestion is completed; later, the nutritive products are absorbed in liquid form by the cells lining the intestine into the small veins of the gut, and so into the blood stream.

The food is only permitted to pass out of the stomach by the relaxation of a valve, and the presence of food in large masses tends to prevent this, so that adequate mastication of the food is essential. Further, mental or emotional disturbances while the meals are being taken will interfere with the nerve supply to the stomach, and so cause digestive errors.

The small intestine performs two kinds of movement, one for driving the food on and the other for ensuring adequate mixing of the food with digestive juices. About five hours after the meal, the contents of the small bowel pass into the large intestine, and this process is also rendered possible by the relaxation of a valve due to a nervous response, or reflex, caused by the entry of a subsequent meal into the stomach. The fact that relaxation of valves, or

"sphincters" as they are termed, in the lower part of the digestive tract, is dependent upon relaxation of the stomach valve, or pyloric sphincter, higher up, explains why it is easier to open the bowels after a meal, is thus of great importance when considering the subject of constipation.

While the small intestine is about twenty-two feet long, coiled upon itself, and active in movement, the large intestine, as its name implies, has relatively more capacity, though only about five feet long. It runs a comparatively straight course having only two bends in it, but is sluggish in movement and contracts once or twice, or, in some persons, three times, in twenty-four hours, in a manner which will be described later.

Importance of the Large Intestine

The residue passing to the large intestine is fluid in consistency, and is merely the waste product of the food. All nutritive material is normally absorbed in the small bowel, except where, as a result of purgation, the contents pass through too rapidly. In this case, the unabsorbed material is wasted because the large bowel does not normally absorb nutritive substances.

The waste products are chiefly of cellulose derived from vegetable matter, and it is the presence of this mass in the bowel which stimulates it to contract. It is essential, therefore, that this residue be sufficient in bulk to stimulate contraction of the bowel, or constipation will result. This will be

referred to again when the question of diet is considered.

In the large intestine, water is absorbed from the residue, converting it from a fluid to a mass, and for this reason the bowels must be evacuated with sufficient frequency to prevent their contents becoming too hard due to the over-withdrawal of water. In addition to the absorption, bacterial decomposition begins in the large intestine, and it is again important to ensure, by means of regular bowel action, that putrefaction does not proceed to the undesirable stage that brings about production of gases and absorption of poisonous substances into the system.

This is Important

Once or twice in twenty-four hours, following the entry of a meal into the stomach, the contents of the upper part of the large intestine, known as the colon, are passed into the lower part or rectum. Now, the rectum is normally empty, and when it becomes filled with the residue from the colon a desire to open the bowels is felt. This should be obeyed at once, for if the call be ignored, desire will pass away after a time, although the mass is still in the rectum, preventing the material higher up from passing on and, in its turn setting up the desire to evacuate.

Finally, if its messages are perpetually ignored, the continual presence of masses in it will convert the rectum into a dilated, flabby, insensitive organ, and constipation will have become established.

From the above considerations it will be seen that the two principal ways of

avoiding intestinal sluggishness are mechanical and dietetic. By mechanical we mean allowing the digestive tract to function naturally. We have seen that movement of the bowel is most likely to occur after a meal, so make it a habit to attempt to open the bowels every morning after breakfast, or your morning drink, and after your evening meal. "Straining" is bad, but allow plenty of time for the mechanism to come to action. For short people a stool used as a foot rest is a great help in allowing the abdominal muscles to gain purchase. Secondly, as has been explained earlier, if at any time a desire to open the bowel is experienced, nothing should interfere with the act being carried out, or the desire will pass away, and it will be a matter of some difficulty to clear the bowel of those contents, naturally, later.

Diet

It was shown that the food residue is the normal stimulus to movement of the intestine, so that foods with a "high residue" are best taken for the treatment of constipation. They are: green vege-

tables, fruits, whole cereal foods, and, to some extent nuts. Take these abundantly, and you should not experience trouble with your bowels. Fats are useful also as they lubricate the bowel to some extent. The diet outlined in Mr. Lief's article in the October, 1937, issue, and reproduced herewith, will be a useful guide.

Breakfast:—Fresh fruit only: hunger may be the guide as to quantity. A variety of fruits or a quantity of one kind may be eaten, just as desired.

Midday:—A salad of raw vegetables—lettuce, tomatoes, cabbage celery, etc., wholemeal bread and butter, stewed fruit, fresh or dried.

Evening:—Two or three kinds of steamed vegetables, with a cheese or nut dish or meat. Fresh fruit. (No bread to be eaten with this meal). Exercises practised in the morning on rising and just before retiring will prove helpful, as also will the cold sitz-bath.

—Reproduced through the Courtesy of the "Health for All" Magazine, London.

Among recent inventions for which patents were granted by the United States Patent Office are the following: An apparatus for compressing air against the ear drums. Object: to exercise the ears. A magnetic device to prevent high speed trains from jumping the track on curves. The centrifugal pull of the train as it rounds a bend would automatically increase the magnetic grip between train and rails. Rubber spats, to prevent wet ankles.—Doughnut shaped bath soap.

Hot Weather Comfort.

MUCH of our health and physical comfort in hot weather depends upon our ability to keep cool. To do this, we must first recognise the beneficial purpose and the definite designs that Nature has for our health and well-being in summer's heat, and plan accordingly.

Heat waves and hot weather are natural changes in our climate and to be welcomed in the interests of health. With its congenial warmth and sunlight, hot weather stimulates all the dynamic forces of our body, internally and externally, with the good intent of preparing us in health and fitness for the inevitable winter ahead.

Cell-metabolism (the wonderful process by which the cell units of the body are broken down and rebuilt, and energy produced) the circulation, the nerves, and the ductless glands all increase their activities in summer time, the growing season, with the object of rendering the body as physiologically fit as possible, and endowing it with reserves of strength and health.

Whether we are able to take advantage of its health-giving effects or not depends on how we adjust ourselves to the heat. One of the most important effects of hot weather on the human organism is the increase of toxic waste within the system, as the result of increased physiological activity, and the consequent need for adequate provision in our way of living for this increased waste to get away.

The pores of the skin open, the bowels relax, and the kidneys are more active in the endeavour to relieve the system of the fast accumulating foecal matter, uric acid, and waste residues of muscular combustion. We can best help these organs in their duties by making changes in our way of living to correspond with changes in the weather.

More than half the physical and mental misery of hot weather living is due to the fact that we try to live through the days on the same every-day fare, wearing the same clothes, and going about our daily routine in much the same manner.

As a result our body, lacking the means and the incentive to cope with more than normal waste, has to carry on with the excess body poisons accumulating and lodging in the tissues, and seeping back through the blood from the eliminative organs. It is not surprising that blood pressures rise, heads ache, hearts begin to labour and energies to flag under such conditions.

It is the retention of body poisons more than the atmospheric heat itself that causes fevers and overheating. Hot weather calls for a change in living that will give every assistance to the eliminative functions of the body. The most important, yet most forgotten, of these functions is breathing. From our lungs we eliminate the most powerful toxins of the whole body, and when hot weather rules, we need to practice

deeper breathing with longer exhalations.

Short spasmodic breathing raises the body's temperature. Try it. More rhythmic breathing, with long inhalation and exhalation succeeds in vitalising the blood stream and keeping it cool. A simple exercise on these lines which can be practised at any time throughout the day is as follows:

Whether sitting, standing or lying down, lift the chest well up arch the diaphragmatic muscles, brace the shoulders back and then let them relax. Breathe in slowly and steadily through the nostrils until the lungs are as full as possible without strain. Breathe out steadily through pursed lips, using the abdominal muscles to contract the lungs, and not the chest wall. Three minutes of this simple respiration has always a tonic effect in a heat wave.

While most of us make a change to our clothing, it is not always for the best. Light weight we certainly need, but our clothing should be light in colour also, for dark and drab clothes absorb the heat and have the effect of an oven on the body. Light coloured suits and dresses, however, reflect the heat rays and so assist in keeping us cool.

Our clothing should be loose and cellular in texture, in order that the air may circulate between it and the skin, and so give invaluable assistance to the speedy evaporation of perspiration from the skin so lowering the body's heat.

Exercise, too, has its place in keeping the body fit and cool. Stretching exercises, relaxed movements in the

morning, and an evening walk do much to keep lactic acids and metabolic wastes on the move, and give the organs a much needed tonic, especially if our work is sedentary. Violent exercise, however, particularly in the mid-day heat is to be avoided.

Tepid or warm water baths, followed by a brisk towelling, are always refreshing, as they serve to remove the film of acid waste that inevitably forms on the skins surface each day. When there is neither time nor facilities for a morning bath, a rub-down with a towel wrung out in well-salted water, followed by a dry towelling will be found beneficial.

All these measures are of limited value, however, unless we make a change in our food at the same time. The correct change in our menu on hot days will speed up waste elimination, tone up the organs, and so refresh the body cells. During a heat wave we have little need of solid nutritious fare. Our "fuel needs" are being largely met by the sun, and our real requirements are the cleansing, regulating and health protective foods.

In hot weather we are living under conditions similar to those who dwell in hot countries, and we should take a leaf out of their book and eat the foods that are imported from such countries, Tropical and semi-tropical fruits, with their large content of water, assist more efficiently in flushing and cooling the system, as well as providing valuable tonic vitamins and minerals.

Oranges, limes, grapefruits, lemons, pineapples, etc. are rich in the organic salts that lower bodily temperature and

guard against fevers and we should use them freely as drinks and breakfast foods. Dates, figs, prunes and bananas, used sparingly, give a peristaltic stimulus to the bowels, and so safeguard the blood pressure, while providing easily assimilated energy food in the form of grape sugar.

Apples, pears and our home-grown berry foods are rich in iron and phosphatic salts that improve the blood and nerves, while their juices are useful in regulating the kidneys and urinary system.

Much of the nerves strain of hot weather may be happily withstood if we include plenty of green salads and raw vegetables in our meals. Succulent salads provide an added quantity of naturally distilled water to the diet, together with minerals, salts and vitamins that police the blood, and assist in the efficient regulation of metabolism and the safe elimination of urea and cell wastes through the kidneys and the pores.

Salads also simplify the making of meals and are welcome in hot weather even to those who, at other times, may turn up their noses. Cucumber, melon, finely grated root vegetables, carrots, turnips, and parsnips provide blood cooling juices and a cellulose bulk that stimulates intestinal movement.

Lettuce, watercress, parsley, mint and other salad greens are excellent tonics to the kidneys and encourage nerve stability, while tomatoes, pineapple, olives and celery are gland foods. Three or four of these vegetables combine well to make a salad,

and by keeping the variety simple, many changes can be made from day to day.

On hot days it is better to cut out flesh foods and use other protein foods, such as fresh cream, cream cheeses, eggs, nut savouries and rissoles that do not add to the body's work of elimination unduly.

In hot countries spiced foods are usual, and in hot weather at home spiced dishes can be invaluable. With salads, the use of cayenne pepper, celery salt, mustard, paprika, and poppy seeds adds useful tonic qualities, while curried rice and savouries are excellent too. These spices have a therapeutic value, and by toning up the liver and the digestive organs encourage health.

The foods to avoid during hot weather are the slow burning, starchy foods, bread-stuffs, cakes, pastry, porridges and potatoes, and rich fatty fare. Instead of these it is wiser to satisfy one's hunger with the unleavened cereal biscuits and breakfast cereals, which are much more digestible and satisfying.

As up to four pints of fluid may be lost from the body on a hot day it is essential that we should make some provision for its replacement. The best replacement is by means of our food, and if every meal includes either fruit or vegetables we get their large content of water which is ideal for the body's needs.

Other drinks should be chosen from milk, buttermilk, fruit juices, etc., in preference to plain tap water, hot

coffee, cereals and cream, this combination or cocoa. These drinks should be taken in between meals, and sipped slowly through a straw. Iced or chilled drinks are in order, provided that we warm them in the mouth before swallowing them.

To gulp cold drinks down when heated is unwise, the chilly fluids paralyse the stomach, and hold up the smooth working of the system. When unduly heated, a hot drink of lemonade or tea with lemon is best. The hot liquid encourages immediate perspiration, which on evaporation leaves one feeling very much cooler.

The less work we can give our digestive organs in hot weather the more we can conserve our energies. For this reason it is better to have small meals of simple variety during

the heat waves, and cooling drinks in between.

Breakfast should be a tonic meal, based on fruit juices, and fruit with supplies all the necessary food elements in well balanced form.

Lunch is best composed of a salad balanced with eggs, nuts or a savoury, and cereal biscuits and butter. Dinner is best taken at night in the cool of the evening when the body can best deal with cooked fare. Two or three baked or steamed vegetables with a savoury dish, followed by a cold sweet or stewed fruit, should provide all we need.

In these ways, by making changes in our normal way of living, we can cope with hot weather, keep cool and come through the hot days with a smile.

—“*New Health*.”

Are You Hiding Small-pox Cases?

ONE important cause for the spread of small-pox in our cities is our carelessness of hiding an attack whenever it occurs.

There is a groundless fear in the mass mind that revealing such a case to the family medical attendant or the Health Officials would bring on untold sufferings to the family members, the neighbours and the suffering patient.

The picture of the patient being carried away from the house in an ambulance car, the process of vaccination to all the members of the family—the

use of daily disinfectants in the house by health officials are looked upon with terror and annoyance.

To avoid this trouble people hide the disease. Medical practitioners and health officials are kept in the dark. With very great difficulty, cases have to be hunted after and removed to isolation hospitals. We cannot but sufficiently impress upon the public mind the best and the scientifically approved method of preventing small-pox in your house is to get yourself vaccinated or revaccinated and report at once whenever an attack breaks in the family.

Overcrowding—bad hygiene—insanitary surroundings and congestion add to the spread of the disease. Our cities where proper housing accommodation is lacking where there are houses with overcrowded tenants small-pox usually occurs and if it is not reported to the Health Authorities or to the family physician untold sufferings to the members of the family and the public at large would result. Please do not stand on superstitions and ignore the laws of Health.

Enlightenment on the laws of health and hygiene have produced very favourable results on the mass mind in continental countries and we often hear statistical reports, pointing very few

cases of small-pox. There the masses are educated and are above superstition and get themselves readily vaccinated without any fear or force but voluntarily.

This is what we should do, in our country. You should not doubt about the efficiency of vaccination or the usefulness of the practical application of rules of Hygiene and Health. Whenever a case of this kind breaks in the house report at once to the family physician or the Health officials, and get yourself and the members of the family vaccinated. Disinfect the whole house and observe hygienic principles of cleanliness, good air and good food.

—"Truth."

Why Should Milk be Pasteurised?

IN view of the fact that there are many different opinions expressed both by producers and retailers of milk, and also the lack of knowledge on the part of the general public, I consider it necessary to point out the reasons for pasteurisation of raw milk.

There can be no doubt that the ideal to be attained is fresh pure milk direct from its source to the consumer. However, our motto in Public Health has always been "Safety First" and even for the sake of having good food, we must run no risk of transferring disease.

Better experience has proved in various parts of the world that milk may be a most successful vehicle for the transmission of disease organisms.

When we know that severe outbreaks of disease have been definitely proved to be due to infected milk, then some method of treating milk by artificial means must be adopted.

The diseases known to be conveyed by infected milk are as follows:—Tuberculosis, Typhoid and Para Typhoid Fevers, Dysentery, Diphtheria, Scarlet Fever, Epidemic or Septic Sore Throat, Epidemic or Summer Diarrhoea of infants, Undulant Fever, Foot and Mouth disease.

It is evident from this formidable list of diseases that cleanliness alone does not connote safety. Milk from a herd infected with tuberculosis or contagious abortion is never safe no matter how cleanly it may be produced. Reputable

dealers are anxious to have clean supplies if for no other reason than that dirty milk has poor keeping qualities.

Safety is the really important consideration, and in present circumstances the ordinary raw milk supply can never be regarded as safe. To ensure its safety, that is to say its freedom from pathogenic organisms, suitable heat treatment such as that afforded by efficient pasteurisation is essential. It may be as well to explain briefly what

is meant by efficient pasteurisation and its effect on raw milk. The standard adopted in this country is that milk should be retained at a temperature not less than 145 degrees Fahrenheit and not more than 150 degrees Fahrenheit for at least half an hour, and should be immediately cooled to a temperature of not more than 55 degrees Fahrenheit. With this method of pasteurisation little changes take place in the milk.

—"Better Health".

The Health of the Mother

AT a meeting held recently at the Ministry of Health, the Minister, while fully realising that a great deal of work for improving the health of the mothers of the nation is being done, expressed the opinion that we have two very important things still to do:—

- (1) The training of the people in the principles of good nutrition.
- (2) Persuading the mothers to make full use of all the facilities provided for their welfare.

A psychologist tells us that "expenditure of energy is not half so important as the intelligent direction of that energy." We are expending energy enough in all conscience; but are we always directing it wisely? Let us lay to heart the words of the Minister and see if we can improve our methods.

The Minister said that we must begin with the school children, those who in a few years will be the parents, we

must ensure that these have the chance of growing up healthy and we must instruct them in the principles of dietetics and of hygiene in general; the subject must be made real to them, a live issue, and must touch the circumstances of their homes.

If children are to be trained in right ways as to dietetics, we must put before them the duty of eating to live and not of living to eat, i.e., of thinking first of the pleasure we may derive from food rather than of the uses of food for the purposes of building up our bodies and maintaining our strength in such a way that we may be able to fulfil life's duties to the best possible advantage, that we may be fit and healthy and able to do our work well; this will, presently, include the work of parenthood, of handing on life in a healthy efficient fashion to those who are to take our place later on. If this is our goal we shall be willing to forego the pleasures

of eating sweet things in excess, especially between meals, to the endangering of proper nutrition. It is well known that when the appetite is sated with articles of this kind, taken at odd intervals, the person fails at mealtimes to take enough of the more important building and protecting foods, viz., proteins, fats, mineral salts and vitamin-containing articles.

A great deal of work is doubtless being done in the schools and by broadcasting in this direction; but the main principles are very slow to penetrate or perhaps it is more just to say that the people are very slow in opening their minds to the realisation of them.

Skimmed, tinned milk, the cheaper brand of tinned meat and fish, cheap jam and margarine, white bread and tea, figure far too largely in the menus of the people and vegetables are still cooked in such ways as will destroy most of their value. While this lasts and the people are content to have it so, we shall not build up healthy parents-to-be. Insufficient food of the kind that matters is the crux of the difficulty (not sufficient in the sense that the person has nothing to eat) and insufficient calories for the work and growth which should be taking place, insufficient material for the building of bones, muscles and teeth and the maintenance of these things in good working order. Without a properly built and maintained body how can the mother fulfil her maternal duties? How stand the strains and stresses of life, and, in particular, those of child-bearing and rearing?

Nutrition is affected by other things besides food; such, for instance, as insufficient rest and sleep, lack of fresh air and sunlight, overwork, worry and emotional disturbance; but this latter is largely related to the food we take; the state of our temper is very dependent on our being properly fed, and the badly nourished person finds increased difficulty in putting up with the other members of the family, school-class or workshop as the case may be, which difficulty must necessarily react on the home happiness or otherwise.

In carrying out rat-experiments, Sir Robert McCarrison has found that rats fed on a good diet, including whole cereals, milk and milk products (butter and cheese) pulses, raw roots, leafy vegetables and fruits with eggs and meat occasionally, live happily together; while the badly fed ones become thin, stunted nervous, with poor coats, some of them even taking to cannibalism killing and eating the weaker members of their community. Rats and humans are not quite alike, of course, but we may often learn useful lessons for our own lives by observing the reaction of our lower brethren.

Is there not another lesson to be learnt in this connection too, namely, that where the reproduction and bringing up of new life is concerned, food is of more importance than the keeping up of the appearances when money is insufficient for both? How much money is frittered away on things which have no real value, just to make a brave show, while the people have to go hungry, or rather to be inadequately fed, as a consequence? So

much for training the children; now for the Minister's second point;—He said that we must make it "the thing" for all mothers to attend an ante-natal clinic, and it must be recognised as a strange omission when they fail to do so (this refers, of course, to the great multitude of expectant mothers who are not under the care of private doctors); about 50 per cent. of such mothers attend now. If we are to persuade more mothers to attend our clinics we must have more sessions; this is by the way, and is a very obvious need to those of us who run the clinics; good work cannot be done if every one is hurried.

It was made clear that it is those who receive no ante-natal attention who form the bulk of the fatal cases and that the mortality-rate amongst those who attend well managed ante-natal clinics is very small indeed, well under a quarter of the average maternal death-rate in some cases.

This stands to reason, for we can foresee and provide against nearly every danger and difficulty, though not quite, if we are on the spot in time. It is when some unforeseen emergency arises after labour has actually started, that the trouble comes; often at night when there is a great delay in getting the services of a doctor, when light is poor, cleanliness impossible, and the patient is in no fit state to be removed to hospital; indeed when there may be no hospital-bed available.

An obstetrician of great experience gave it as his opinion that fear and anxiety were great factors in keeping up the maternal death rate. No doubt,

this opinion was correct and is another reason for getting the woman to go to the ante-natal clinics where, if anywhere, fears and anxieties can be allayed—where a doctor of exceptional experience can go into the case, weighing all the circumstances, and give well considered advice as to what should be done, while there is ample time to make all arrangements. As a matter of fact the women obtain great confidence and comforts from the visits to the clinic knowing that the reassurance they receive in all normal cases, which of course predominate, and the advice given in cases of abnormality are to be trusted.

Often there is something in the woman herself, unsuspected by her, which tends to render her unequal to the trial of labour, parturition and recovery; this can be found and treated early in the pregnancy and the danger removed; such things as septic teeth with abscesses at their roots, digestive troubles, impairing the nutrition of a well-fed mother, or defects in the diet of the poor which can be made good from public funds if only they are brought to light; the beginnings of toxemia (poisoning of the woman herself and of her unborn child by faulty metabolism—the constant change which goes on in our bodies, as we live, which in some pregnancies does not proceed on normal lines) too can be arrested if recognised early and both lives spared to health and happiness.

Pregnancy is a normal, physiological event we are constantly being told; but do we live normal physiological lives

in our great towns and cities and even in the country? Until we do so, we cannot trust every pregnancy to be normal and physiological and surely in

the aid of those who spend their lives in the study of the safety of the mother and child should be made fuller use of.
—“*Better Health.*”

Breathing for Fitness

NATURE provides hands, eyes, and lungs, limbs, senses and functions sensations and vital instincts. But in order to write with the hands, read with the eyes, to stand, sit, stoop or walk correctly with the limbs and body, and to breathe efficiently with the lungs, it is necessary that all these natural attributes should be trained and made efficient by the use of conscious intelligence.

Primitive man may have been guided by instinct, but, whereas his sensations were simply untutored, those of civilized man are a complex tangle of distortions. All the more need, then, for intelligently directing your functions towards a degree of health and fitness unattainable through the dubious promptings of sensation alone.

Man is still evolving but progressive evolution is not inevitable. Retrogression and degeneration are much more probable, unless there is conscious and intelligent co-operation with biological processes. Cultivated costal breathing is an example of this. Long full, costal breathing is a matter of conscious respiratory re-education.

Training not Straining.

In all combined muscular and breathing exercises avoid any harsh forcing

or overstraining of the muscles and the lungs. Nothing is gained by violence, by turning training into straining, or by over-doing it to the point of staleness and boredom. Remember that, as a rule, vigorous muscular and bodily movements should be made while exhaling rather than to the accompaniment of a tense, indrawn breath.

While out walking in the country, or in the fresher and purer air of parks and open spaces, make a habit of long full, rhythmic breathing.

Exhale for as many steps as possible, then inhale for about half as many, letting the fresh, pure air flow in naturally to fill the squeezed-out lungs, to their deepest crannies. Fourteen steps out and seven in is a good normal number, although for going uphill you may have to change to a “lower gear”. Generally you will find that you can walk twice as far and as fast without feeling tired. The same rhythm may be practised while standing stripped before an open window, walking steps being substituted by counting or marking time. The accent should always be on the outward breath.

Benefits Of Better Breathing.

Take long, full breaths whenever you think of it—which should be

increasingly often—until long breathing instead of shortness of breath becomes habitual. With the long, wide, full, backward and upward breath from the waistline comes, inevitably, increased endurance, strength, stamina, vitality and elasticity of the lungs. This will be apparent in improved staying power if you have to run hard or make any sudden or exceptional exertion, and in increased vocal power and volume when you speak or sing. The whole body, including the brain, will benefit by the more abundantly oxygenated blood. Resistance to most forms of disease or infection will be invigorated considerably. Cough and colds will trouble you rarely.

To breathe intelligently is one of the first foundations of physical health. It is the beginning **from within**. Even in these days, when physical fitness is much more to the fore in the health front than previously, it is still assumed that chest expansion is a matter of external muscular development, whereas natural lung power and improved respiratory capacity are seriously hampered by superficial efforts to develop the outside first. Internal training for the lungs should precede all outward training of the surface muscles.

Stand erect, with head level and chin in. As a preliminary exhale completely. Now without straining, inhale a long slow breath through the nostrils, at the same time repeatedly contracting and relaxing the abdominal muscles in slow alternation. Consciously resist any inclination to breathe below the waistline or distend the abdomen. Concentrate on all round expansion of the chest

and ribs, sideways, forwards, backwards and upwards from the waistline.

Hold the full breath a few moments, then exhale slowly and completely, keeping up the alternating tension of the abdominal muscles all the time. It is helpful to span your hands lightly over your ribs on either side so that you feel their rise and fall. Repeat this exercise regularly and at odd moments until respiratory control is perfected in all its details.

A simple and effectual breathing exercise for promoting rib expansion and at the same time developing the shoulder and chest muscles is the following: Extend the arms in front at a downward angle of about 45 degrees, hands side by side with palms down and locked thumbs. Empty the lungs. Then, keeping the arms straight, raise the hands till they are above the head, holding the chin level and not hollowing the back or bending of the body in any way. While doing this, breathe in slowly. Hold the breath while bringing the arms down sideways with a circular movement. Breathe out lowly and repeat. Vary the exercises by exhaling as the arms are raised and inhaling as they are brought sideways and downward.

Another exercise resembles the breast stroke in swimming. Empty the lungs with a quick expulsive breath while taking the starting position—finger tips touching in front of the chest, hands and bent elbows making a straight line at shoulder level. Now extend the arms forward with hands together as in swimming, inhaling a long full

breath. Hold the breath while sweeping the hands and arms outward in a circular motion until they stretch sideways from the shoulders. Slowly exhale while bringing the hands back to their original position. This exercise will be found to increase your sense of backward expansion of the ribs, which is just as important as their lateral and forward distension.

Abdominal contraction may be combined with each of these exercises if you like. Practise, also, dilating your nostrils, rather like a horse does. Some fortunate people can do this easily and have naturally wide nostrils; in others the nostrils are narrow and inert. In

the latter case it is helpful sometimes to hold the nostrils open more widely with the thumb and fore-finger of each hand while exhaling and inhaling a few long full breaths. The feeling of increased freedom in breathing thus gained is remarkable. Then alternately hold one nostril closed and the other open, breathing first out and then in through the open nostril. If preserved with regularly this affects a permanent clearance of the nasal passages which is sensed as a great relief in respiration. It also cures or prevents any tendency to snoring.

—"Health for All."

Dangers of Vaccination

Dr. S. Monekton, writing in the Quarterly Journal of the Research Defence Society, says: "Of course, nothing in the world is absolutely safe. A scratch of a pin may open the door to erysipelas or lockjaw. The bite of an insect may prove fatal and the vaccine vesicle on the arm may become infected by septic germs or by erysipelas as in the case of any other slight wound. Owing their origin mainly to incompetence or carelessness such accidents, while most deplorable, are, however, fortunately rare. In recent years, there is evidence that in this country and abroad, especially in Holland, acute disease, characterised in the human subject by symptoms indicative of an infection of the brain has occasionally followed vaccination. The occurrence of such post-vaccinal nervous disease, however seldom it may occur, is necessarily of serious import, and can hardly fail to have an unfavourable effect of vaccination. It is, therefore, well to point out that all the evidence at present available goes to show that vaccination, as such, is certainly not the sole cause of this complication."

—"The Medical Times."

SUNSTROKE

MANY laymen are under the impression that sunstroke has no actual entity; that the facilities one reads about in the paper the morning after a hot day are due to causes other than the sun. Some persons argue that the victims were not in good physical condition to begin with and that the added burden of the heat brought on the disastrous result. It is true that people who are subject to some disorder which debilitates them are more apt to be affected by exposure to the sun. At the same time it is a fact that healthy men and women may also be subject to sunstroke and that it is without question a disorder of a real kind. Sunstroke and heatstroke must not be confused as they are somewhat different in their cause, in the symptoms they manifest and in the treatment required.

What is sunstroke? How can one avoid it? What remedial measures can a layman take when some one is stricken with this condition?

Sunstroke occurs only when a person is exposed to three climatic conditions at the same time: sunlight, highly humid atmosphere and absolute dearth of breeze.

The human body is a marvellous mechanism in that it maintains a constant temperature under ordinary conditions. Heat is produced in the body by the oxidative processes in the muscles. On a cold winter day or on a hot summer day the body temperature will invariably be around 98.6 F; in other words, regardless of the surrounding temperature the body usually

maintains this constant degree of heat. When the surrounding air is cold the body retains its heat, whereas on a hot summer day the body gives up its heat, by conduction and by radiation from the skin. Under conditions of stress, however, heat is given up mainly by the evaporation of perspiration. During hot weather the body loses heat and thus remains cool, mainly by the evaporation of water from the skin.

If the surrounding atmosphere is saturated with water, as on a humid day, we may perspire; but the perspiration does not evaporate and therefore we feel hot. If there is a breeze blowing, or if we are exposed to an electric fan, the perspiration will evaporate more quickly and our bodies will lose still more heat, making us feel cool.

Sunstroke, therefore, is usually due to an interference with this evaporation of perspiration from the skin. It is usually due to the fact that the victims body contains so little water that he does not perspire freely enough, that the surrounding atmosphere is so humid that what perspiration he does produce will not evaporate, and that the air is still, without a breeze, so that what evaporation does occur is slow and small in amount.

The case is recorded of a man who had no sweat glands. On exposure to heat, or when working in hot weather, his temperature rose at once to 102. This man discovered, however, that if he wet his shirt from time to

time, he was perfectly able to go about his work.

It is interesting to note that dogs and some other animals do not perspire. Dogs lose heat in hot weather by evaporation of water from the tongue, mouth and throat. On a hot day a dog's tongue is always hanging out; he pants. It is important to remember that the dog, having only this relatively limited area with which to cool the body might be even more susceptible to heat injury than man.

The first step to be taken in avoiding sunstroke is to avoid exposure to the direct sunlight. It is not the ultraviolet rays of the sun but the infra-red or heat rays that produce sunstroke. During very hot weather the head should always be covered in the direct sunlight. The shades of the home should be drawn to exclude the sun but not to exclude what little breeze may be stirring. It is unfortunate that the old-fashioned habit of carrying parasols is frowned on these days.

In Africa it has been found that monkeys accustomed to tropical heat, quickly died when exposed to the sun in still air. Those in the shade of an umbrella or in the sun with a current of air from an electric fan, suffered no damage.

The next important measure in avoiding sunstroke is to be sure that there is an adequate intake of water and therefore an adequate amount available for perspiration. The amount of water lost on a hot day is astonishingly large. Three gallons of water are required by a man working on a hot day in the sun. In another experiment four men, on a

march of seven miles, lost an average of three pints of water each. In another experiment a man lying on the sand of a beach, lost over a half pint of water in one hour through perspiration. Therefore it is important to drink large amounts of water during the hot weather to replace this lost water. The water should not be iced. Ordinary tap water is preferable.

Next in importance is certainty that the skin is kept clean and free from dirt and oil in order that there may be no interference with free perspiration.

The amount of humidity in the atmosphere is a factor over which we have, unfortunately, no control. The humidity is greatest in lowlands adjoining bodies of water. Statistics show that sunstroke is commonest about the Great Lakes, in the Mississippi valley and along the Atlantic sea-coast. High altitudes are apt to be most free from humidity with the result that sunstroke is rare indeed.

The next important factor is to obtain a breeze if possible. Fortunately we can manufacture our own breeze these days by an electric fan. An experiment was performed by placing young adults in a closed chamber at body temperature. They soon became restless but when a small fan was started they were made to feel quite comfortable, even though the temperature of the room was unchanged. Army doctors, who are especially interested in sunstroke because of its frequency in the army, have repeatedly noted that men are better able to endure long marches and heavy work in heat when there is a

good breeze blowing, regardless of the temperature.

Sunstroke nevertheless occurs most commonly in large cities where people are crowded together and subjected to unwholesome surroundings, bad hygienic habits and errors of diet.

The consumption of alcohol has a direct relationship to sunstroke. When a man is exposed to conditions which make sunstroke possible he is more susceptible to the disorder if he has taken alcohol in any form. There is no question about this matter. It has been mentioned in army reports from the tropics and elsewhere. Alcohol has been recognised for years in India as one of the chief pre-disposing causes of sunstroke. In the Philippines our own Government observed that sunstroke occurred rarely, even among newly arrived troops, unless alcohol was taken in some form or other. Alcohol has been shown to cause diminished efficiency in the temperature-regulating mechanism of the body. Apparently large doses of alcohol inhibit the body's normal reactions to heat and cold.

In the largest epidemic of sunstroke New York City ever had, which occurred in August 1896 there were 648 deaths in one week. It was found at this time that the majority of cases occurred between 3 and 5 P.M. when the humidity was the greatest, and between 7 and 10 P.M. the latter cases presumably resulting from indiscreet dinners. The history of the epidemic did not show a single case of a Negro being overcome by the sun. It was also revealed in this epidemic and in others that one attack of sunstroke predisposes to subsequent ones.

One of the most important factors which predispose to sunstroke is indiscreet eating, such as excessive food of any variety, unfortunate combinations and especially fatty foods. Clothing should be loose and preferably light in color and weight.

Physical exertion should be avoided as much as possible in the heat. If this is impossible, the energies should be expended with discretion. Playing tennis or golf or racing about a beach during the dog days is a hazardous procedure.

An attack of sunstroke usually develops suddenly. The introductory symptoms may consist of general depression, headache, malaise, dizziness, abdominal pain, restlessness, insomnia, great thirst and convulsions. The victim becomes unconscious, and his skin is hot, dry and flushed. His temperature is high, reaching at times from 105 to 113 F. The pulse is rapid and bounding.

The immediate urgency is to remove the victim to a shady place, to produce a breeze by fanning or an electric fan, to loosen the clothing, administer water if possible and either take the temperature or estimate it by the heat of the skin. A good method of reducing the temperature is to place a sheet over the body and pour water over this or, if possible, to place the victim in a bath of 80 F. and add ice to the water until the temperature reaches 40 F. Apply ice simultaneously to the head. In case there is a tendency toward fainting, and unconsciousness, the administration of aromatic spirits of ammonia will help. The next step is

to call a physician. The results of sun-stroke may be serious, with sometimes permanent injury to the heart and brain. The tremendous loss of water produces acidosis. Following an attack the patient should remain in bed forty-eight hours.

—“Hygeia”

Fighting Malnutrition Among Students

Doctor-Teachers in High Schools
Orissa Government Sanctions Scheme

The Government of Orissa, at the instance of the Director of Public Instruction, has sanctioned a scheme for the inclusion of an L.M.P. doctor-teacher in place of a trained graduate in High Schools of the Province.

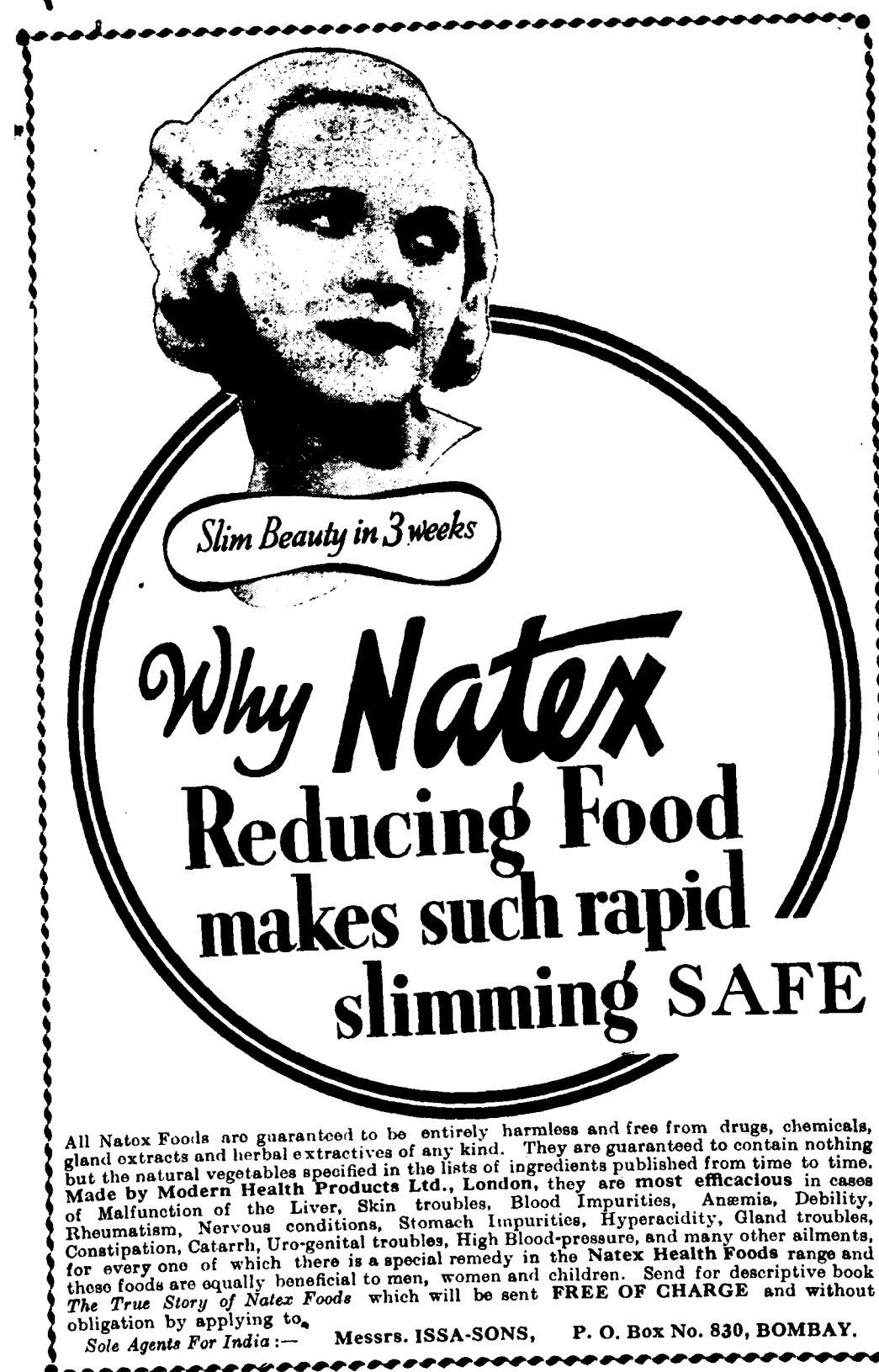
Besides doing the work of an ordinary teacher, the doctor is expected to develop the preventive and positive side of the health of the students.

In view of the findings that most of the students in High Schools are suffering from malnutrition and deficiency diseases, the experiment of appointing a doctor as a teacher, it is stated will be watched with interest.

—“Indian Express”

Quackery in the field of health is the greatest of all the menaces. Money, once lost, may sometimes be regained, but health once lost, is regained only with the greatest difficulty. Life, once lost, is never regained!

Various things affect walking: the type of shoes worn, the type of muscular co-ordination, the kind of clothing, the health of the body and the mental attitude.



Slim Beauty in 3 weeks

Why Natex Reducing Food makes such rapid slimming SAFE

All Natex Foods are guaranteed to be entirely harmless and free from drugs, chemicals, gland extracts and herbal extractives of any kind. They are guaranteed to contain nothing but the natural vegetables specified in the lists of ingredients published from time to time. Made by Modern Health Products Ltd., London, they are most efficacious in cases of Malfunction of the Liver, Skin troubles, Blood Impurities, Anæmia, Debility, Rheumatism, Nervous conditions, Stomach Impurities, Hyperacidity, Gland troubles, Constipation, Catarrh, Uro-genital troubles, High Blood-pressure, and many other ailments, for every one of which there is a special remedy in the Natex Health Foods range and these foods are equally beneficial to men, women and children. Send for descriptive book *The True Story of Natex Foods* which will be sent FREE OF CHARGE and without obligation by applying to.

Sole Agents For India:— Messrs. ISSA-SONS, P. O. Box No. 830, BOMBAY.

Tuberculosis.

THE considerable fall in mortality from pulmonary tuberculosis which has been so satisfactory a feature in the majority of recent years, was replaced by a slight rise in 1937, and for the first time for many years there was an increase in the deaths from non-respiratory tuberculosis. The increase in the pulmonary group may be accounted for by the severe epidemic of influenza at the beginning of the year, which was followed by an exceptional number of new cases. In the non-pulmonary group there has been such a substantial decline since the war—the death rate has been halved since 1921—that the small rise may not be of great significance. The incidence and mortality of pulmonary tuberculosis among young adults, especially young women which have caused much concern during the past 20 years, have fallen rapidly since 1931, though they remain high in Wales and the north of England. More use is being made of the dispensary service, for the number of cases dealt with last year was the highest on record, and no

doubt this points to greater confidence on the part of practitioners. It is doubtful, however, whether tuberculosis service is yet getting into touch with patients at an earlier stage. A considerably higher proportion of the tuberculous population is now willing to accept treatment in residential institutions, presumably because of their improved standard of comfort and increased facilities for modern treatment. The chief medical officer suggests that we may be suffering from a wave of over-enthusiasm for the surgical treatment of pulmonary tuberculosis, and he emphasises that the thoracic surgeon requires not only a special training in surgical technique but also a thorough knowledge of phthisiology to aid him in selecting suitable cases and deciding upon the correct time for operation. Experience of this kind of work is also essential in the medical and nursing staff which assists him, and for this reason major thoracic surgery at the smaller sanatoria is discouraged.

—"Lancet."

* * *

Striking or frightening children into good behaviour is another policy pursued by some parents. Such methods are indications of their inability to raise children properly.

* * *

Time alone will reveal whether all our preventive medicines will be for the good of the race in these long periods which are dealt with by history and evolution,

Vital Indian Health Problems

VITAL problems affecting India's health were reviewed at the Sixteenth Annual Medical Research Worker's Conference which was opened by the Hon'ble Sir Jagdish Prasad, Member for Education, Health and Lands, in Conference Hall of the Imperial Secretariat, New Delhi.

An unusually large number of medical and health interests were represented including administrative heads of Medical and Public Health Departments, distinguished members of the Women's medical profession, representatives of the Indian States, military health services, railway medical organisations, the Rockefeller Foundation, the Indian Council of Agricultural Research, and others.

General Bradfield addressing the delegates said he joined with the Hon'ble Member for Education, Health and Lands, in extending to them all a hearty welcome to Delhi.

Cholera Danger

General Bradfield made special reference to the question of cholera. The great danger, he said, which this disease continued to present in India was illustrated last spring when, as a sequel to the large Mela held in Hardwar, an epidemic broke out and spread over wide areas of the country.

Owing to the uncertainty which existed in regard to the relationship between the V. Cholerae and other vibrios, and in regard to the serological differentiation of the different types, the International Office of Public Health in

Paris had decided that special investigations on these questions were urgently necessary. As a result of earlier work, it had been made evident that many points could only be cleared up by research carried out in endemic and epidemic cholera areas and India was asked to undertake this work. Owing to the nature of the problem the work in India had naturally fallen into two phases one laboratory investigation and the other conducted in the field. The phase of laboratory investigation had involved the collection and detailed examination of some thousands, of vibrio strains from cases of cholera, from carriers and from water. This work had proved that vibrios of many different types were widely distributed in nature, but by the adoption of new serological methods, the true cholera vibrio could now be differentiated from other types, whose presence in water supplies and human carriers had in the past led to much confusion.

Field Investigations

With a new and reliable basis for the diagnosis of the cholera vibrio and with more accurate knowledge of the distribution of other types the Director-General said they were now in a position to undertake on an effective basis the second phase of the enquiry, namely the field investigation of the factors concerned in the epidemiology of cholera and particularly those concerned with its persistence in certain endemic areas. The Cholera Advisory Committee would, therefore, be asked to discuss a proposal to terminate the enquiries of

an essentially laboratory nature and to concentrate on field work in endemic areas such as were to be found in Bengal and Madras.

The work so far done had been undoubtedly productive and its value had been warmly appreciated by the International Office of Public Health. The Cholera Commission of that body in its report of May 1938 recorded its acceptance of the findings made in India which had answered the questions put forward by them in May 1934. Throughout these investigations close association had been maintained with workers of the Medical Research Council in England and it was hoped shortly to present a full and co-ordinated account of this work.

Nutrition

Turning to nutrition, General Bradfield said that further progress had been made during the year. A training course for health officers in public health nutrition work, including methods of carrying out diet surveys, was held at the Nutrition Research Laboratories, Coonoor, in February and March last. Fifteen officers attended, twelve being from Indian States and the remaining three from Delhi, Orissa and Sind respectively.

Satisfactory publicity had been given to recent work of practical value to India by the issue of a Health Bulletin entitled, "The nutrition value of Indian Foods and the Planning of satisfactory Diet." To increase the circulation of the important information contained in this Bulletin, the Government of India had agreed to issue it at the specially

low price of two annas. Nearly 25,000 copies had been sold. An up-to-date and enlarged edition was in the press, and an important improvement, which made the bulletin of greater value to the layman, was in the inclusion of Indian names for the different foods.

Last year the Nutrition Advisory Committee emphasised the finding that skimmed milk was of great value in improving the health and development of Indian children and recommended the milk powder containing not more than 4% of fat should be exempted from customs duty. This recommendation, he said, had been accepted by the Government of India, so that imports of skimmed milk from Great Britain were now free of all duty whilst the duty on that from other countries had been reduced to 10 per cent.

The important conference of Far Eastern Countries on Rural Hygiene held in Java in 1937 recommended the establishment of a National Nutritional Committee in each country. The Government of India had accepted this recommendation and had decided that the Nutrition Advisory Committee of the Indian Research Fund Association should perform the functions of a National Nutrition Committee for India.

The value of the work done under the auspices of the Association in the matter of nutrition and the high esteem in which the Association's Nutritional Laboratories at Coonoor were held by Eastern Countries, had been indicated, continued General Bradfield, by a request from the League of Nations

Health Committee that the Coonoor Laboratories should assume the task of co-ordinating nutrition research in the East. This request would come before the Governing Body for consideration at its next meeting. In March last the Governing body had given sanction to the acceptance by the Director of Nutritional Research of membership of the League's Technical Commission on Nutrition. During his leave this summer, Dr. Aykroyd attended a meeting of this Commission.

Malaria

Regarding their malaria organisation, he stated that disappointment was experienced when the Government found it impossible for financial reasons to take over the Public Health Section of the Institute, an important element of which was the Field Experimental Station at Karnal. In 1936 this conference had recommended that the Experimental Station should be transferred from Karnal to Delhi at the earliest possible date. There were obviously desirable reasons for making such a move. In the first place, it brought this important field unit into closer contact with the general public and with irrigation and other engineers. Moreover, a valuable museum had been built up at Karnal, but its remote situation was a serious handicap to its usefulness. The Government of India had agreed this year to give Flagstaff House in Old Delhi to the association for housing the field Experiment Unit and the transfer from Karnal to Delhi was now in progress. In addition, the annual malaria classes would in future be held in Delhi where the anti-malarial

schemes now more or less completed would constitute an excellent demonstration of the value of anti-malarial schemes based on sound knowledge.

Yellow Fever

Last year he had made a brief reference to the danger of the introduction of yellow fever into India owing to the rapid development of air transport. On two previous occasions at these Conferences General Graham, the late Public Health Commissioner, made a statement on the position as it then stood. An important part of their preventive organisation was the arrangement under which the Sanitary, Maritime and Quarantine Board of Egypt not only kept them informed of the movements of suspected passengers proceeding to India but also took steps to destroy mosquitoes which might be present in suspected aeroplanes coming to this country. Colonel Russel had visited Egypt last spring and later in the Conference would give them a description of the present epidemiological features of this disease and the preventive measures now taken in this country against possible introduction of infection.

After his visit to Egypt, Colonel Russel had also discussed the subject with representatives of air lines in London and later attended the May meeting of the International Public Health Office in Paris. He was able to present papers from Indian Research Fund Association workers on the following subjects; cholera, nutrition, quinize post vaccinal encephalitis, the population problem, and tuberculosis. General

Bradfield said they had been assured by the Director-General of the International office in Paris that the papers contributed by India were received with deep appreciation, and there was no doubt that the prestige of their medical research workers stood high in international circles. That position could only be maintained by careful thought, sound judgment and hard work and the Director-General hoped that it might be possible to continue to show to the world in general that India and her research workers were determined to maintain their leading place in the field of humanitarian and scientific endeavour.

A Primary Consideration.

General Bradfield concluded by impressing especially on the younger workers that, when choosing a subject

for research, they should always keep in mind the importance of its applicability to the improvement of the health of the people in India. This must always be a primary consideration with the scientific Advisory Board in making their recommendations to the Governing Body. Scientific research was a matter to which considerable importance was attached both by Government and the public. Their deliberations last year were the subject of wide interest and the valuable contributions made by workers in India to knowledge of disease were given much favourable comment both in the press and elsewhere. He was confident that their discussions this year would be equally helpful and stimulating.

—*Journal of the Indian Medical Association.*

Education and Discipline

EDUCATION and discipline together afford another stabilising influence. Sometimes you have a child who is anxious, unstable, bad-tempered, not sleeping or eating well, and yet whose home environment does not yield any explanation of his condition. In such a case, it is well to examine the educational situation. Of every ten children suffering from these nervous, excitable or violent disturbances, when there is no apparent cause for it in the child's home, nine will be found to have been wrongly educated using the word in its widest sense of discipline and training, not merely of school work.

During the war a great advance was made in the knowledge of mental disorder, for the war placed a tremendous

amount of clinical material in the hands of medical psychologists, whose research revealed that a mental process called repression lay at the root of most mental illness, if not all. Unfortunately the lay public seized on that word and interpreted "repression" as "discipline." It was deduced that if a child was allowed to do as he pleased, he would never become mentally ill. But the word repression, as used by scientists in connection with mental disorder, has nothing to do with the conscious mind, or with behaviour. It is a process by which thoughts yet unborn are kept out of the mind. But the faulty theory, based on an original misconception, that children should be allowed to do as they like is responsible for the instability of a great many people, and I am glad to

say that this erroneous theory is now giving way to something more sensible.

Discipline is freedom within limits. To discipline a child, in the right sense, is to teach him the rules of living—rules we all have to learn. We are bound to make dreadful mistakes if we are expected to find out for ourselves how to live. Such an expectation would throw on the child's mind more responsibility than we have any right to ask him to accept. Imagine yourself, having never ridden in a motor car, being told to drive to the other side of a foreign city you had never visited before. You would not set out with much confidence.

How to turn to the more practical side of actual education—we can now estimate with mental tests a child's mental age, his mental capacity in various practical and theoretical studies and his educational attainment. We can also judge whether the child's educational attainment tallies with his mental capacity; if it does not, something is wrong. Two-thirds of the nervous and difficult children sent to the London Child Guidance Clinic are doing school work three years behind the standard they should have achieved, and in one half of these cases the backwardness has not been recognised. If you do not adjust this discrepancy, you will get nowhere with the child. It is sometimes thought that the proper treatment for such children is to keep them out of school—that their trouble is nervousness. Their trouble is not nervousness, and keeping them out of school can only make things worse.

You do not have to drive the intelligent, nervous child. He will lap up interesting work as fast as you can give it—and by interesting work I do not mean play work. I mean reading,

writing and arithmetic. No subjects can be more interesting, and none are more essential to the development of the normal child. They are the core of all knowledge and all education.

Why is it that when the normal child is deprived of sufficient educational stimulus, he becomes nervous? Your child is producing a certain amount of mental energy all the time—the more intelligent the child, the more energy is produced. If that energy is being dammed up, he will become tense, and will fall a prey to the ordinary difficulties and fears of the ordinary persons. These fears are perfectly normal, but they are exaggerated by increased tension within the mind. If you can release the tension through work, the child becomes an ordinary child again, as indeed he has been all along.

Affection

Affection, along with discipline and work, is essential to the child's security. After the war there was a theory that a great many mental disorders were due to the fixation of child on parent, and people were inclined to distrust the natural impulse to express affection, in case it made the child too dependent on the parent. But the child must be dependent upon the parent up to a certain point, and this dependency can exist without a fixation, which is a pathological thing. Curiously enough, the importance to the child of natural affection is being stressed by the most advanced psychologists, the psychoanalysts. They are appreciating that affection between mother and child is a normal thing, and that it is far safer for the mother to allow her own natural instinct of affection to direct her behaviour towards the child, than it is for her to adopt some textbook technique of handling.

—*"Mother and Child"*

British Ideals of The Profession And The Public

WHEN we just finished writing our "New Year Greetings" to the members of the medical profession and were musing about another Leading Article quite accidentally by an involuntary act we opened the July 23rd edition of the British Medical Journal and it was a very happy coincidence that the page we opened contained a prominent head line "The Profession and The Public." The subject matter was an address by Dr. Colin D. Lindsay, M. D., the newly elected President of the British Medical Association delivered at Plymouth containing ideas on topics which are the routine items of discussion in the columns of The Medical Practitioner whose primary policy is to help the profession to be above want to be able to serve the public to the extent expected from its members. Dr. Colin Lindsay spoke from an experience of 40 years as a general practitioner and consulting physician and his views and opinions on the affairs of the profession are worth the serious consideration and respect of the members of the medical profession in India. The President of the British Medical Association laid great emphasis on the urgent need of educating the public on the medical care and advocated publicity of the activities of the members of the profession doing team work though not activities of the individuals. He rightly says Medicine is also an "Industry" whose product is the health both physical and mental of the community it serves. He compares the general practitioner to a retail division of health industry and presses the need of the

general practitioner having a 'close personal relationship with the public as individuals.' He deposes the present tendency of the credit of the general practitioner 'sinking' and says.

"This family doctor is the obvious connecting link for our medical industry. All direct contact with the public as individuals should be in the first instance through the family doctor. There should be no short-circuiting or duplication of his services."

We wish the specialists and the members of the profession serving in the Public Health Department to note the words of wisdom of Dr. Colin Lindsay himself a specialist. He says the general practitioner is no less in prestige, status and even in his knowledge of medical science than the specialists or the officers in Public Health Services. He describes the general practitioner as, 'a specialist in the recognition of diseases in the early stages...' and he wishes the profession to remember that, 'it is the general practitioner who sees the beginning of the disease; the specialist mainly the end.' Dr. Colin Lindsay's advice to the members of the Public Health Service was not less trenchant. He regrets that the correlation of the staff of Public Health Service with the general practitioner is at present 'extremely deficient,' and opines, that 'for any smooth working of the medical services in a community more effective measures of amalgamation must be applied between the two branches...' He believes 'that this can be supplied by the provision in

each administrative locality of a Medical Advisory Board consisting of representatives of each branch of the medical services—administrative, specialist and general practitioner.' There is also a reference in the presidential address that the general practitioner has lost his true estimation even from medical students though majority of them have to choose the life of the general practitioner after qualifying themselves. This perhaps may be due to the impression created by their teachers all of whom are specialists of one branch of medicine or other. The reference is perhaps intended to the teachers in the medical schools to warn them that such an impression will be

unfavourable and detrimental to the prestige of the general practitioner.

He concludes his address by saying:

"I do not presume to dictate a programme, but I humbly suggest that there are possibilities in the idea that at least merit our consideration, both as individuals and as an organised profession. I would like to suggest that as members of this great profession we have possibly an important missionary function in this cause."

We wish India could boast of a leader in the profession of the type of Dr. Colin Lindsay to guide the destinies of the medical profession.

—"The Medical Practitioner"

HOSPITAL ODOUR AND NOISE.

Shame causes woman's face to blush. Fear dilates a child's pupils. A nauseating sight makes even a robust man vomit the entire contents of his stomach. These instances show that the emotions have a profound influence on the working of the inner organs. There is a great possibility of applying this principle in the hospital.

Odour in the hospital may be pleasant or not. But best of all is a lack of odour. The bedpan odour sometimes noticeable, and even more the odour of the incense used to disguise it are objectionable. The smell of soap and lotion may suggest cleanliness and safety, but they are apt to remind the patient of illness and increase fear. With modern appliances and ventilation, odour is a preventable evil.

Noise is another psychological factor. Noise is an undue amount of sound of a disagreeable nature. Few are disturbed by a pleasant voice which is clearly heard, but there is nothing more tantalising than a raneous or half-heard voice.

We can multiply instances, but we have said enough to suggest that a little of the thought devoted to the physical well-being of the patient could with advantage be diverted to a consideration of his mental comfort,

"Health."



Noise on Health

EVEN non-melodious noises are sometimes agreeable because of their social environment. To a proud mother the wailing of her newly born child sounds perfectly angelic; to a hungry and thirsty man the harsh, noisy clang of a dinner gong gives a happy emotion, and, still more, the pop of a champagne cork. The noise of the bagpipes rouses a Scot to enthusiasm, but may infuriate his English neighbour. None of us wishes to discourage pleasant or happy noises.

But there are other noises which are unpleasant to most of us. They are irritating by upsetting our temper. And they may be even more damaging to our health.

What is it that makes some noises disagreeable? Firstly, discordant noises are offensive to the ear. For example, the barking of our neighbour's dog, the nocturnal serenades of cats on the roof, the loud hooters and noisy gears of motor cars, the open exhaust of motor cycles and sports cars in the streets, the clattering of milk cans, the noises of low-flying aeroplanes, and so on.

It is a curious psychological fact that nearly all offensive noises are produced by some one else. None of us is disturbed by our own snoring.

Secondly the sheer intensity or loudness of otherwise unobjectional noises may transform an attractive musical note into something offensive and even painful to the ear, as when we turn on the radio set too, loudly.

"Health."

Edited and Published by Dr. U. D. Gopal Rau at No. 57, Thambu Chetty Street, Madras,
on behalf of the Health Propaganda Board, Egmore, Madras.
Printed at The Artisan Press, No. 17, General Patters Road, Mount Road, Madras.

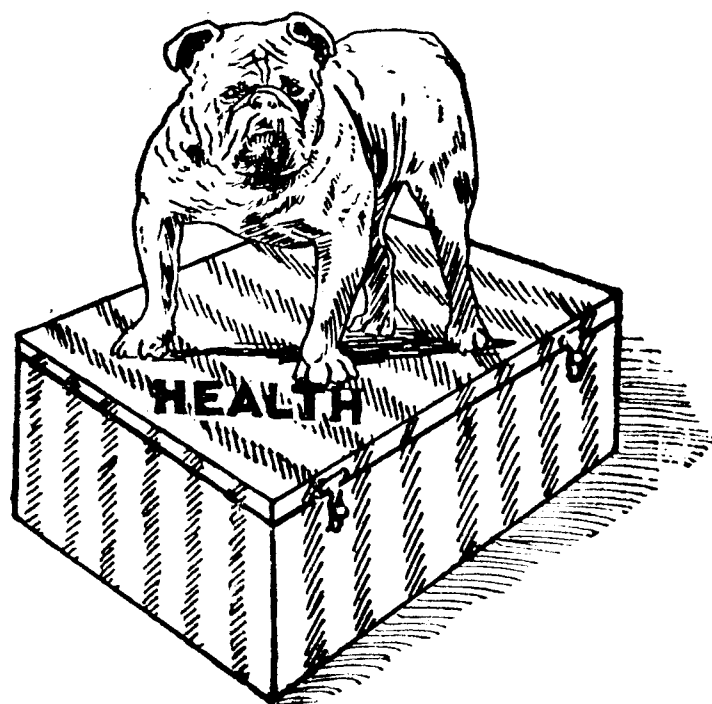
SCHOOL DAYS:

School days, School days,
They're our good health rule days,
Every child so alert and quick,
Healthy and happy and rarely sick,
And our proud parents can have no kick,
When we follow the rules
Of our School days.

School days, School days,
Commonsense health rule days,
Every child with a well-marked arm,
Should there be smallpox, will fear no harm,
And with T.A. no diphtheria alarm,
If all follow these rules,
In our School days.

School days, School days,
Nevermore are fool days,
For, Doctor examines our throats and teeth,
Eyes and tonsils, and lungs beneath,
While treated sight will good health bequeath
For the years that follow
Our School days.

Health Propaganda Board



Is a Treasure
That Needs Well Guarding

Edited and Published by Dr. U. D. Gopal Rao at No. 57, Thambu Chetty Street, Madras
on behalf of the Health Propaganda Board, Egmore, Madras
Printed at The Artisan Press, No. 17, General Patters Road, Mount Road, Madras

5 APR 1939
MADRAS

**KEEP IT WELL
IN HAND**

Page

Squeezing Boils is Dangerous ... 12

I Select White or ... 13

Bread for Eating? ... 13

The Handkerchief. ... 14

Posture, and Posture ... 15

Requirement and ... 15

Takes Your ... 17

ishment. ... 19

elp You. ... 21

use for ... 23

children. ... 24

... 26

Act 27

31

34

37

8

AROGYA-MARGAM

A MONTHLY JOURNAL DEVOTED TO
HEALTH & HAPPINESS PUBLISHED
UNDER THE AUSPICES
OF

Vol. II
No. 1

The Health Propaganda Board, Madras

• **APRIL** •

1939

•

SUBSCRIPTION
Rs. 1/4 per annum

"PANTHEON GARDENS"
PANTHEON ROAD
EGMORE :: MADRAS

Annas Two
per copy

YEAR'S ENJOYMENT TO KIDDIES

re enjoying your New Year

What about your kiddies?

Send for copies of health posters, leaflets, books, etc.

And have a health film at the Social function ;

And give your children health education

So that they could enjoy Health for many, many years.

Health Exhibits, Lectures and film displays

Could easily be arranged.

Write for particulars to:—

The Secretary,

THE HEALTH PROPAGANDA BOARD,
EGMORE, MADRAS.

CONTENTS

1. Public Health Conscience (Editorial)...	Page 1	14. Squeezing Boils is Dange- rous ...	Page 12
2. You Should Welcome In- troduction of Public Health Bill in Madras...	3	15. Shall I Select White or Brown Bread for Eating?	13
3. A Health Conscience ...	4	16. Use of The Handkerchief.	14
4. What is Pneumonia Fever?	5	17. Poise, Pose, and Posture— Their Acquirement and Preservation ...	15
5. Sound Teeth		18. Why Doctor Takes Your Temperature ...	17
6. Some Facts About Pneu- monia	6	19. Causes of Ill-nourishment.	19
7. Importance of Rest Periods in Schools?		20. How Yoga can Help You.	21
8. Fight Against Heavy Mortality Rate ...	7	21. Lack of Sleep, a Cause for Malnutrition in Children.	23
9. Clothing ...	8	22. Small-Pox ...	24
10. Virtues of Tomato Juice...	9	23. Health and Cleanliness ...	26
11. Helpful Parents ...		24. The Madras Public Health Act	27
12. Beware of the Poor Quality of Patent Cod Liver Oil Preparations in India ...	10	25. Public Health—The Foun- dation of Nation-Building	31
13. Why Mothers Die? ...	11	26. Medicine and the Law ...	34
		27. Acknowledgment ...	37
		28. Healthgram ...	38

IMPORTANT

All the manuscripts for publication, books for review, Exchange of Journals and other correspondence relating to the Editorial Section should be sent to the HONORARY EDITOR, *Arogya Margam*, 57, Thambu Chetty Street, Madras.

Original articles are accepted with the express understanding that they are contributed solely to his journal. All matters published in *Arogya Margam* is copyrighted.

The manuscripts must be typewritten, and double spaced, and the original copy should be submitted. Blocks for illustrations will be supplied by us if the original illustrations are sent.

The Honorary Editor reserves the right to alter, delete, or make necessary changes in the matter sent for publication. No reasons will be given for rejecting articles.

All business correspondence, advertisements, subscriptions, and other payments should be made to the SECRETARY, HEALTH PROPAGANDA BOARD, Pantheon Gardens, Pantheon Road, Egmore, Madras.

ADVERTISEMENTS

Complete copy, instructions and blocks must reach this office not later than the 5th of every month in which the advertisement is to appear. It is understood that the old text (running) is to be printed, if no new copies of advertisement reach this office a month previous to the date of publication of *Arogya Margam*.

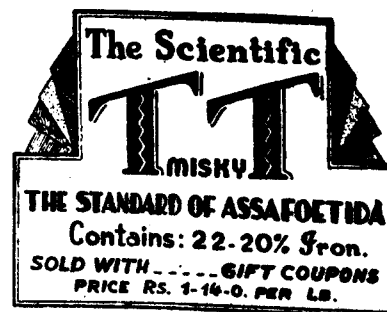


Her Little Doll

This wise mother gives her child an early introduction to the rich deliciousness and the extra goodness of

Simplifies Digestion

- ★ Mother Recommends
- ★ Father Appreciates
- ★ Children Like it



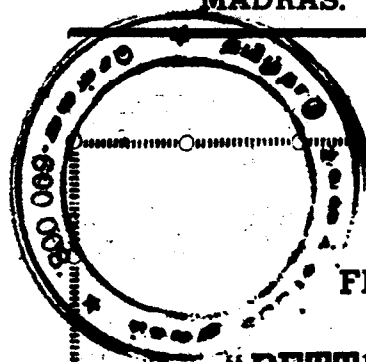
RASHID JAMSHED SONS & CO.,

H. O. BOMBAY 3

222, Govindappa Naicken St.,
MADRAS.

96, Palace Road,
MADURA.

56, Chakrapani Sannadhi,
KUMBAKONAM.



Reduced Offer!

Copies of

FILM ON TUBERCULOSIS

entitled

"BETTER LATE THAN NEVER"

prepared for

THE HEALTH PROPAGANDA BOARD

by Lt.-Col. J. R. D. WEBB, O.B.E., I.M.S.

Can be had now at Rs. 326/- per copy (4 Reels)

From the

HEALTH PROPAGANDA BOARD,

"PANTHEON GARDENS,"

EGMORE, MADRAS.

PUBLIC HEALTH

CONSCIENCE

(Editorial)

EDUCATE THE MASSES

BE a healthy nation—get yourself strong and sturdy—avoid dangerous and infectious diseases by timely and suitable preventive measures—drink pure water and avoid Cholera—get yourself vaccinated and keep away Small-pox—Breathe fresh air and avoid Tuberculosis—Eat good food and prevent mal-nutrition. These are some of the Health lines which one would not fail to observe in the activities of any organisation or society functioning for the purpose of maintaining Public Health.

Very serious and honest attempts would be made by such organisations to work out statistical figures and inform the public in facts and figures, the number of attacks and deaths in dangerous diseases like Cholera, Small-pox, Plague, Tuberculosis, etc. etc.

They show us in black and white the tremendous advances made in modern medical science and give us the exact details how

we could prevent serious and infectious fevers.

They collect details regarding the causation and the effects of diseases from all the available sources of information and bring on us really a moral pressure to see exactly with our open eyes the folly and evil of being ignorant of ordinary sanitary and health laws and the wisdom of knowing what a disease is, how to prevent it and how to be healthful and progressive in life. Their aim is to keep us ever healthy, make us healthy, and give us health.

How far we respond to the various appeals from such bodies and how we make best use of their health advices is a point worth considering. Here comes the test to know what that public health conscience is, how one would be interested to know the real ins and outs of diseases, how one could prevent them for his own sake, for the sake of his family members and lastly and

most important for the sake of the community at large—the public.

Our co-operation with the activities of the Public Health organisation depends to a very large measure on our achievement of health conscience, that is, a real inner desire to be always hale and healthy, our hearty wishes for others to be hale and healthy and our sincerity to give our best co-operation to such organisations which always stand for public health. Hence the success of any public health measure depends largely on the sincere co-operation from the citizens.

Our desire should always be to cultivate good habits of hygiene and health. This would mean mass education. This is the foundation on which we could easily erect a healthy nation.

School is the place where healthy impressions on good health could be made on the young brains. This will have a permanent foothold and when the boy becomes a citizen he would realise his responsibilities, of how he should behave in the matter of health and hygiene for himself and the members of his family and the community at large.

The above point could be easily illustrated thus. Take for example a doctor, a lawyer, a graduate or a cultured man he would think twice before he commits a nuisance on a public road. When sickness comes he would be the first man to take preventive measures. He gets himself and his family members vaccinated and would advise all his friends to do so when an epidemic of Small-pox occurs. The matter is quite different in an uncultured man. He is unmindful of the public conscience, commits openly nuisance on the public road. He is ready to go to the Magistrate and pay a fine of 4 annas and repeat the process again. He has no moral fear behind that what he does is bad not only for himself but also for the public at large. When an attack of Small-pox takes place he hides it—he is ignorant of Sanitary laws—so he is afraid of the Health Officials. The chief defect is—he has no education.

Hence we would urge on the authorities concerned the need for educating the masses. This is what is required now-a-days: compulsory education. This is the real foundation on which public health safety could stand firmly and strongly.

You Should Welcome Introduction of Public Health Bill In Madras.

OUR readers are not unaware that the Public Health Bill recently passed in the Madras Legislature would come into force shortly.

One wise step which the authorities have in view prior to the actual introduction of the Bill is the Education Propaganda. This programme would ensure a promising ground for sowing health ideals contained in the Bill on the mass mind.

Mass enlightenment especially regarding the fundamental principles of Health and Hygiene would easily pave the way for the healthy growth of a nation.

As it is, inspite of the activities of the various Health Organisations—official and non-official—we still find superstition and ignorance reigning supreme among the people at large. Mass education would remove ill-literacy. We gain a wider view of things that are healthy. We get a broader knowledge of diseases and how to prevent them and we become resourceful with the necessary and most up-to-date health laws to combat epidemic and infectious diseases and in short all of us could take pride of being easily able to dispel the cloud of mystery that hangs always in our mind regarding diseases and their ravages.

We are in duty bound to help the Public Health authorities and other voluntary Health organisations in their

endeavours to make us imbibe the health principles and keep us ever healthy and prosperous. Our hearty co-operation with their activities would be something like preaching Gospel of Health to the people in our own homes.

Scientific treatments are being ignored and diseases and death are supposed to be due to fate or anger of Gods. Instances are not wanting where very typical cases of Small-Pox and Cholera are kept without intimations to the Health authorities and family doctors. Thus infections are allowed to spread.

How we should educate the public in imbibing principles of the laws of Health and Hygiene is a point worth considering.

One should decide whether persuasive methods or prosecution methods would serve the purpose. Persuasion is the best and most fruitful and successful weapon for implanting health ideals in the mass mind.

Take for example a man committing nuisance in a public street. How to prevent this? No doubt, if a Police constable were to see him he would take him to the station and be dealt with according to law. Of course to an ordinary man in the street this punishment is nothing. He goes on repeating his bad actions and might escape prosecutions. His mind is disposed to evade the constable and he

does not care for other people walking in the street or house people witnessing his bad actions. He simply closes his eyes, passes urine on the side of the public road and walks away.

Our object should be to teach to the mass mind the sense of decency and cleanliness so much so men should really feel for their bad actions and not fear for the constable but must have a moral fear for any other man in the street seeing the commission of nuisance. He should really feel that what he is doing is bad not only for himself but to others also. When we succeed in implanting this health conscience in the public mind, we would have achieved a very great health ideal for which all health organisations have been always striving for.

The dramatic effect on the public mind produced by cinema pictures, processions on public roads and the consequent rush in theatres give us one important clue to study the mass psychology.

A regularly organised health procession carrying Health posters and

huge pictures depicting the horrors of diseases—what is a nuisance? How dangerous diseases result from bad habits would help a good deal to educate the mass mind?

It should be constantly dinned into the ears of the masses by organised processions the principles of sound health.

Medical men and other Health officials should strive hard to persuade the people coming under their care to follow rules of public decency and Health conscience.

Co-operation of medical and other voluntary health associations should be taken and regular organised health units should start functioning health propaganda with the only view to educate the public on the above lines viz. Health processions, health dramas—health posters, etc. Services of laymen should be enlisted and they should be trained in the propaganda work just on the lines where Boy Scouts are being trained.

—“Health Propaganda Board.”

A HEALTH CONSCIENCE

“It is a truism to say that the health of the coming generation is in the hands of the present generation of wives and mothers. Ignorance is the enemy of health. The general tendency of the educational system is to develop the intelligence, to train initiative and to impart some idea of sense of values and of proportion. It is clear, therefore, that the success or failure of our efforts to promote health depends largely on the development of a “Public Health Conscience.” Much is being done by the teaching and practice of hygiene and housewifery in schools, but much remains to be done in introducing the elder girls at least into the elementary principles of mother craft and child nurture.”

—“Better Health”

What is Pneumonia Fever?

THE most common name which the public are giving to this common fever which is responsible for a large number of deaths in our Country is what is known as “Kapa Jwara”—Fever with phlegm in the chest.

To the medical mind this name is out of place and complicating. He will not call “Kapa Jwara” as Pneumonia Fever. He searches deep into the various causes that bring on “Kapa Jwara.”

Science has proved that different germs of varying virulency occupy the breath organs and produce different types of diseases, say, for example, when the Tuberculous germ infects we call it Tuberculosis of the lungs or consumption. When pneumococci a particular kind of germ infects, we call it Pneumonia Fever. Here again there are different types.

Pneumonia fever is most dangerous. It chiefly affects adults; produces high fever, unconsciousness and death within a week. It is usually known as the captain of the men of death.

Is there no way to be free from this fell disease? Yes, by all means. The common cold or the catarrh of the upper air passages if neglected in the early stages will lead to infection of the

entire breathing canal and we get what is known as Pneumonia Fever the specific micro-organism being Pneumococci.

So one could realise the need for taking preventive measures and avoid cold and catarrh. Hence make it a point to avoid

1. Foul atmosphere laden with dust and dirt.
2. Avoid congestion and contamination such as crowded gatherings and infected places.
3. Breathe always pure air free from smoke and filth. Deep breathing is helpful to avoid cold and increase resisting power of the breathing apparatus.
4. Always protect yourself with warm clothing in cold weather and avoid chill and cold winds.
5. Keep the upper air passages, nasal canal-mouth, the entrances of the wind and food pipes, always clean and healthy by timely washes.
6. Take medical advice whenever troubles arise.

—Health Propaganda Board.

SOUND TEETH

It is generally admitted that if the school Medical Service could ensure that every child on leaving school had sound teeth it would be rendering the most practical and effective contribution possible towards an improvement in the general health of the nation.

Some Facts About Pneumonia

Pneumonia is an inflammation of the lungs

Chill, fever, pain in the side, a cough, with blood-stained expectoration and prostration—these are the red lights which call “Stop!” Go to bed, Call a doctor at once.

The death-rate from pneumonia is higher among males than among females.

Serums have been developed for several of the most prevalent types of pneumonia. To be of greatest value, serum must be administered early in the progress of the disease.

Practically every case of pneumonia begins with a cold accompanied by fever.

Few colds would develop into serious conditions if care were taken the first day or two to rest in bed, especially if there is a feeling of weakness. Drink plenty of water. Eat lightly and simply.

Pneumonia is an acute disease; its poison or toxins place great strain on the heart. Good nursing care is essential.

Care should be taken after recovery in resuming the usual habits of living, as it is easy to overdo.

Importance of Rest Periods in Schools?

Educational authorities in the Continent have realised the importance of providing regular periods of rest for children reading in schools. There are provisions for a midday rest for children who take lunch at schools. 20 to 30 minutes of rest is given under the supervision of teachers on whose shoulders fall this extra labour and which is well worth in the interest of both the teacher and the taught.

—THE HEALTH PROPAGANDA BOARD.

Fight Against Heavy Mortality Rate

TOTAL deaths in India are about 70 millions yearly. These are chiefly due to infantile mortality and to epidemic diseases. We have not been able so far to arrest the appalling infantile mortality or the many epidemic diseases which take a heavy toll annually. We may not be able to eradicate them, but we can certainly lessen the incidence of mortality to a great extent, if we put in requisite efforts and a determined will. This question has been often neglected and dismissed with the remark that India is a vast country and this is too great a problem to be solved, without at any time making effective efforts to solve the problem. The remark, therefore, implies or contains two premises that if India was divided into smaller parts the problem would be solved and the smaller parts will have sufficient money to do so. This on its face is an absurd proposition. What is required is an organising capacity and a will to do it. The authorities generally appear to consider that Indians have no souls and whether they live or die, as flies, is not very much a matter for those in power to be concerned with.

Qualified medical men find it difficult with all the accessories to diagnose diseases and there are so many deaths due to the limitation of the knowledge of our medical men. Imagine also as to how many deaths must have occurred due to the ignorance of those who are allowed to practice with impunity and those who are not qualified and whom we designate as quacks. Provincial Governments may help indigenous

systems and may bring them on scientific basis, as I have already remarked, but they should take courage in both hands and should put a stop to this evil of quackery with strong hand as soon as possible. The quack should no longer be left abroad to play with the lives of so many of our people. The practice of quackery also leads in lowering the prestige and value of qualified doctors and these quacks generally have a brisk trade as they unscrupulously promise quick recovery though the majority of their cases end fatally.

Dietary and Nutrition Problems

The question of dietary is now universally recognized as an important problem for the well-being of any nation and any country. Our Governments, neither the Government of India nor the National Provincial Governments, had so far seriously done anything to solve this question.

I have read that Dr. W. R. Aykroyd, Director of the Nutrition Research Laboratories at Coonoor, has established a liaison between Geneva and Far East and Dr. Aykroyd has been made the Officer-in-charge of the Department. It is also said that data had been collected from investigations in the Coonoor Laboratory on deficiency diseases, vitamin standards and analysis of foodstuffs. It will be admitted on all hands that the problem of nutrition is of vital importance to our Country and on its proper solution to a great degree the welfare of the whole country.

depends and any genuine efforts in this direction should earn the gratitude of all concerned. But it is a sad commentary that in spite of whatever the official reports on the subject may say, steps taken in this direction have borne no practical results. We have to recognize the fact that the greater number of patients in our Hospital register come for treatment of dyspepsia in some form or shape. In towns this trouble is caused by overeating and in villages by under-eating and mal-nutrition. If we analyse these figures we should have come to the conclusion long before that there was something wrong with our system of diet. Scientifically we know that salts, proteins, carbo-hydrates and fat are all necessary for the proper development of human body and that excess or inadequate quantity of any of these ingredients causes disease. The discovery of vitamins has proved that dietary forms an important item in human life. Here is a field where our profession can do a great deal in developing the physique of our countrymen and in diminishing the incidence of disease. We should take upon ourselves the important task for studying

the dietary of the different classes of our people and by experiments and investigations into the data available as well as by research we should be able to formulate a diet on scientific basis with proper ingredients which should be acceptable to all, of course with certain amount of variety to suit different localities and different communities and we should also give due regard to the fact that most of our people have only limited budgets.

But it will not be enough to formulate the dietary alone and leave it there, we shall necessarily be required to educate the people on this subject by intensive campaign and wide propaganda if we wish to decrease the mortality and increase the vitality of the vast masses of India. Whilst we are on this subject, I think, I cannot neglect another important subject, the necessity of light, ventilation, of adequate water supply and sanitary houses and surroundings, as nutrition alone will not improve matters very much unless these defects are tackled.

—*Journal of the Indian Medical Association.*

CLOTHING

Boys are often overclothed, and sometimes reluctant to remove superfluous clothing before taking exercise. The value and necessity of removing coats should form the subject of a hygiene lesson. Girls are always far more sensibly dressed. One wonders why parents insist on their boys wearing several thick layers of clothing, and at the same time dressing their girls in sleeveless and open neck frocks. They are probably influenced by convention. Cricket-type shirts and jerseys are probably the best clothing for boys.

Virtues of Tomato Juice

RECENT studies upon tomatoes have shown us that in tomato juice are to be found all the three vitamins called, provisionally A, B and C. The only other vegetables which contain all these vitamins are raw carrots among the root vegetables, and uncooked cabbage, cauliflower, lettuce and water cress among the green. The tomato is second to none as a vitamin source. While the orange contains much Vitamin C (the one which prevents scurvy) it contains practically no Vitamin A, and only a trace of Vitamin B, the vitamin which keeps the nerves in proper condition.

Vitamin A not only promotes growth of the body generally, but by keeping the mucous membranes healthy, it imparts to the body a distinctly anti-infective capacity. This is quite a recent discovery and one of the utmost value.

As a juice-providing substance, the tomato obviously has an enormous advantage over raw vegetables such as carrots and cabbages, for the juice of the tomato, with its slight acidity, is quite pleasant to the taste, and it is now possible to obtain a palatable preparation of raw tomato juice in bottle form. Thus we have a vegetable

product possessing in a most concentrated form all the three vitamins, A, B and C, whose presence in the diet of everyone, and especially of infants and young people, has been proved to be of immense importance.

Even the infants, therefore, may have their "cocktails" (to borrow that ugly Americanism) in the shape of a few drops of tomato juice in milk. Mothers would be well advised to keep a stock of this tomato juice in the nursery larders. It may be added to pasteurized or to boiled milk, as the case may be.

It is scarcely necessary to remark that the tomato contains also mineral salts such as calcium phosphate and salts of the mild and wholesome citric and malic acids. These contribute towards maintaining that state of chemical "neutrality" of the blood so necessary to health. Finally, there is one great advantage which tomato juice has over many other vegetable juices, namely, that it contains no oxalic acid. Those who know how injurious this substance and its oxalate of lime are to persons of gouty constitution, and to those whose kidneys are not acting too well, will fully appreciate this.

—*"Good Health"*

HELPFUL PARENTS

Attendances at school medical inspections, especially in connection with entrants, indicate a considerable interest on the part of the parents in the health and welfare of their children and are of great value in promoting the efficiency of the school medical service. The medical officer is thus enabled personally to explain the nature of any defect found in the child and to give proper advice with regard to treatment and after-care.

Beware of the Poor Quality of Patent Cod-Liver Oil Preparations in India

An examination recently made at the Biochemical Standardization Laboratory, Calcutta, of various samples of medicinal Cod Liver Oil used in India has shown that—

“Ninety-five samples of medicinal Cod Liver Oil, obtained directly from the open market in Calcutta as well as from the various Provinces of British India through the courtesy of the Heads of Medical Departments, were subjected to analyses, and the findings show that quite a fair proportion of the samples are definitely of poor quality, some of them not even containing certain active principles which may be responsible for the medicinal properties of the oil.

“Out of 95 samples analysed, 58 (61.05%) specimens were found not to conform to the standards laid down in B. P. 1932 and in the Addendum to the B.P. 1936. Forty-nine (51.6%) samples gave a free fatty acid value in excess of the maximum limit, indicating that these oils were either old, rancid or prepared from partially decomposed livers. Twenty-three (24.2%) samples were deficient in Vitamin A potency. Three samples (3.2%) were absolutely devoid of any Vitamin A content. Sixteen samples (16.8%)

failed to satisfy the requirements of the “Chill Test” indicating the presence of stearin.”

Countries of Origin

Twenty-nine samples amongst this lot were of foreign manufacture as evident from the labels on the original bottles or from the statements of the senders. Sixty-two samples had labels of Indian manufacturers and distributors. The source of 4 samples could not be traced. As Cod Liver Oil is not produced in India, it is presumed that these were imported from outside and bottled in this Country.

The analytical methods employed were essentially those described in the B. P. 1932 and in the Addendum to the B. P. 1936. The Vitamin A content was estimated both on the whole Oil as well as on the unsaponifiable matter, by the Antimony Trichloride Test, employing a Lovibond Tintometer with artificial light attachment. The readings obtained were converted into the Carr-Price ‘Blue Values’ for purposes of comparison with a standard Cod Liver Oil whose Vitamin A potency was determined biologically in terms of international units at the college of Pharmaceutical Society of Great Britain. The Vitamin D potency has not yet been determined.

The importance of Cod Liver Oil and its preparation in medical practice is too well-known to need special mention.

Cod Liver Oil is not only a rich source of Vitamin A and D but contains, in addition, a large proportion of unsaturated fatty acids, all of which are of definite therapeutic value. It is one of the few medicines universally used in

diseases where a deficiency of accessory food factors is suspected. It is also used for its food value in wasting diseases and in increasing the general resistance of the body against infective conditions.

WHY

MOTHERS DIE?

Enquiry in Calcutta

Deaths that need not occur

That in 96.3% of maternal deaths investigated there was an avoidable factor present is one of the findings which has been put forward, as the result of a statistical inquiry into the causes of maternal mortality lately carried out in Calcutta for a period of one year by the All India Institute of Hygiene and Public Health with a grant from the Indian Research Fund Association.

Cases of maternal deaths were collected from all female deaths between 10 and 50 years registered in the area under the control of the Health Officer, Corporation of Calcutta. Duplicate registration cards were supplied in the case of all female deaths between these ages and on these duplicates information was provided regarding the existence of pregnancy or the puerperal state. Considerable care was taken to ensure that duplicate registration cards were received

in all cases, but questions relating to pregnancy were not answered in every case. Complete accuracy is not, therefore, claimed for the series of maternal deaths.

Causes of Death

Each maternal death was followed up by home visits, interviews with the doctor, midwife or dai who attended at the time of delivery or visits to the institutions in which treatment had been given. The information collected was in most cases sufficient to make it possible to reach a conclusion regarding the probable cause of death and the contributory factors, and also regarding the preventibility of the death. But in some cases, these conclusions were largely conjectures based on the statement of relatives, for in 11% of the maternal deaths investigated no trained person had been in attendance.

Eight hundred and eighty-seven which 701 were found to be due to maternal deaths were investigated of directly to child-bearing:—

		per cent.
1. Septic abortion	33	4.71
2. Abortion (non-septic)	4	0.57
3. Ectopic gestation	6	0.86
4. Other accidents of pregnancy	7	1.00
5. Puerperal haemorrhage	74	10.56
6. Puerperal sepsis	224	31.95
7. Puerperal alb. and convulsions	126	17.97
8. Other toxæmias of pregnancy	15	2.14
9. Embolism and sudden death	11	1.57
10. Other accidents of child-birth	26	3.71
11. Other or unspecified conditions of the puerperal state	10	1.43
12. Anæmia	165	25.53

Puerperal sepsis, anaemia and eclampsia stand out as the most important causes of death due directly to child-bearing in Calcutta, while pulmonary tuberculosis was responsible for 40 per cent of deaths from diseases associated with child-bearing.

—Issued by the Principal Information Officer, Govt. of India, Delhi.

Squeezing Boils is Dangerous

1. A common error in the treatment of pimples, boils, and carbuncles is to try to squeeze out the pus. It is a dangerous practice as germs are likely to be squeezed into the surrounding tissues or into the blood-stream, and blood poisoning or septicaemia not infrequently results. This is particularly true of infections of the nose, cheek, and upper lip.

2. It is equally important not to meddle with the boils or pimples with a pin or needle.

3. The best treatment for boils is the use of hot packs made with one or two tablespoonfuls of salt in a pint of water. Repeat the compresses every hour until the boil is ripe. All boils and carbuncles, as well as any kind of infection on the face and above the mouth, should be cared for by a surgeon.

—The Health Propaganda Board.

Shall I Select White or Brown Bread for Eating?

IT would be of interest to know exactly the nutritive value of this common article of diet especially during these days when much is spoken of ravages done to our people by diseases due to mal-nutrition.

A man in the street does not know what is exactly the nutritive value of white bread and brown bread. He gets satisfied by eating bread which would satisfy his hunger.

The Scientific Investigation made by competent authority the British Empire Cancer Campaign runs as follows:

"It is common knowledge that white flour as a diet is thoroughly inadequate not only is it deficient in the vitamins but it also fails to supply a sufficiency of salts. In particular it is deficient in Vitamin A. Rats fed on the white flour of this country are, as a rule, not able to live for many weeks; they succumb to infection readily. They go out of condition, they lose spirit and become lethargic. They shed part of their coat and they suffer from eye trouble, in short, although they eat readily of the bread, they show every sign of dietary deficient in certain essentials."

Our readers should not go unenlightened on the scientific investigations made on this particular food.

Normal life cannot continue to function unless its physical vehicle is supplied with a correct proportion of mineral salts as well as protein, carbohydrates and hydrocarbons. But we find that white flour is definitely deficient in essential salts presumably due to processes for commercial purposes. Wheat as it grows seems to have been given special consideration by Nature in that the whole grain contains practically all the elements required by the human constitution. In the heart, wheat contains albumen which supplies and repairs the wasted parts of the body; then there is a natural and balanced starch which creates heat and energy; nuclein the germ of life; phosphorus a food for the brain of man; the vital mineral elements, equalisers, eliminators, and neutralisers; and lastly, the roughage essential to the movement of the bowels. That white flour is deficient in these qualities may be seen at a glance from the following analysis:—

Contents of white and whole-wheat flours.

	Whole Wheat	White
Potassium	... 7.20	1.82
Sodium	... 0.50	0.08
Calcium	... 0.75	0.42
Magnesium	... 2.88	0.44
Iron	... 0.30	0.03
Phosphorus	... 10.90	2.80

It is true that many scientists advocate the use of the white flour, but this only indicates the truth of Huxley's words that science operates chiefly for commercial bodies in the productive side and few only on the consumption side. And although the white flour advocates shout the loudest in the wilderness of ignorance it should be remembered that an empty vessel makes the most noise.

At the present day, in order to comply with superficial culture wheat and other cereals used for bread are milled until practically all the essential mineral salts are removed as well as the nucleins. This is done because the flour so treated can be stored for an indefinite period and thus comply with commercial requirements; yet without these normal mineral salts and nucleins the white corpuscles are helpless to

prevent the invasion of disease in the human body.

As bread constitutes one of the important diet of the average person, this may be the causative factor in the incidence of wasting diseases such as Tuberculosis and Anaemia due to Vitamin A deficiency.

National Health would be jeopardised and we would be laying the foundation for diseases if we do not carefully select our daily articles of diet.

The whole wheat bread is more nutritious than white bread. The former contains more active protein as it is in combination with its nutritive elements than in latter.

The nourishment obtained would be greater than that received from the proteins of white bread.

—“Medical Times.”

USE OF THE HANDKERCHIEF

Many of the children who appear before me with nasal discharge have no handkerchief at all, others have to retrieve it from an overcoat in the cloak room, whilst in other cases, when attention is drawn to the discharge, the mother produces her own handkerchief and proceeds to give the nose a perfunctory wipe. The importance of teaching the child to clear the nose himself and keep it cleared, always to breathe through the nose and avoid mouth-breathing, and the necessity of breathing exercises for such children is all too little realised. In this matter the teacher's help can be valuable.

Poise, Pose, and Posture—

Their Acquirement and Preservation.

Nothing is more disconcerting to the listener than the meaningless movements of a speaker who shifts his weight from one foot to the other, puts first the left hand then the right in a pocket, leaning against the table.

IMPRESSIONS as received through the eye are more intense than those received through the ear. Therefore it is exceedingly important to possess the proper attitude, whether or not one is obliged to appear in public, especially when proper attitudes are as easy to acquire as are slovenly, improper ones.

Poise, according to the dictionary definition, is balance, and balance means equality of weight. Nothing is more disconcerting to the listener than the meaningless movements of a speaker who shifts his weight from one foot to the other, puts first the left hand then the right in a pocket, sways against the table in front or leans against the wall behind him. Much more impressive is the easy poise of a soldier, for instance, whether a corporal or a general, as he delivers an address.

Pose according to the dictionary, is an attitude. Whether this be in standing, walking or sitting, it can be graceful, easy and artistic, or it can be slouchy, slovenly, ungraceful and anything but the outward expression of a fine attitude.

Posture also is defined as attitude, but as orthopedic surgeons use the term

it includes the numerous positions by the body in standing, walking, sitting or reclining. Anatomically speaking, it can be excellent good, ordinary, poor and bad, depending on many factors.

The proper attitude, when standing, depends on balance, which is an equal distribution of weight on all parts of the foot. A fallacy of the modern high-heeled shoe is that it is impossible to distribute more than a small fraction of body weight on the heel because the sole of the shoe slopes at a sharp angle. Balance depends on many factors, a number of which are under our control. Muscular development plays a large part in acquiring and assuming proper balance. For example, observe the easy grace with which a well-developed athlete enters a room.

As one determining factor in maintaining or losing proper balance, clothing is most important. With tightly fitting uncomfortable clothing and more particularly the tightly fitting high-heeled, pointed shoes, that are designed to make the toes turn out, it is impossible to have proper balance because they cause too much discomfort to the wearer. Many women have a stilled, awkward gait with toes pointed

outward; high heels prevent a straightening of the knee at any time. Occasionally one walks with a graceful, easy stride, and careful observation will reveal heels that are not too high and feet that are parallel, necessitating the use of the muscles of the foot and lower leg in walking.

Factors over which we have no control are inherited characteristics. Some persons inherit well proportioned bodies, some tall, others short: some willowy and others stocky. Whatever the inherited characteristics they can be markedly influenced whether for good or bad, by exercise, clothing, diet and, to a limited extent, environment.

Improper attitudes are usually not inherited, but they are the result of improper clothing, overwork, environment or other factors. Soon after children begin to walk, their movements are usually graceful because their bodies are well developed and muscular, and they are unconscious of any rules for posture. It sometimes happens that instructions from parents, teachers and other sources consist of a confusing mass of misinformation that does not help but rather hinders the development of the child. "Hold your hands down," "Keep your feet close together," "Turn your toes out," "Hold our head high," and numerous other admonitions can make the child assume anything but a natural posture. Adults probably forget that if the child has plenty of exercise, proper clothing and proper hygiene in his daily life, he naturally assumes a graceful, easy poise with few instructions. By the same token, adolescents or adults, whether

they be 20, 30, or 50 years of age, need have no instruction or make any special effort to acquire poise if they have proper daily exercise, if they wear proper clothing and shoes and if proper hygienic measures are carried out in daily living.

Clothing that fits tightly at the waist in a futile attempt to mask obesity crowds the upper abdominal organs high against the diaphragm. This crowding reduces lung and heart space and causes embarrassment of respiration and rapidity of heart action. Tight abdominal clothing also causes a pressure downward against the pelvic organs, frequently resulting in displacements especially in the female. A tight, so-called "well-fitted" corset gives a false sense of support which acts like a crutch and prevents development of the abdominal and hip muscles. What is the result? Instead of good posture in standing, walking or sitting, there is a slouch or a ridiculous artificial stiffness that is anything but attractive.

Shoes are frequently the cause of defective poise in an otherwise well proportioned, well developed and well poised body. Many shoes are designed and manufactured, primarily for appearance, not with the idea of giving the foot a proper covering and allowing the toes plenty of room so that the muscles of the foot may be used in walking.

What is the proper course to acquire, pose, poise and posture? Exercise proper dieting, proper daily hygiene and the use of proper clothing afford the answer. No one set of instructions

applies to all, and no group of instructions can entirely apply to any one individual. A physical examination by a physician would be most advisable to determine what type of exercise, what type of food and what type of clothing would suit the individual case.

Strenuous exercise in early life usually does not produce ill-effects, but a body and a heart that are well developed in early life need a certain amount of exercise to maintain the muscles in good condition. If they are not exercised, the large, well-developed muscles become flabby and fat and suffer from degeneration. Instead of being an asset they become a detriment.

We frequently hear of the sudden death of a comparatively young man who had formerly been a famous athlete and who in later years settled down to a sedentary occupation with little or no exercise. His muscles had become flabby and soft, so that any extra effort was too much for the heart, and the result was sudden death.

It is really surprising how an obese, clumsy individual whose youth seems rapidly departing can regain easy poise, proper pose, good posture and a rather youthful appearance by following a well-outlined campaign which includes proper clothing, proper hygienic measures, a supervised diet and regular exercises that are outlined by his physician.

"Hygeia."

Why Doctor Takes Your Temperature

THERE are three stand-bys that the doctor depends upon in diagnosing the condition of a patient; temperature, pulse, and respiration. Of these three, temperature is perhaps the most important. It is the diagnostic straw that shows which way the winds of disease are blowing; it is the red signal that warns of dangers ahead.

What is this handy signal that Nature uses in warning the trouble? What produces the temperature, and why should it remain so unvarying in its degree in normal health?

The human body may in a sense be compared to a furnace, its fuel being the

food that we eat and the process of digestion and subsequent changes in the tissues, corresponding with the burning of coal or coke. As different fuels produce different quantities of heat so different foods yield varying quantities of body heat. Fats give twice as much heat value in proportion to their weight as does protein or carbohydrate. For this reason Eskimos eat largely of fatty foods, while dwellers in the tropics do better on a lighter diet. But the source of all body temperature is the metabolism or burning of the food in the stomach and tissues.

How Body Temperature is Regulated

The rate at which the food burns varies in different individuals, and in the same individual, according to the body's demands, as a result of certain temperature-regulating devices divided among several bodily systems.

First, there is the glandular control of body heat. The thyroid secretion regulates the rate at which the fires burn; thyroid-deficient individuals burn their food slowly, resulting in a storage of the excess as fat. From the pancreas (a gland lying behind the stomach) comes the secretion called insulin, concerned with the burning of sugars and fats. Insulin deficiency results in an imperfect burning of sugar in the body, accompanied by an imperfect burning of the fats, the well-known condition called diabetes resulting.

Then the nervous system and the skin play an important part in the regulation of the temperature of the body. There are heat regulating nerves supplied to all the sweat glands. Other similar nerves regulate the small blood-vessels in the skin, making them contract or expand at will. When the body is overheated due to exercise, infection, or increased heat of the surrounding air, two things happen in the skin. The nerves to the sweat glands are stimulated, resulting in an increased secretion, which upon evaporation exercises a cooling effect in the skin. At the same time the blood capillaries dilate, allowing more blood to come in contact with the cooled skin. Fat acts as an insulator and for this reason fat persons have more trouble in keeping cool. A fat man may sweat more profusely than a thin one, yet he feels the heat more because the fat keeps the heat from reaching the cool skin.

The cooling action of the skin is reinforced by the organs of respiration. In a fever, breaths are taken more frequently and the consequent evaporation from the lungs helps to decrease the temperature. Dogs have no sweat glands in the skin and all of their heat regulation is done through the respiratory tract. Breathing over a wet tongue keeps them cool.

In addition to these two methods of temperature regulation there is thought to be in addition a nerve centre in the base of the brain, whose function is to regulate and balance the action of the sweat glands and the capillaries. Doubtless fever occurs as a result of the disturbance of these centres.

What Fever Indicates.

Now, what use does the doctor make of all this knowledge of heat regulation? He knows that the temperature-regulating mechanism is a delicate one, that under normal conditions the body is able to maintain an even temperature from day to day. Any deviation from normal is thus significant to him. He realizes that fever is usually evidence of some underlying body poisoning, resulting in a rise in temperature together with increased pulse and respiration rates. All of these things have a definite meaning to him.

What disorders does he suspect? A rise in temperature may follow fractures of the bones, or haemorrhage into the tissues such as caused in wide-spread bruising of the body. Other less common causes would be the entrance into the blood of proteins foreign to the body. There is thus a reaction stirred up resulting in fever. Finally, there is fever due to the entrance of living or dead germs, or other poisons, into the blood.

This is the most frequent cause of fever met with in actual practice. There are many who become frightened when fever is present and who have a horror of a high temperature. Actually, we should look upon fever as a friend. It is Nature's wise method of warning us that something is wrong. Fever shows that the body is putting up a fight. It is the signpost of the progress of any infection. By looking at it we can know where we are at any moment.

State of Temperature

The fever of certain diseases is very characteristic. In typhoid, or enteric fever, the course is described as being like a step ladder; that is, each night the temperature goes a little higher than the night previous until a maximum is reached. The presence of a slight rise in temperature in the afternoon or evening is very characteristic of lung tuberculosis. The temperature may not go above 99 or 99.6 deg. Fahr. and yet there is considerable infection present. In many cases the temperature may be slightly below normal in the morning with a very slight rise in the afternoon.

An Old Custom Refuted.

If there is fever present, care should be taken of the diet. The old custom was to "starve a fever." We now know that this method was detrimental and hindered recovery because during fever the metabolism is increased and the body tends to live on its own food stores. The burning of stored food eventually would produce a very toxic state, with possible damage to the liver. Taking our cue from this fact, we find that it is necessary to provide readily assimilated food during a fever. The best food is fruit juices. Dilute lemon, orange, grape, and grape fruit juices may be given in large quantities so that the total intake amounts to three quarts daily. Barley water, or dilute milk, may also be used. A tablespoonful of honey or glucose, or barley sugar, added to each glass of liquid helps to provide readily-burned carbohydrate. It is this carbohydrate or sugar, that protects the liver from damage during a fever and aids in burning up the fevered toxins.

In conclusion, let us look upon fever as a friend and not as a foe, realizing that it is one of Nature's aids to the physician.

"Good Health."

* * * *

Causes of Ill-nourishment.

Nutrition is more than a question of adequacy of diet. The bad influence of worry, insufficient sleep, lack of cleanliness, illnesses and general disobedience of the laws of health must all be taken into account. The introduction of milk meals to schools is a step in the right direction. Milk is rightly regarded as a valuable article of diet and even a medicine in the case of weakly children and invalids, but it must not be thought that the mere addition of a small quantity of milk to the diet of school children will produce a miracle.—Dr. H. J. Milligan, M.O.H., Reading.

—“Better Health”

HOW YOGA CAN HELP YOU

WHY is it that there are such marked physical differences in the various classes of humanity? In some persons we see diseased and distorted figures, and in others we see fine and perfect demonstrations of radiant health. Certain it is that some have had a much better chance in life than others, and our physical appearance reflects, perhaps more than anything else, the extent of those chances.

Most of us have been born at a tremendous disadvantage. We are only hanging on to life. Our parents knew not the vital power of deep breathing. They have not practised it in their own lives, and, in consequence, we have been content with the "three-seconds-in" and the "three-seconds-out" breath.

And so we are here, with our worries, and our aches, and our pains! What are we going to do about it?

Begin to Breathe

First of all, we must begin to breathe a little deeper; we must **breathe to live**; We have been breathing at the top of our lungs instead of at the bottom, and it is quite unnecessary for us to go through life with the resultant deficiency of our vitality.

Bad breathing not only means bad bodies, but bad brains also.

Dr. L. P. Jacks, speaking at the Regional British Conference of the New Education Fellowship, at St. Andrews University, declared recently that the inability of millions of people to stand,

sit, or breathe properly was one of the chief hindrances to mental education. "The fate of civilization depended finally on the quality of the human material that formed the substance of society," he said and in his speech the doctor stressed the necessity for underpinning our whole system of education by right physical culture.

Through the individual breath of a seven-seconds inhalation and a seven-seconds exhalation (seven being the universal number of this planet, meaning freedom) it is possible for thin, scraggy, and bony people to put on flesh. Also, when we practise this form of breathing we protect ourselves automatically from the onslaughts constipation, asthma, high blood pressure, and the many other diseases which are liable to attack shallow breathers.

In India.

Avoid a jerky series of movements in inhaling. Strive to attain a steady, continuous action. Practice will overcome the tendency to divide the inhalation into seven separate movements.

The value of deep breathing is shown by the fact that, in India, a great many diseases prevalent in other countries are comparatively rare, while more people of the ages of eighty and ninety years are found in that country than anywhere else in the world. This radiant health and longevity is ascribed by the Yogis and their disciples to the practice of deep breathing and natural living and eating.



Slim Beauty in 3 weeks

Why Natex
Reducing Food
makes such rapid
slimming SAFE

All Natex Foods are guaranteed to be entirely harmless and free from drugs, chemicals, gland extracts and herbal extractives of any kind. They are guaranteed to contain nothing but the natural vegetables specified in the lists of ingredients published from time to time. Made by Modern Health Products Ltd., London, they are most efficacious in cases of Malfunction of the Liver, Skin troubles, Blood Impurities, Anæmia, Debility, Rheumatism, Nervous conditions, Stomach Impurities, Hyperacidity, Gland troubles, Constipation, Catarrh, Uro-genital troubles, High Blood-pressure, and many other ailments, for every one of which there is a special remedy in the Natex Health Foods range and these foods are equally beneficial to men, women and children. Send for descriptive book *The True Story of Natex Foods* which will be sent FREE OF CHARGE and without obligation by applying to
Sole Agents For India:— Messrs. ISSA-SONS, P. O. Box No. 830, BOMBAY.

In an article which appeared in the **Daily Mirror** (London) recently the Rajah of Aundh, who was recently made deep-breathing exercises compulsory in his State, said that the Indian Yoga exercises enable the Indian women to retain a youthful beauty into advanced age. The exercises also were good for slimming and general fitness.

Rajah's 350 Exercises

Although the Rajah himself performs over three hundred and fifty different exercises a day, it is only necessary for an ordinary man to perform forty, and a woman twenty. In all the exercises the importance of correct and deep breathing is essential.

Major Yeats-Brown, famous author of **Bengal Lancer**, who has recently returned from another visit to India, where he has made a special study of Yoga methods, says, in an article which appeared in the **Daily Mail** (London), "I cannot get the exercise I need while earning my living as a writer, so I take a twenty-minutes spell of yoga in the morning, which gives me exercise, relaxation, meditation, and mild amusement.

You too, can and should, practise deep breathing until the eyes radiate brilliance and the blood seems to be coursing tumultuously through your veins. You will feed a sense of happiness the feeling that life is glorious and full, and you will realise that your widest dreams of radiant health can be substantial possibilities. You will at once feel exhilarated, instead of going through life with that "half-dead" feeling.

Breathing Builds or Breaks

Take long deep breaths while you mentally count seven. Hold your breath for a while. Then exhale slowly, counting seven again. Do this for five minutes three times a day until it becomes natural to you. It is not how we breathe once in a while, but how we breathe habitually, every day, that counts. It is that which makes or breaks us; it is that which builds up or tears down. It is no good doing it for one week or one month. Any one can do that. It is persistence that matters. It is the daily, hourly application that is going to give such glorious results.

Dr. W. Plenderleith Knowles, who had a wonderful war record is a strong supporter of deep breathing. Completely shattered by sharpnel, he was entirely disabled for years. He attributes his recovery to his breathing exercises alone.

Yogi Bends Iron Bars

General Dugdale, Major J. B. Paget, Colonel Frank Fisher, and a whole host of other well-known personalities have taken to inhaling by numbers breathing the seven-seconds breath.

Victor Dane reputed to be the only authentic and initiated white Yogi in the West, pins his faith, as all yogis do, to deep breathing. It has made Victor Dane so strong that he can bend iron bars, and control all muscles to such an astonishing extent that a film was recently taken of him by the International Institute of Psychic Research.

Remember, though, that nothing "just happens." You cannot jump into perfection. You have to work for

it, live for it, train for it—every second of the day. We have to be constantly on the alert to preserve our health, and we are the physically unfit nation to-day because of our past omissions. At last the West is beginning to learn what the East has known and practised for many centuries—the vital power of correct breathing.

More Oxygen Required

The gardener who grows grand flowers for show at some exhibition has to tend those flowers in a very special way, in order to make them grow better and more beautiful than the untended blossoms. Daisies are pretty, but it is the orchid, so ravishingly lovely and luxurious, that carries off the price.

Pedigree dogs and race horses have, in the same way, to be specially bred and trained to achieve the best. And the same can be said of us. If we want perfect health and a fine physique, we must work for it. Most persons fly to pills and medicines and expect them to do the work. What we all need is more pure oxygen. Do not simply take deep breaths at intervals, but breathe deeply always.

When you breathe like this you can concentrate the mind upon what you will, and be certain of fulfilment. It is claimed to be the perfect natural healer, rejuvenating you to such an extent that even if you have white hair, it will turn it black or brown again.

Indian Fakir's Feats

The Indian fakirs walk over red-hot stones, lacerate their bodies, eat fire, sleep on spikes, dance on broken glass, drink poison without harm, all by the power of deep breathing. Tibetan Yogis can sit naked in deep snow and keep warm by special vibratory breathings. They can run a hundred miles non-stop by the same method. If you are always feeling fatigued and utterly exhausted, stretch yourself. Throw back your head and wriggle about. To move is to live. Inactivity means death. Breathe deeply.

What we need to-day beyond all things, it would seem, is a method of physical training that will enable us to build up slowly brick by brick, edifices of radiant life, which will not only give us lasting health and joy, but also preserve our youth and vitality.

—"Health for all."

Lack of Sleep, a Cause for Malnutrition in Children.

"Film exhibitors in Blaenau-Ffestiniog, North Wales, have had to give an undertaking they will not admit children to their picture houses after 8 o'clock every evening. The condition was imposed by the Justices when they granted renewals of licenses, following a report by the medical officer of health in which he emphasised that children suffered badly from malnutrition, due chiefly to lack of sleep."

SMALL-POX.

ADMINISTRATIVE MEASURES.

EVERY authority, either by itself or in combination with other authorities, should provide adequate hospital accommodation for the isolation of cases of small-pox. In a disease which varies so much in its incidence it is very difficult to estimate with any accuracy the number of beds required. Now that motor transport is available the establishment of small-pox hospitals to serve the areas of a number of authorities is a sound administrative procedure.

As soon as the diagnosis of small-pox has been confirmed by the medical officer of health, the patient should be removed to a small-pox hospital. Particular care should be taken to ascertain that the ambulance driver and others who assist in the removal of patient or infected articles are first protected by revaccination. Disinfection of the infected house and its contents, and steam disinfection of all infected clothing and bedding, should then be carried out.

Contact

All the inmates of the house should be closely questioned. By this means a list of contacts, as complete as possible, should be obtained under four headings.

(1) Intimate contacts living in the same house (2) persons visiting the house, such as tradespeople, milkmen, insurance agents, and the like. (3) Persons who have been in contact with the patient outside the house, including fellow-workmen. (4) All relations living in the town, whether there is a history of contact or not.

At the hospital in which he is isolated the patient should be interrogated as to his movements about the twelfth to the sixteenth day, before the onset of his illness, and also as to his or her knowledge of cases of small-pox previously notified, or of cases said to have been chicken-pox. In one instance in my experience six cases of small pox were discovered by questioning the patient regarding cases of chickenpox of which he had heard. It is useful to read to each new patient a list of the names of previous cases; the patient may remember having been in contact with one of them.

Besides being interrogated as to contact, the inmates of the patient's house should be medically examined and questioned as to recent illness. Staining on the face, and more particularly on the arms, has been noticed three months after the patient had the rash, and previously missed cases have been thus been detected.

The routine procedure with contacts is as follows:—Note is made of the date and place of contact, the nature and place of occupation of contacts and their vaccinal condition. All who have not recently been vaccinated or revaccinated should be offered and strongly urged to accept vaccination. In my experience they do not usually need much persuasion. Having regard to the prolonged incubation period in variola minor, all contacts should be visited daily for at least twenty days,

whether they have been vaccinated or not. The vaccination or revaccination of contacts within three days of exposure may usually be depended upon to prevent the spread of small-pox from such persons. Vaccinations performed after three days have their value in that they may serve to protect against subsequent infection. Such vaccinated contacts, however, often necessitate much medical supervision. They may give rise to further cases through small-pox being more or less masked as a result of vaccination, the prodromal illness being mistaken for the vaccinal reaction, or the difficulty of diagnosis where the eruption is modified by the vaccination may lead to an actual case of small-pox being overlooked.

The Sanitary Inspector or health visitor should report immediately to the medical officer any contact or contacts who, as the result of the daily visiting, are found to be in any way ill and such persons must be visited as soon as possible by one of the medical officers dealing with the epidemic. All medical practitioners in the area should be informed of the occurrence of small-pox and the medical officers of health of contiguous areas should be acquainted with the details. The names and addresses of all contacts in other areas should be notified to the medical officers of health of such areas.

The occurrence of small-pox should never be concealed from the public and, if cases increase in number, posters should be issued recommending vaccination or revaccination and giving the names, addresses, and surgery hours of the public vaccinators. It is frequently

useful and sometimes necessary to open special vaccination centres. Common lodging houses should be visited daily and all cases of illness in them must be immediately notified to the medical officer of health who will arrange for them to be seen by a medical member of his staff.

The pursuit of contacts must be kept within reasonable limits. If for instance an infectious small-pox patient was found to have attended a cinema, it would be impossible to find out the names and addresses of all the other persons who were present at the same performance; but it would be wise to let it be known that such persons have been exposed to the risk of small-pox infection, and that by getting vaccinated at once they can protect themselves. Inquiry as to the origin of an outbreak is very important but often inconclusive. The disease may have been introduced through the medium of infected cotton, clothing, or other fomites; but too early acceptance of the theory that the infection has been conveyed by fomites may tend to retard the suppression of the outbreak. The theory of infection by fomites can rarely be definitely proved, whereas persistent inquiry, if properly directed, will often provide evidence of recent contact with a previously concealed or missed case.

Schools and Factories.

School closure will rarely be required, but it is the practice to exclude actual school contacts. Such contacts as have been successfully vaccinated recently enough to render them reasonably immune from infection could

safely be permitted to attend school, but parents of other children would be likely to keep them away and public confidence would be greatly disturbed. If a child who has been attending school should contract the disease, an effort should be made to get all the other children in the same class or school vaccinated. Children should be given forms to take home inviting parents to give written consent to their vaccination. There is usually little difficulty in obtaining consent. A public vaccinator or a medical officer of the public health staff and a nurse should attend the school for the purpose of vaccinating. During an epidemic, the head teacher of each school should send in a daily list of absentees giving, if it is known, the alleged cause of absence. All absentees should be visited by a sanitary inspector or school nurse. Children can be kept under supervision when attending school much more easily than when they must be sought in their homes, and school closure is therefore inadvisable unless a considerable number of scholars become infected.

Where, in mild cases, the patient may have infected one or more of a

very large number of workers, say in a factory, reasonable control may be gained by the management submitting a daily list of absentees. Visits will be made to ascertain the cause of absence and any suspicious illness will be kept under strict observation.

Extra Staff.

Even a small outbreak of small-pox involves a great deal of work for the public health staff, and a temporary increase of personnel may be found necessary. Apart from medical supervision, home visiting and vaccination, a considerable amount of clerical work is involved in the daily records which must be kept under various headings. A spot map has to be prepared showing the situation of houses, schools, and works where cases have occurred, with the cases numbered in the order in which they arose, and a key list giving brief particulars of each case has to be kept up to date. A really efficient clerical staff is therefore of great importance in the successful control of an outbreak. It is essential that, before they are allowed to take any part in the work, every member of the staff should be revaccinated.

"Lancet."

HEALTH AND CLEANLINESS

It is regrettable that greater progress has not been achieved in the standard of cleanliness since the introduction of school medical inspection. It is possible that better housing and cleaner surroundings may effect that uplift of the negligent parent that will in time bring him into line with the more enlightened of his class, but education in health and cleanliness moves forward only slowly. Fortunately in but a small proportion of the community is there no forward movement at all. These few are those who cost the local authority so much in their difficult task of education of the unwilling in matters of cleanliness.

The Madras Public Health Act

A Broadcast Talk from All-India Radio Station, Madras.

By

LT.-COL. C. M. GANAPATHI, M.C., I.M.S.,

Director of Public Health, Madras.

THE word "HEALTH" is understood by many to mean "Freedom from disease or sickness." This is a very narrow meaning of the word. Does health then consist in merely being able to keep out of a hospital or dispensary? Certainly not. Health in its broader and real sense indicates a positive condition and not a negative one. It connotes a state in which all natural functions are performed freely, thereby keeping the body and mind at an efficient level. To be healthy therefore the individual should aim not at a disease free existence but at a total well-being and functioning of the body as well as the mind, so that he is able to enjoy life and at the same time lead a life useful to himself and to others. Health thus permits a man "to live most and serve best."

The health of an individual is of as much concern to the community in which he lives, as it is to himself; the strength of a chain lies in the strength of the weakest link in it. Unfortunately, we are often inclined to adopt a fatalistic attitude on matters relating to the health of individuals. Health and sickness are treated as accidents and we do not bother to consider why one individual should remain healthy and another sick. No Government can afford to allow ill-health and disease to

remain rampant in the country and at the same time spend large amounts of money in building and maintaining hospitals for the treatment of the sick. Man's health, individually and collectively, is of concern to any organization intended to look after the public health of a country. The Public Health Department have therefore to include in their programme not only the problems relating to the causation and prevention of diseases, but all those referring to general sanitation, water-supply, drainage, removal and disposal of rubbish and filth, abatement of nuisances, maternity and child welfare, food and nutrition, sanitary arrangements at fairs and festivals, registration of vital statistics, industrial hygiene and similar other subjects which are likely to affect the health of individuals and communities.

To achieve satisfactory results in all these aspects of public health problems, the public health organization in any country has to depend primarily on the State, the local bodies (municipalities and panchayats and district boards) and the individuals and communities. It will be admitted that the State, the local bodies and the public have each their specific duties and rights. No individual or collection of individuals can claim any rights or

privileges without corresponding duties and responsibilities. Thus in matters relating to public health, the State and local bodies have their duties to perform; the Public Health Department, every one of the officers employed by the State or local body has each his own duties and responsibilities; similarly the public, the individuals residing in rural or urban areas have their duties to discharge.

In more advanced countries legislative public health enactments have been in force for a number of years. In England for instance the first Public Health Act was passed in 1875. In our Province the proposal to introduce a Public Health Act has been under the consideration of the Government for a number of years. A draft Bill was prepared in 1929, and was subsequently revised and altered and subjected to prolonged and careful scrutiny. The Bill thus revised has now been passed with certain amendments, by both the Houses of the Madras Legislature and has become law. Madras has been the first Province in our country to place on the Statute Book a legislation relating to public health. In fact we were the first to organize a public health department to deal with all questions relating to preventive medicine.

The Madras Public Health Act is an enactment embodying all such provisions as are considered necessary and essential for the advancement of public health in our Province. It must be conceded that statutory direction should be laid down specifying the duties and responsibilities of the indi-

viduals, the local bodies, and the staff of the public health departmental organization, so that each one of these agencies may clearly recognize its functions and work in close co-operation with the others towards the common goal, viz., the improvement of public health.

The individual citizen, whether he lives in a rural village or in an urban town, has a duty towards his neighbour in all matters relating to public health. Can your neighbour for instance be allowed to accumulate filth and rubbish in and around his house, thus providing excellent breeding grounds for flies which are likely to infect your food with disease-producing germs? Can he be allowed to let sewage, or any poisonous or noxious substance into your drinking water-supply thus rendering you and your family liable to dangerous diseases like cholera and typhoid fever? Should he not be bound by law to report to the Public Health Department any case of infectious diseases like cholera, small-pox or plague, in his house, so that prompt measures may be taken for preventing the spread of such diseases? Will he not otherwise endanger you and your family by exposing you to the risk of infection? Everyone will agree without a moment's hesitation that sufficient statutory safeguards should be taken to protect the citizen from such dangers—a few of which have now been instanced to you. It is true that many of these dangerous situations arise from ignorant practices and superstitious beliefs. In certain instances such dangers arise from acts done through

neglect or inadvertence. "More evil is wrought by want of thought, than by want of heart." It is therefore all the more necessary that the duties and responsibilities of the citizens should be clearly laid down in a statutory enactment of this nature—a public health Act.

Similarly the duties of local bodies in regard to public health matters have also been specifically laid down. The most important function of local bodies like municipalities, panchayats, and district boards is primarily the general welfare of the people committed to their charge. It is their duty to provide adequate and wholesome water-supply to the villagers, to render available and maintain a sufficient and satisfactory system of public drains, to provide in proper and convenient situations a sufficient number of sanitary conveniences (latrines and urinals); to maintain the necessary equipment and staff for the disinfection, of conveyance, bedding and clothing, if found necessary for controlling the spread of infectious diseases; to exercise control over insanitary buildings; to regulate the sale to the public of articles of food; and to make satisfactory sanitary arrangements on occasions of fairs and festivals. All these and similar duties of the local bodies have been provided for in the Act. It has also been made obligatory on the part of municipal councils, panchayats and district boards, to earmark a definite proportion of their income for public health expenditure, the Government reserving the power to relax this requirement in special individual cases.

The Government have also laid down in this Public Health Act, the duties of the officers of the Public Health Department who are primarily the agencies for the successful working of the Act. It is the duty of the Health Officer of a municipality or district board to inspect places where cases of infectious diseases are reported to exist; he has to arrange for the care of the sick and for isolation and observation of the contacts. In the case of plague and similar infectious diseases, he has to arrange for the evacuation of the infected house, and has to carry out the destruction of rats and fleas thereby preventing the spread of infection and rendering the house safe for re-occupation.

Similarly he has definite duties to perform in other matters relating to public health; general sanitation, food control, nuisances, fairs and festivals. In the matter of food control, for instance, do you not expect him to keep coffee hotels and eating houses under constant supervision and enforce that the preparation, storage and distribution of articles of food, are all carried out under hygienic conditions? Is he not to prevent the sale of adulterated, obnoxious or poisonous food? The Health Officer has similar duties to perform in the matter of abatement of nuisances. For all such duties, the Act provides for the necessary facilities being made available to the Health Officer and his staff.

On the administrative side, the Act has provided for the constitution of an Advisory Public Health Board for the Province, the statutory recognition of

the Director of Public Health and the vesting of the necessary powers in him as the head of the Public Health Department for the effective discharge of his duties, and the statutory obligation on the part of the authorities concerned for the employment of public health staff as may be found necessary and for regulating their conditions of service.

Thus it will be seen that in framing this Act, the Government have given consideration to all aspects of Public Health Administration. While the duties of the citizen have been laid down, his rights have not been ignored. Similarly the obligation of the local bodies, municipalities, panchayats and district boards have been specifically detailed. The duties of the staff of the Public Health Department have been pointed out and their work specified. We, the officers of this Department, recognize the responsibility we incur under the Act. We have to overcome barriers arising out of poverty, ignorance and superstition. We have to carry public opinion with us so that the villagers may give their whole-hearted co-operation in the successful working of the Act. We have also to take the local bodies with us, as without their support, no measures can be effectively taken for the improvement of public health and general sanitary conditions. Aware, as we are, of our responsibility under the Act as well as of the handicaps we may have to meet

with in the early stages, after the introduction of this Act, we look forward confidently to securing the entire co-operation of all concerned in working the Act.

The Public Health Department was organized as a separate administrative branch of the Government in our Province in 1922. During these 16 years the Department has been steadily growing including in their activities all aspects of preventive medicine. By constant propaganda and by securing the co-operation of local bodies and the public, the Department has amply justified its reorganisation. From the discussions in the legislative chambers and from the views expressed by others at other places, it will be seen that there is perfect unanimity of opinion regarding the need for a public health Act for our Province. The Act has not come a day too soon. The few criticisms that were offered during the discussion, were directed towards certain minor details in regard to some sections in the Bill. The Act which has now been placed in the Statute Book of our Province, only embodies all the fundamental public health principles on which we have been carrying on propaganda for a number of years. We therefore look upon this Act as a piece of educative legislation. Even if there be a few who should consider this, as one of doubtful utility or need, we expect to win them over.

Public Health—The Foundation of Nation-Building

A BROADCAST TALK

BY

SIR COLONEL A. H. RUSSELL,

Public Health Commissioner with the Govt. of India.

MANY of you no doubt are acquainted with the Biblical story of the wiseman who built his house upon a rock in contradistinction to the foolish one who built upon sand with disastrous results. Similarly in nation-building, we must be sure of our foundations and it is my purpose to-night to try to demonstrate to my listeners that the one sure foundation on which to build a happy and prosperous nation is that of health,—not only health of the individual but health of community. We are all so apt to leave community health or public health as it is usually called, to the other fellow, forgetting that it is the cumulative effort which counts so much. So it is that I have no hesitation in claiming that public health, and all that that phrase implies, is the sure foundation on which to erect the structure of national health. Without that foundation no nation can hope to be strong enough to resist successfully the strain of economic and social storms.

The purpose of all nation-building activities is to make the life of every citizen fuller, richer and happier. This implies that the individual citizen should be provided with suitable opportunities for desirable self-expression, in

respect of his physical, intellectual and emotional equipment, because only by that means can he hope to enlarge his experience and his capacity for enjoyment of life. Modern public health development stands for the creation and maintenance of all those conditions which will enable each individual to attain these objects. Sickness, pain and suffering, poverty, mal-nutrition, final-adjustments in his home or in his work or in his social environment, these are largely responsible for depriving the average citizen of his inherent right to enjoy life. A well-organised public health campaign must take cognizance of all those deterrents to happiness and I for one believe that in the advance of public health we have the solution.

For many centuries past, human society has recognised the necessity for treatment and care of the sick, but the conception of prevention of disease and sickness by means of an active programme of ameliorative measures intended to render it possible for the people either to maintain health, or, at least, to leave more healthy lives, is one of much more recent origin. In fact it is not yet 100 years since in England the importance of preventive medicine

came to be recognised and was made the foundation of the many-sided social and health services now in existence in that country.

But, you may ask, how does the public health worker seek to bring greater happiness to the individual and to the community? It is by no means easy to summarise in a brief talk the many different directions in which health work should be planned, because it has become obvious—at least to those who have real vision—that preventive medicine includes in its range of activity “the whole nature of man, as shaped by his home, his surroundings, his work, his recreation, his struggles and aspirations.” This, as you will appreciate, is a formidable task, but for my purpose to-night, it might perhaps be divided into four parts:—

1. State-aided health services capable of providing care for every individual, from the pregnant women and unborn child to the adult and the aged. These services would also include separate branches for special health problems such as those associated with tuberculosis and leprosy.
2. Improvement of environment by the provision of sanitary houses, fresh air, pure water and nourishing food, both for humans and cattle.
3. Education of the people—especially the wives and mothers, in the principles of health so that the active co-operation of every individual

may be obtained. The search for health demands the abandonment of many undesirable habits and the practice of others which science has shown to be necessary to man's well-being, but here perhaps we are faced with our greatest problem because “all our life, so far as it has a definite form, is but a mass of habits,” good, bad and indifferent and the inherent inertia of man always acts as a serious handicap to change.

4. Promotion of physical and mental welfare with the object not only of increasing the resistance of the body to disease and of promoting happiness in bodily activities, but also of assisting the individual to secure harmonious development of his intellectual and emotional faculties.

Such a comprehensive programme must of necessity lay a heavy burden of expenditure on the State and, even in the wealthiest countries, it has been found impracticable to carry it out other than by successive stages, and, then only, as and when the necessary public funds become available. It is not sufficiently realised, however, that all social and economic progress is seriously hampered by sickness and a low level of physical fitness, and this is particularly true of India. Improvement of Public Health is essential if, for instance, the working capacity of the agricultural or industrial labourer is to be raised; and those

existing conditions in this country are only too well aware of the handicap to efficiency which is caused by bad health and poor physique. The fact that the deaths from malaria in British India alone total 1,250,000 yearly indicates the amount of suffering, incapacity for work and loss of income caused by this one disease especially among the rural agricultural populations, on whose productive capacity the prosperity of this country so very largely depends. Another striking illustration may be found in the large numbers of deaths among young mothers and their infants, and these, of course, represent only a small fraction of the amount of ill-health and suffering which is borne by the women of India. Whilst no estimate can be made of the economic loss these and other mortality figures represent—although it must extend to many crores of rupees each year—they certainly point to the necessity for progressive health work as the essential foundation for sound and secure nation-building.

Another aspect of the economic question is that State action directed towards improvement of health has undoubtedly beneficial repercussions in many other directions. Take, for instance, the question of nutrition. During more recent years, we have been able to obtain a more accurate picture of the amount of mal-nutrition from which the people of this country suffer, and it has also been shown that an adequate state of nutrition is of the greatest importance not only in the prevention of disease but also in increasing man's resistance to infection

and his sense of well-being. Solution of the nutritional problems in India, however, depends on improved agricultural and animal husbandry practices, the development of trade and industry, the encouragement of co-operative enterprise, banking and other activities. There is no shadow of doubt that every step towards better national health will lead to the development of all these activities which are so fundamental in any nation-building campaign.

Improvement of public health demands that every individual should develop a sense of responsibility in respect of his neighbour's welfare in addition to his own. It is not enough for the house-holder to keep his own restricted environment tidy and clean, if by doing so he creates fresh conditions favourable for the development of ill-health in his neighbour or in the community. Modern science has shown that, in matters relating to health man is his own worst enemy and much of the diseases which now works havoc over large areas could be avoided if the community sense were better developed and if the individual were brought to realise the danger of his own actions to community health.

The remedy for these errors,—which are, usually,—but not always—the result of sheer ignorance,—lies in health education, that is in teaching the people how to avoid actions which assist in the spread of diseases. Such instructions is essential for real citizenship, because it is only when the individual comes to realise that his interests and those of his neighbours are identical in respect of health matters that he develops the

wider outlook which is essential if his actions in other spheres of life are to be to the benefit of the State and to his fellow-citizens.

The history of the public health movement in England and elsewhere clearly indicates that the initial stimulus towards necessary reform has repeatedly come from private individuals or from voluntary organisations. Whether it be in respect of factory legislation for the improvement of the conditions of factory workers, of measures for saving the lives of mothers and infants, of prevention of tuberculosis or of other efforts for alleviation of human suffering voluntary effort has led the way to State action in practically every civilised country. Even when Governments have assumed responsibility, there always remains room, however, for the resources in time, money and

labour of humanitarian individuals and voluntary organisations in supplementing official activities. It has been remarked that "to save and prolong man's life, there is nothing so effective in the long run as collective humanism." There is no doubt that "Collective humanism" is a living force in this country, as the recent result of Her Excellency's appeal on behalf of the tuberculous sufferer has indicated, but the urge towards high human endeavour requires a much wider development if it is to meet adequately the heavy and urgent demands which must be obvious to all thinking men and women in this country. In so far as the public health movement can help to foster man's fellow-feeling for man, its contribution towards nation-building will be of an enduring and beneficent nature, resulting in a vastly desirable increase of human happiness and well-being.

Medicine and the Law

AFTER a short conflict of evidence Thomas Hugh Wilbraham, a herbalist, was acquitted last week at Manchester assizes on the charge of manslaughter arising out of the death of Eric Gabbot, aged 22, from diabetes. The prosecution opened a strong case against Wilbraham. It was said that he had held himself out as skilled to deal with diabetes and in his treatment had showed himself devoid of the necessary skill, or wanting in the necessary care, with the result that the patient died. Wilbraham, it was alleged,

had a system of his own; he did not use insulin when he found his own treatment failing, and, when he saw the young man apparently growing worse, he omitted to prescribe insulin: he told the patient's father that he did not believe in it. Up to March, 1937, the deceased was seemingly in good health. Afterwards his father noticed him drinking quantities of water and becoming drowsy. He consulted a doctor on whose advice the patient was sent to Dr. Norman Kletz. The latter tried a diet for two or three

weeks but, finding a considerable increase in the sugar in the body advised that insulin injections were immediately necessary. Unfortunately, early in May, before the insulin treatment was begun, somebody told the father that insulin was not a cure but a stabiliser; he was given the impression that diabetes could not be cured by a medical practitioner with insulin but could be cured by a herbalist or osteopath. He placed his son under a woman herbalist for treatment but found, from tests which he made himself, that the sugar increased. The father then went to Wilbraham who was alleged to have told him that he specialised in the treatment of diabetes, that he had had successful results with other patients, that he strongly disapproved of insulin, and that his treatment by herbal remedies caused the pancreas to resume its proper functions. He put the patient on a diet consisting as much as possible of green vegetables. Last August the young man broke down; he was weak in the legs and terribly thin. According to the prosecution his father took him to see Wilbraham who said he was very pleased with his condition; he was giving him "pancreatic juices" in his medicine. Later Wilbraham was said to have stated that the sugar was down 1½ points. In September the young man was too weak to stand. His father telephoned to ask Wilbraham if he should get a doctor. Wilbraham replied that he could do so if he wished but he did not think it necessary. Next day the boy was no better. His father rang up Wilbraham and asked him to come over. He came and said he sugar was less. The father was anxious about coma; Wilbraham said

he did not think there was such chance of coma as the sugar was diminishing; he thought the boy was suffering from a poisoned stomach and would give him medicine to set it right. Sometime later the patient went into a coma and was removed to hospital where he died early next morning.

Such was the case opened for the Crown. Among the witnesses called in support of it was the father. Mr. E. G. Hemmerde, K.C., cross-examining for the defence, strongly pressed him to admit that Wilbraham had always said that there was no cure without insulin in the present state of our knowledge. The father emphatically denied the suggestion. "I put it to you," said counsel; "that from first to last he told you that diabetes was incurable without insulin." "No", replied the witness, "he said he could put the boy right with his treatment." In re-examination the father said that two doctors had suggested insulin; he did not take their advice because a friend gave him a paper stating that diabetes could be prevented provided that the patient had not taken too much insulin. The evidence of Dr. Kletz and Dr. W. H. Grace established the fact that if the patient had begun to take insulin in January, he would now be living an active and normal life. There thus seemed to be a cast-iron case for successful prosecution. The defendant, however, contradicted the father's evidence and put an entirely different complexion upon the case. So far from admitting that he advised against insulin treatment or that he did not personally hold with it,

he praised insulin treatment and said that he had strongly pressed it. It was, he stoutly maintained, the father who was against insulin. He himself had found insulin combined with his own treatment definitely helpful in some instances and definitely essential in others. He asked his diabetic patients to get insulin prescribed by a doctor. He said he told both the father and the son in August that the son must have insulin; the son said he did not want it; the father said he could not have it. He had told him that a doctor must be called right away. He agreed that the patient's death was accelerated by the failure to give him insulin treatment. In his summing up the judge warned the jury that they were not trying whether treatment by registered medical practitioners was either better or worse than treatment by herbalists. The jury after a short retirement found the accused not guilty.

There were two noteworthy points of general interest in the proceedings. Mr. Hemmerde, always a strenuous advocate for the defence, insisted that there was no question of want of skill in Wilbraham's case inasmuch as Wilbraham was prevented by law from administering insulin. The charge against him must therefore be limited to the failure to advise it—an issue on which, as we have seen, there was contradictory evidence. Wilbraham in the witness-box mentioned the legal restriction. Prosecuting council, if correctly reported, seems to have said that the point was one of which he was previously unaware. The judge mentioned the restriction to the jury

and observed that it had not been challenged. The authority for the statement is not quite clear. Insulin is not a dangerous drug though it is a "Part I poison" and therefore, to protect the public an authorised seller may see fit to impose limitations on its supply to unqualified men. Neither the injection nor the purchase of insulin is the exclusive prerogative of the registered medical practitioner.

The second point was one which affects coroners. Wilbraham stood committed for trial on the warrant of the East Cheshire coroner. Mr Hemmerde found occasion to protest against the department of the expert medical witnesses sitting in court. They smiled, he said, when questions were asked which seemed to them ridiculous. In addition he complained that he was embarrassed by the attitude adopted by the coroner. There was a brief discussion with the Judge who spoke of the coroner being in the same position as a committing magistrate and expressed doubts whether it would be proper for a committing magistrate to be present when a case which he had committed was being tried. "I think it would be better," concluded the judge, "if the coroner did not take any active part in the case and sat away; I did not appreciate he was in court." The coroner thereupon gathered up his papers and took his departure. It is not quite clear why a coroner from whose custody the depositions come and who is available to prove them must keep away from an assize court, though it may well be that, having acted in a judicial capacity, he

should not be actively engaged on the side of the prosecution. These are matters in which our procedure has gradually changed. A century or more ago before the functions of the police were evolved, the magistrate took a personal part in investigating an alleged crime and in bringing offenders to justice.

Compensation for death after Mosquito Bite

A crew of 24 sailed from South Shields to a mosquito-infested river in West Africa in 1936. Seven lost their lives and six went to hospital. The County court judge held that one of the dead men, John Craig, died from yellow fever and malaria caused by a mosquito bite. The mother's application under the Workmen's Compensation Act was dismissed on the ground that the injury did not "arise out of his employment." The Court of Appeal has reversed the decision and has awarded £180. Lord Justice Slesser said that, if the locality was one where danger might reasonably arise, it was a risk incidental to the man's employment.

A somewhat similar case was decided in favour of the seaman in Robinson

v. British and Continental Steamship Co. (see *Lancet* 1926—1,471). The man was bitten by a mosquito at Ghent while the vessel was unloading near marshy land. The heat and light of the boiler house attracted the mosquitoes; Robinson was more exposed to a bite than if he had been on shore and had less chance of avoiding it than if he had not been at work. The result was different in *Craske v. Wigan* (1907) and *Amys v. Barton* (1912). The former case was that of a lady's maid who sat at an open window one evening. A cockchafer flew into her face and in brushing it away she hurt her eye. Her claim failed; she was sewing at the time and to that extent was employed at her work, but it was not a risk that arose out of her employment. *Amys v. Barton* was a case of a wasp-sting causing death. This too was unsuccessful; the risk was not specially associated with the work. On the other hand in *Rowland v. Wright* (1908) where a stableman was bitten by the stable cat, his application for compensation succeeded. He had to be in the stables where the cat lived.

—"Lancet."

Acknowledgment

WE read with great interest the Bulletin on "Fraternity in Education" kindly sent to us by Dr. V. N. Sharma, Ph. D., Secretary, Fraternity in Education, 9-A, Edward Elliot's Road, Mylapore, Madras.

The one great ideal that is before the organisers namely to impart National

Education in a true "Cosmopolitan and Universal Spirit" is what is really wanted at the present time.

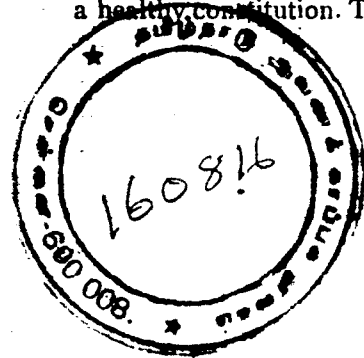
A preliminary survey of the present system of education and the fruits thereof are points worth considering. In our mind it appears that the one great defect in the present day

education is that no proper attention is given to the field on which the seed is sown. Unless the field is properly softened and manured you cannot expect the seed to sprout and promise the desired fruits.

We mean the authorities concerned or those who realise that there is a real need for a 'dynamic revolution in the field of education' and want to do something practical in that line should always bear in mind the physical frame on which stand the edifice of national education is sufficiently strong and well built.

Prepare the ground, a beautiful body for a beautiful mind and a beautiful character.

Our children in schools should possess a healthy constitution. This is very, very



HEALTHGRAM

"The foundation of the National Fitness Movement is laid in the schools. Children who have learnt the joys of games and physical exercises feel a strong desire to continue with them when they leave school."—Capt. S. J. PARKER, Board of Education.

—"Better Health."

Edited and Published by Dr. D. B. Gopal Rau at No. 57, Thambu Chetty Street, Madras, on behalf of the Health Propaganda Board, Egmore, Madras.
Printed at The Ananda Press, No. 17, General Patters Road, Mount Road, Madras.

essential to achieve the ideal of national education. There are usually one hundred and one defects in the physical frame and these should be rectified carefully and we fully concur with the views of the President George S. Arundale that "a group of practical educationists might get to work to study the Indian Educational Needs seriously" having always in view the need for strengthening the principles of physical education while erecting the edifice of National Education.

We wish the bulletin every success in their endeavours to enlighten the public on the latest methods and experiments in education satisfying to the conditions in our land.

—Health Propaganda Board.

New Public Health Bill IN MADRAS

Give us your hearty co-operation,

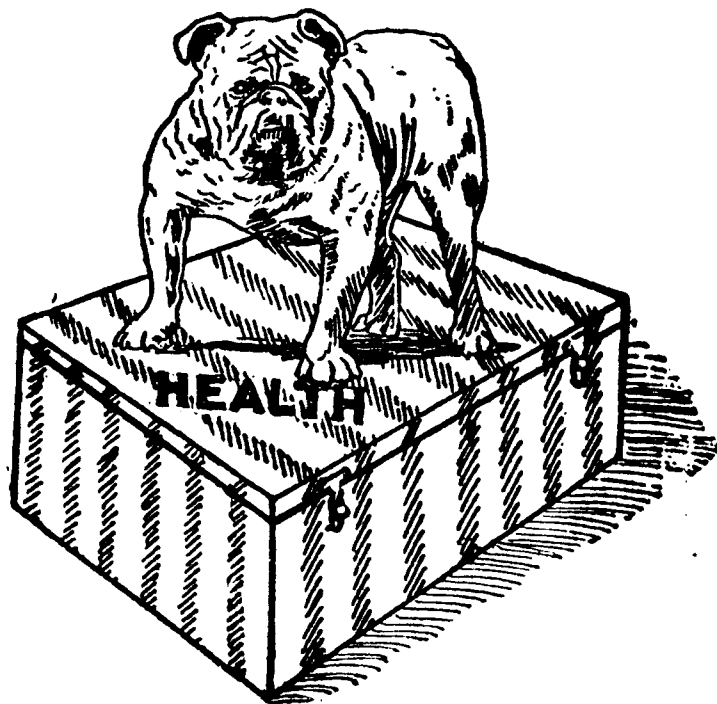
In building a Healthy Nation.

Keep your mind, body and character
clean and beautiful;

Your house well ventilated and airy,

Your roads and other public places
neat and clean.

—Health Propaganda Board.



Is a Treasure
That Needs Well Guarding