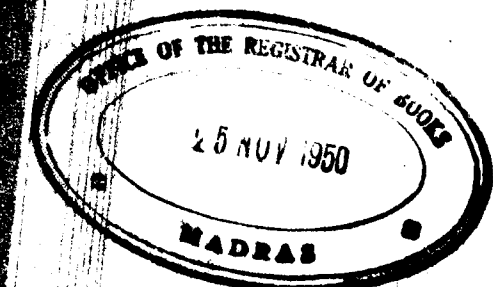
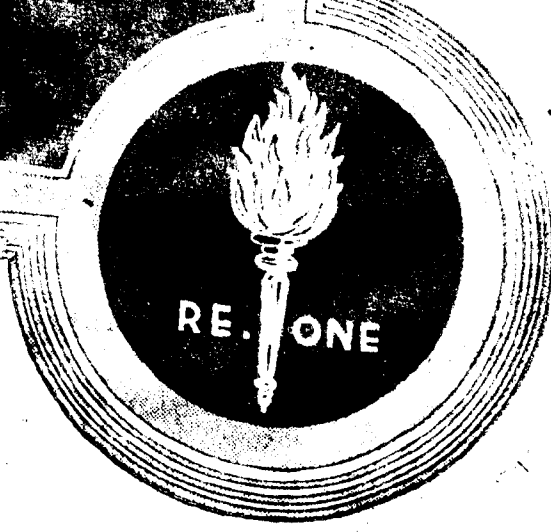


# PEOPLES HEALTH

EDITOR  
A.V. RAMAN



648 (869)  
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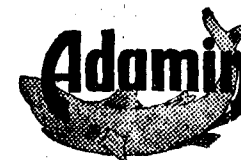
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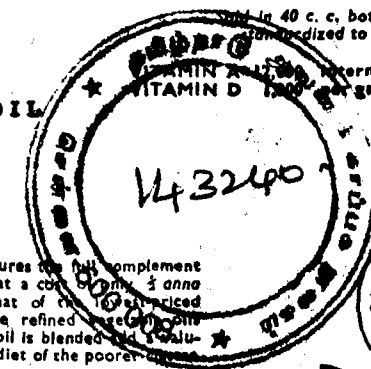
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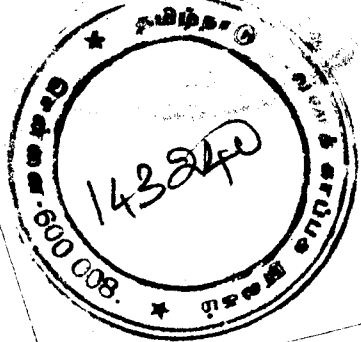
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## TO OUR SUBSCRIBERS

We have no doubt that our subscribers would have perused an appeal issued to them in the issue of "People's Health", September, 1950.

We request our readers to note that we do not enrol subscribers for part of a volume nor discontinue the supply of the magazine during the currency of a volume.

The annual subscription is Rs. 12; it is payable in advance at Madras. Those who send cheques in payment of the subscription are requested to add the banker's commission also.

While remitting the subscription, kindly note the subscriber's number.

Kindly intimate to us as and when there is any change of address.

Kindly do oblige the publishers by avoiding correspondence as far as possible, as it throws additional strain on the publishers.

Madras-14,  
31-10-'50

Manager,  
"People's Health"

## PEOPLE'S HEALTH

A Pioneer in the Field of  
Public Health

Vol. V

OCTOBER, 1950

No. 1

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Vol. V No. 1.

OCTOBER, 1950.

Issued Monthly

## EDITORIAL . . .

### TO STRIVE, TO SEEK, TO FIND AND NOT TO YIELD

Dear Readers,

I go forward on my journey undaunted. I have managed to reach the Fourth Mile Stone, in my forward journey. I have done so not without difficulties. As a pioneer in the field, I had anticipated that the path ahead of me was a rugged one. My firm faith in the cause alone has helped me to get over many an obstacle.

The so-called good old days of England were in a large measure, dirty and dangerous old days, and it took a man like Sir Edwin Chadwick, a fearless enthusiast and a clean thinker, gifted with dogged determination, to bring about sanitary reform. I do not claim to have the qualities of that great reformer; nor have I the atmosphere of Free England. But I am determined, notwithstanding difficulties, to press forward on my journey, in this country which has won a notoriety as the reservoir of all preventable epidemics.

Every crusader, whom the world has produced so far, has had to fight his battle through every inch. Powerful

opposition had always ranged against him. For instance, when Chadwick came forward with his suggestions for Poor Law Reform, the *Times* of London said that country would willingly submit to Egyptian bondage rather than to the Poor Law Reform of Edwin Chadwick. While the Public Health Act of 1848 was under discussion, the *Economist* uttered a warning:

"Suffering and evil are Nature's admonitions. They cannot be got rid of. The impatient attempts of benevolence to banish them by legislation have always produced more evil than good."

Yet, in the face of such powerful odds, Chadwick was the ultimate victor.

One can understand a firm, definite and even powerful opposition. But what depresses me most is my experience of some people of influence and authority paying me a fulsome tribute for the work I have been doing and at the same time sabotaging my efforts in an indirect and underhand way. I can fight open enemies. I have got the courage to do so and I have the faith in my cause. But I cannot fight people, who wear velvet gloves.



However, there are fortunately, for our country, good people among us, who genuinely sympathise with the aims and objects of *People's Health* and have come forward with active assistance and co-operation. Indeed, but for such co-operation, my task might have almost become an impossibility. I convey to one and all of them my grateful thanks.

Public health education is the power that keeps in motion the machinery of sanitation.

To be or not to be was a problem that has been agitating my mind. Eventually, fortified by the advice of one of our top-ranking patriots that *People's Health* was rendering an invaluable service and any sacrifice was worth making to ensure its continuance, I decided to go forward, whatever may

be personal losses. In the midst of these worries, I have had to change printers. Hence, the delay in the publication of this issue which I trust you will view with indulgence. You will be glad to notice that under the expert advice of the Associated Printers (Madras) Ltd., *People's Health* contains practically one-third more matter than in the previous issues of the Magazine. I leave it to you to judge for yourself the excellence of printing and the get-up.

Sincerely Yours,  
A. S. Ramani.  
31/9/50.

### "BEAT T.B." BEATS US.!

A man has many fears when he pays his money in at the counter and enters a theatre for an evening in front of the silver screen. Among them are, the possibility of having for a neighbour an excitable person with propensities to pinch the nearest thigh during the thrilling sequences in a film; the chances of having to peer in between two mighty heads in the front row; and finally the dismal prospect of having necessarily to look at the news-reel or worse still, the documentary film, issued by the Films Division of the Indian Information Ministry. We are not here concerned with the first two misfortunes—one can always choose a seat judiciously—but there is no escaping the 'documentary' which,

from the moment it announces itself with a hideous wolf-call (no better tune could be found by the musical directors) till it ends with an equally discordant note, has on the optience the effect of a thumbscrew on a captive. The fifteen minutes of unrelenting torture that one experiences, are rarely neutralised by the pictures that follow.

#### The Nazi Touch!

The latest documentary *Beat T.B.*, released in the last week of October, swims into our ken and in spite of the fact it was clubbed with pictures so entertaining as *Champagne for Caesar* or *The Good Humor Man*, its unhealthy effects have outlived the week. *Beat T.B.* is something that a Fascist pro-

pagandist like Dr. Joseph Goebbels could be proud of; but our Sardar can be in no raptures over it—at any rate he should not be.

This latest propaganda on celluloid had a cartoonish beginning in a diagram that showed a man's lungs (and ribs), contracting and expanding picturesquely. The children felt they were in for some Disney stuff like "The winged scourge". The disillusionment came soon enough, and we followed patiently the progress of a T.B. patient from cough to cough. Quite realistic we felt; some even got tearful. The first fear that it was all "propaganda", came when we were asked to go to one of the many free T.B.-hospitals run by Government and other charitable institutions, on the slightest fear of having the dread disease. Actually, the opportunities afforded to an ailing patient to get himself freely treated, do not seem to be as many as one is led to expect. Thereby hang many tales.

#### The only Preventive Measure?

When ultimately the cinematised patient had sufficiently recovered, the commentary said: "... but prevention is better than cure" and thereafter was shown the sight of school children being vaccinated with B.C.G. Much has been written on B.C.G. strongly questioning the advisability of vaccinating children on a mass scale with it. After the fashion of Frederick the Great who allowed the people to say what they liked as long as he could do what he liked, our Health Ministry appears to take no heed of public opinion as long as it has its toll of the vaccinated.

The curious thing about *Beat T.B.* is the sliminess with which it missed the point every time. We were told that overcrowding causes T.B., and instead of logically arriving at the conclusion that our housing conditions are bad and need to be improved, we were taken away to the X-ray plant and the syringe.

#### Wasted Effort

The film ought to have made it much clearer that B.C.G. is not a universal preventive measure. One should be free from the *slightest infection* of T.B. before B.C.G. is administered to him. In a country like India, where the living conditions are notoriously bad, the majority of our people are tuberculin positive, in other words, *even theoretically* unfit to be immunised by B.C.G. This vaccine will therefore serve a fraction of India's people. A preventive so limited in application, and so doubtful in effect, does not deserve so much attention from the Films Division. Are they trying to convince the people that B.C.G. is an avatar of the Almighty come to save them from "the cough that kills"?

#### The very Latest

Literature on B.C.G. is accumulating day by day, but the local experts are gifted with the Nelsonian quality of not seeing anything that would affect their course of action. Only, Nelson won his battles; the experts have not. With our compliments we present to the Health Ministry the very latest on B.C.G. No less an authority than the National Tuberculosis Association, (U. S.A.) in its Review of October, 50 says:

"Many authorities believe that B.C.G. is not the answer to protection since studies by them have shown no significant difference in morbidity between positive and negative reactors and because protection is not complete. All agree that the tuberculous patient should be isolated in separate wards in the general hospital."

### Save the Kiddies

The compulsory exhibition of such blatantly one-sided, if State produced, films is something deplorable. The screen is the most potent weapon of propaganda, and if the State abuses its privilege, the only thing left for

parents would be to preclude their offspring from seeing films—not to "protect their eyes" or "preserve their morals", but to save them from being injected with filmatised stories of the State. The wrong ideas which the Government films can put into the little heads are as deadly as the drugs proposed to be injected into their tender skins. We hope exhibitors will seriously consider the question of demanding a choice in exhibiting State-produced films, or at least ask for a reduction in the entertainment tax. Sideshows like *Beat T.B.* certainly go a long way to reduce the entertainment value of the pictures which they precede.

### FIGURES AND FIGURES!

Recently, in the Madras Legislative Assembly, questions were raised on the epidemic of cholera in Mathurai district. The Minister of Health gave figures of attacks and deaths covering a certain period. According to him, the total number of attacks was 2,068 and of deaths 802. For the same period, the Director of Public Health had given in his *Weekly Epidemic Bulletin*, a total of 261 attacks and 85 deaths.

When the wide disparity in the figures, was brought to light in the press, the Director of Public Health is reported to have given a very ingenious explanation. He said that the figures furnished by him in the *Weekly Bulletin* were from the reports of Tahsildars, which are often times very incomplete; but he hastens to give these figures to the public before the end of the follow-

ing week. He is prompted to do so, because "it would only be of topical interest if it is given as soon as possible for the information of the public indicating where cholera prevails and not exactly the size of the epidemic". He explains further that "more accurate figures are collected by the Health Inspectors and Health Officers" which he gets a week later. The first set of figures only is published in the press. The other set of figures, which he gets about two weeks later, is furnished to "Government as well as other agencies." Why not publish accurate figures in the press as well?

Despite official explanations, it is evident that the publication of the *Weekly Epidemic Bulletin* far from being informative, is misleading. Its routine publication may just as well be abandoned.



STILL WE ARE PLANNING!  
(This prophetic cartoon appeared in the "Hindustan Times," New Delhi, dated April 28, 1944).



By  
**SLEDGE HAMMER**

Fear not to lie, 'twill seem a lucky hit;  
Shrink not from blasphemy, 'twill pass for wit;  
Care not for feeling—pass your proper jest,  
And stand a critic, hated yet caressed.—Byron.

### Cow Trees

Sri K. M. Munshi, India's Minister of Agriculture, said in Parliament recently that the Indian Council of Agriculture and Research had sanctioned a scheme for the introduction of Cow Trees in Bombay State and had arranged to import the seeds.

Cow Tree milk is said to be widely used in Venezuela as substitute for cow's milk and, apparently, it tastes good. Undeniably, the milking job should be easy, as the tree need not be tethered, and in any case, it will not kick!

But why are Cow Trees needed for Bombay where milk supply has been rationalised? Have they not taken steps to conserve fresh milk for house-holders and make public eating houses, hotels and tea shops use only powdered milk—or have we been misinformed?

It is in Madras that we suffer from lack of milk for domestic consumption, and the coffee hotels take away the bulk of the supply, of course, diluting the milk with 'organised' water (meaning water with organisms) for dishing it into that lethal beverage called 'coffee'!

A foreign expert once said that Indian milk contained more organisms than were found in London sewage. Perhaps so! After all, London sewage was also 'organised'—only in a different way!

Sri Munshi should do some cow tree planting when he next visits Madras—one tree in each coffee hotel! Good idea, that, only he would remain a tree planter for the rest of his life, granting that he lives longer than Methuselah!

### Ongole Cows

On the cover page of a recent issue of a contemporary journal, we saw a photograph of Ongole cows and bulls being shipped from Madras Harbour for the Philippines! Our export trade is going up! We earn more foreign exchange! Shabash! In fact, sha-awfully-bash! (continued and prolonged cheers).

Aside, and strictly between ourselves, we tighten up our belts and our children put out their tongues. If you need proof, go to the Tiruvottiyur Cattle shandy. You will find that the price of a cow yielding two measures a day, which was about Rs. 150 a year ago, is now Rs. 300 and the number of such cows available for purchase is only half of what it was! The conclusion is arrived at by a very simple arithmetical process—in fact, elementary school standard!

Don't forget—we live in a planned democratic welfare state—We export cows and import cow tree seeds! Hurray! Indeed, Hu-blooming-ray!

### Homes for the People

Sri Sanjivi Reddi, Minister for Housing, Madras, stated recently that very few housing schemes have been undertaken by the State, and that although it was the duty of the State to ensure adequate food, clothing and shelter for the people, they should not expect everything to be done for them by the Government, which had many commitments, and so they should start doing things themselves. Them's his sentiments, very neatly expressed. You just can't pick up a quarrel with a man who knows what he should do, says he can't do it and asks you to go ahead and do it! Well, he is being fair, ain't he?

But you certainly can give him some tips! Take this one, for instance. A fish curer in Camden town built a house of fish boxes, and it was passed by the London County Council for a period of five years. (Corporation of Madras, please note). Or this one, for another instance. A bungalow was sold in Florida for £1,250 which was built from 12,000 petrol tins cemented together. (Seems quite easy now that petrol has been de-rationed). Or, even this one, for a third instance. In Nevada a two-roomed house was built with 10,000 beer bottles placed bottom upwards and plastered together with mud. (Oh! Golly! we have dropped a brick. Sri Sanjivi Reddi is the Minister for Prohibition also, and we have gone and suggested beer bottles for reinforcement. Let's change the subject.)

### Smoking in Show-Houses and Public Halls

West Bengal prohibits smoking in show-houses and public halls, in a sledge-hammer way, so to speak. Offenders are punishable with a fine upto Rs. 25 in the first instance, and upto Rs. 100 in the subsequent instances. Offenders may be arrested summarily without warrants by a Police Officer not below the rank of a Sub-Inspector.

In Madras, our Government behaves in much the same way as the average English wife to her husband. "Be good, John and if you won't, then be careful." We have

posters publishing the Police order that smoking in cinema-halls during matinee shows is prohibited, but the order is not-enforced! Could it be, is it possible, is it likely, that the reason is—ahem! Ha! —that the offenders are mostly among persons who pay for the upper class seats? Good gracious, we have said it!

"Are we faint-hearted?" says the Madras Government? "No, Sir" Sez we! "But, of course, you are", squeaks a voice!

### "Those with Blinkers on, Need not be Blind"

This is for our Mayor Dr. P. V. Cherian, who is reported to have stated in a speech delivered by him on the 16th October, 1950, on the occasion of the inauguration of the Tuberculosis Seals Sales campaign that "fortunately the controversy about BCG vaccination has ceased and some hospitals were doing good work in BCG vaccination." Incidentally, he went a bit out of the way to talk about BCG vaccination on that occasion. Anyway, he is not up-to-date with the current literature on BCG vaccine, and does not know that the last word on the subject has not been said. He must have those blinkers out.

The Minister for Public Health, Travancore-Cochin, recently stated in a broadcast talk from the Trivandrum station of the All-India Radio that about 35,000 people were victims of Tuberculosis in the State. In a recent tuberculin test at five important towns in the State, 31,921 out of 129,507 persons were found to be positive cases. The nearness of the two figures is strangely suggestive! Could it be, we wonder, that the Minister was informed by his expert officers that positive cases in tuberculin test are, in fact, victims of tuberculosis? Some of you may laugh, knowingly, with a wink of the eye, but really, and truly, we would like to know. Because, indeed, these revealing facts were broadcast throughout the country by the PTI and some newspapers used bold type headings to publish them!

How does the saying go? Liars, damned liars, and experts? Or, liars, damned liars

and statisticians? Never mind, we won't bother.

### Social Hygiene Conference

In the conference held at New Delhi on the 21st October, 1950, one lady worker is reported to have stated, among other things, that one of the social and psychological causes of prostitution was child marriage, and that when society did not hold out any hope to a woman to lead a healthy normal life, she was faced with two alternatives, either to commit suicide or become a prostitute.

We are acquainted with the fact that lady workers addressing social conferences usually let off a lot of steam, but in the above case, the accompanying whistle is a little too shrieking! We do not hold brief for child marriages, but we cannot agree that they lead to prostitution. In child marriage, a woman is held out every hope to lead a "healthy normal life" (whatever that phrase means); so she can't be faced with either of the two alternatives mentioned above! Tut, Tut, there must be some serious flaw in the argument! We would commend to the lady worker the following limerick:

There was a young lady of Lynn  
Who was deep in original sin.  
When they said "Do be good!"  
She said "would if I could",  
And straightaway went at it again.

### HEALTH MINISTER ON MATRIMONY

Rajkumari's advice to girls is "Don't get married till you are past 22". Why 22? Why not, for instance 21 or 23? Is it just because it is at that age that women start learning that 2 and 2 makes 5? I mean to say, we must know why and the wherefore of suggestions even from an elderly Health Minister, or even a Rajkumari. We have been told that there is much that is wrong with ages between 14 and 21 and that there is much that is right with ages between 21 and 25, but in this country and as regards matrimony, boys and girls are pawns in the game in the former case, while in the latter, it is a game between pawns,—so why bother?

However, there is just one simple fact we should remember. When girls think of matrimony after 21, they meet the boys and talk it over; before 21, their parents meet the boys' parents and talk it over. It is difficult to say which is the better way, but biologically speaking, the purpose is the same—how to spread the pollen? That, of course, is a messy subject.

### A SMART SUGGESTION

Rajkumari is priceless. She wants newspapers to be run without depending on the income from advertisements—very good, we should admit! Newspapers should not depend on advertisements, advertisements should relate to goods that do not exist, goods should be sold without receipt of money, money should be paid without expectation of consideration, everybody should have everything that everyone has.

Just a moment! We are getting very involved in this wretched catechism. But we should suggest to newspapers that some measure of philanthropy would be needed in handling advertisements as the undermentioned:

"A young gentleman on the point of being married is desirous of meeting a man of experience who will dissuade him from such a step."

or

"Found—lady's purse left in my car, while parked. Owner can have same by describing property and by explaining satisfactorily to my wife how purse got into my car."

### SIR CHINTAMAN DESHMUKH Says:

"Like what you do rather than do what you like"—Is that what he is doing now as Finance Minister? Because, we are told that he did not like what he did when he was Governor of the Reserve Bank!

"India is a land of endeavour. If you are reasonably diligent you will succeed in whatever career you choose."

What kind of endeavour? Let us ask Penderel Moon who wrote the book "Strangers in India"!

Sir Chintaman is a wise guy. He tenders such advice to our young men in London. Let him try it on our young men while they are wandering from one college to another seeking admission, or from one office to another seeking jobs, or while they are sweating their souls out in jobs wherein their prosperity would depend on several adventitious factors—then they will tell him to shove his advice where the monkey shoved the nuts!

### THE COOUM

Says the P.W.D. Minister: "Whenever the water in the Cooum goes below a certain level at which the margins and islands get exposed and begin to stink, water is being pumped into it with a view to keep the water level high and prevent the bad smell."

Well, well, we suppose governmental activity is mainly directed to keeping down bad smell from all exposed quarters which emanate stench; so the Cooum is no exception! It is a hard world, even for Governments!

Says the P.W.D. Minister again: "The problem of keeping the bar open at all times has been under examination for quite a long time." The Prohibition Minister gets up to protest, but is told to resume his seat as the reference was to the bar at the mouth of the Cooum!

### TYPHOID IN THE CITY

Referring to the incidence of Typhoid in the city during the last six months Dr. U. Krishna Rao asked the commissioner if it was due to the possible pollution of the water supply, to which Dr. Maslamani, the acting Commissioner replied that, according to his investigations, it was not.

Eternal vigilance is the price of Democracy! Our city fathers are absolutely top notch that way! You can't catch them napping, No, Sir, you can't. They strike you with wonder, the way they ask you

questions; indeed, you feel they are individually qualified to conduct Quiz Programmes. Only you feel that they often remind you of the Tamil Proverb:

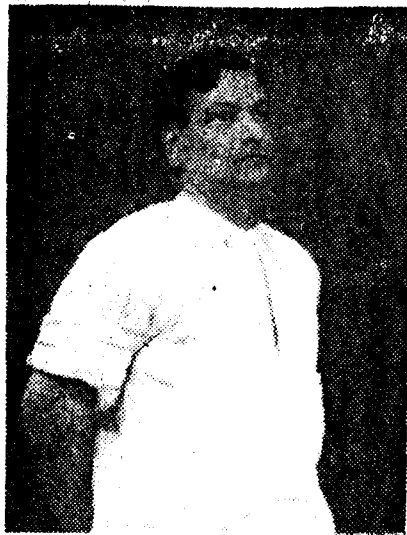
"I shall administer to you painless beat  
If only you guarantee an unceasing  
bleat"

The curious among ratepayers would like to know why the questioning was not pursued on the following lines. If it was not Red Hills water that caused Typhoid, could it be the ice-fruits and ice-candies and ice-creams hawked about near schools and colleges and at street corners that caused the disease? Could it be the sharbaths and unprotected foods that people were consuming? Are effective methods of avoiding infection through them being taken by the Health Officer? But, honestly, how could you indulge in such persecution? As one Doctor to another, the question was put and answered, and the matter must be allowed to rest there. After all, there must be honour among Doctors, what?

### PLAN THE PLANNER

The Planning Commission has grandiose schemes for extension of agriculture and electricity and food production in fifteen years. Rs. 1,900 crores will be spent, four crores and twenty lacs of extra acreage will be brought under cultivation, ten lacs of kilowatts of extra electricity will be available and—hey, presto—the rabbit from the hat of one crore and forty lacs of tons of increased food! It is going to be all Jam at the end of fifteen years, but the process will result in leaving us in a Jam all through that period!

Do the planners realise that a pre-requisite for a better world is better and more unselfish men and women, and that you cannot create them even in fifteen years in this country? What are they going to do about that? But we forget; we should plan the planners! Shall we?



## A SCIENTIFIC STUDY OF SOME OF OUR AACHAARAAS

by

Dr. A. Lakshmipathi, B.A.M.B. & C.M.

*Bhishagratna, Madras.*

The word **Aachaaraas** means "traditional usages" which regulate the daily habits of an individual in the Hindu Society. Regular observance of these **Aachaaraas** would constitute "good conduct" according to the Hindu conception. These rules of good conduct are codified in the **Dharma Saastras** and they have been adopted by the medical text books and by the legal and ethical codes—(**Neeti Saastras**) and taught systematically. They were preached by the religious heads, and taught by school teachers and taught by Ayurvedic Physicians to all classes of people. Any infringement of the **Aachaaraas** was not only considered as bad etiquette by society, but was also punished very severely by the magistrates who administered justice in those days. (Vide—**Artha Saastra**, Book I. Chapters VIII and XXVI.)

In order to understand the great importance and the scientific basis of these **Aachaaraas** we have to understand clearly the very conception of health according to the Hindu ideas.

### Definition of Health (Arogya)

A healthy person is defined as follows:

"**Sampadosha — Samaagnischa Sama-dhaatumala Kriyaah.**

**Prasannaatmendriyamanaah Swastha Ityabhidheeyate.**" (Susruta).

A healthy person (**swastha**) is one, who has an equilibrium of the three doshas

(**Vaata, Pitta and Kapha**—the nutrients), who has normal digestion, normal condition of the tissues and excretory processes, whose soul is free from bondage and whose mind and senses are clear and bright (**prasanna**).

The words **Prasannaa-thmendriyamanaah** should be carefully noted. It is not the physical or the material well-being of the individual, but the mental, intellectual, moral and spiritual well-being, that makes for the greatness of the nation. In India, civilisation is not measured by the material standards but by the moral, intellectual and spiritual standards. It is not enough to develop the physical strength of the nation or the country's riches. What is more important ultimately is the development of the moral and intellectual standards. Savage strength is not the ideal of India. The ancient Hindus aimed more at the development of the spiritual men, because they realised that the human being is not the body. It is a complex combinations of the body with the senses, mind and the soul.

"**Sareerendriya Satwaatma Samyogah Ayuh**"—**Charaka**.

The development of the latter in the series is more important than the development of man, namely, **Dharmartha Kaama moksha—Dharma**—good conduct, **Artha**—acquisition of wealth, **Kaama**—enjoyment of pleasures and **moksha**—liberation of the soul—the last is considered as the ultimate

goal of man—**Paramaarthah**. The greatest happiness lies in attaining that peace of mind (**Saanti**), which comes from the realisation that the mere body is not the man.

Viewed in this manner, the real scientific basis of our **Aachaaraas**, will be clearly understood.

### Rules of Health

The first rule for every healthy man is to get up from bed early in the morning.

"**Brahmee Muhoorta Utthishteth Swasto Rakshaardha Maayushah — Vaagbhata**".

A healthy man should get up from bed at **Brahmee Muhoorta** (i.e.) 48 minutes before sunrise. For what purpose? **Rakshaardham Aayushah** for the promotion of long life. This rule is for every healthy man in order to promote his health and long life. In this country, early hours of the morning are the best hours for intellectual development, for original study, for meditation and for inspiration. I personally feel that my intellectual faculties are keenest at that hour. A lazy man or woman rolling in bed till late, after sunrise cannot enjoy the happiness that comes out of the study at that peaceful hour. Once the habit of getting up early from bed is established, it is so easy to keep it up. Our **Aasramams** which were our real cultural centres used to function mostly in the early hours of the morning. The students of **Gurukulas** would be eagerly at their books at that hours.

This rule applies only to **Swasta**—a healthy person—because a sick man has to rest as long as possible.

In this manner, all the rules of conduct have to be commented upon so that we may appreciate their real importance.

### Cleaning Teeth

Cleanliness is the crux of Aryan civilisation. It begins with cleaning the teeth, immediately after getting up from bed.

"**Ekalkam Gharshayet Dantam Danthamaamsaanyabaadhayan**".

Clean the Teeth with a fresh brush of astringent, sweet, bitter or pungent twigs. Fresh tooth brush made of these twigs should be used every day, so that there may be no fear of contamination. In addition to these natural tooth brushes, you may use finely powdered, fragrant, honeyed, and salted chalk powder (**Tejovathi choornam**), in order to brighten the lustre of the teeth.

Clean Each Tooth Separately, and see that you do not injure the gums. The modern dentist says that the tooth brush should not be used horizontally. Our brush made of a twig, can be used vertically, so as to clean each tooth separately, and so, it is as healthy and scientific as the modern brush.

### Early Morning Bath

A Tamil proverb says,

"**Vaidyanukku Kodukura Panam Vaaniyanukku Kudu**".

The money, that you pay the physician, may with better advantage be paid to the oilman (**Vaaniyan**), because that would prevent disease altogether.

"**Abhyangam Aacharetnityam, Sa Jara Srama Vatahaa**

**Drishti prasada pushtyaayuh swapna Suthwakthawa daardhyakruth**".

Every healthy individual shall have an oilbath daily. Oilbath removes the malas (dirt) from the body, cleanses it and keeps the pores of the body open, and so, there is less danger from infectious diseases. Oil bath checks old age and removes tiredness and pain. It improves eyesight (**drishti**) and weight of the body (**pushti**), conduces to longevity of life (**ayul**), gives good sleep (**swapna**), and strength (**daardhya**) and improves the complexion of skin (**sutwak**).

"**Sira Sravana, Paadeshu Tam Vise-shena Seelayeth**"—

More attention should be paid to the

**"Deepanam Vrishyamayushyam Snaana Moorjaa Balapradam Kandoomala srama sweda tandraa Thrit daaha paapmajit".—Vaagbhata.**

A good bath improves appetite, generates vigour, prolongs life, creates enthusiasm and gives strength. It destroys itching, dirt, fatigue, sweat, sleepiness, thirst, burning sensation and sin, which is considered as an impurity of the heart (Hridaya Maalinyam).

**"Ushnena sirasaa snaanam Ahitam chakshushassadaa; Seetena sirasaa snaanam Chaksushyamati nirdiseth".**

Ayurvedic physicians consider that bathing the head with hot water is injurious to eyesight and that bathing the head with cold water improves eyesight.

A cold bath is the best for healthy people. It is a good tonic. Hot baths to the head or the body are only given as part of medical treatment, and generally speaking a comfortable hot bath (Suksho-shanam) is safe for the sick.

**"Eka Vaasasaa jalam Na viseth"—Gouthama Sootra**

Never enter water with a single cloth. That is the rule of the Aryans, because the most important object with which a bath is taken is to cleanse the body of the dirt. An expert use of a rough piece of cloth for removing dirt is in itself an exercise in addition to its being a good cleaner.

#### Communal Cleanliness

**"Na Vegaan Graama Nagara Devataayatana Smasaana Chatushpadha Salilaasaya Padhi Sannikrishtaan utsrijet—Charaka.**

Never pass excreta in the vicinity of the village, town, temple, burial ground, junction of four streets, reservoir of water and pathway.

#### Prevention of Infectious Diseases

Infectious diseases were prevented by individual personal hygiene and by strictly enforcing isolation. For instance, in some parts of India, a village in which an infectious disease prevails is actually cut off from all neighbouring villages by erecting a fence of thorns round the village. Not a single person is allowed to cross the boundary as a religious injunction. No article is sold or borrowed from a house in which a patient suffers from an infectious disease. I wanted to buy some paddy seeds which were urgently required for sowing from a house in which there was a small-pox patient. The villagers protested strongly and the seeds could not be secured for any cost. Such is the rigour of isolation. This strict isolation is carried to such an extent in every house, that one member of the family does not touch another member or anything that is not scrupulously clean for fear of pollution. This is called 'Madi' "Sacred Isolation". It is generally observed until the midday meals is finished. In fact, a person after bath should not touch with his left hand, any portion of his own body above the navel, because the left hand is considered to be polluted although it may have been thoroughly cleaned. (Smriti Chandrika). This 'Madi' is similar to the surgical cleanliness of the modern operation theatre.

The fight of the Hindus against infectious diseases is a non-violent fight, because it does not consist in killing the germs or their carriers, but in keeping oneself away from their contact. Instead of encouraging the growth of flies by accumulating dirt and killing them by the use of the fly paper, and insecticides we should keep our surroundings clean, so that the fly may not find a suitable place to thrive and to lay its eggs. Every vessel, containing articles of food is always kept carefully closed with a lid. This is what is done in orthodox families, who strictly observe the rules of 'Madi'—Sacred Isolation.

#### Are We More Civilised Today?

In this manner, the life of citizen is not lived anyhow or other, in order to enjoy

sensual pleasures to the best advantage of himself, but to follow a strict life of discipline from birth to death, from early morning until going to sleep, every day in the year throughout all seasons, according to the rules prescribed in detail for each action of man, woman and child. Independence and democracy do not mean licentious living but the education of every individual who is a unit of society, so as to be responsible to himself and to the state.

Perfect cleanliness of the body and mind, of dwelling apartments and of surroundings, good habits, good food, exercise, recreation and sleep are all important factors in determining the strength, lustre, happiness and long life of every individual (Bala Varna Sukha Ayushaam). This is the goal, which Ayurveda struggle to reach.

Are we more civilised today, when we are learning to drink, bed tea without washing the teeth? If civilisation means cleanliness, good character, positive strength and long life, the ancient Hindus were more civilised than some of the modern Indians.

#### The Responsibility of the State

A great responsibility lies on the State in these matters. So far, there was practically a state of anarchy in the administration of moral, social and hygienic laws. We have lost the old rules of good conduct and we have not learnt the new rules of sanitation.

#### Health and Longevity

He who drinks and has no thirst,  
Or eats and has no hunger;  
He who does not take any exercise,  
Suffers illness and dies young.

—Sicami Sivananda.

**Pradhaanaah Dharma Mutkraamya Adharmena Prajaam Vartayanti, Tasmaat Udhvamsante Janapadaah. Charaka-Vimana—Chap. 2.**

If the leaders trespass the rules of righteous conduct—Dharma—and lead the people in the path of unrighteousness, epidemic diseases and wars break out and destroy the country.

Let us hope that our National Government and the people will co-operate with each other in working the Public Health Act and similar Acts, the purpose of which is only to administer Dharma and thereby protect the people not only from the invasion of epidemic diseases, but also from unhealthy habits, anti-social and immoral vices, with the same care with which we are protected from rowdies and thieves by the help of the police.

#### Importance of Self Control

**Nagaree Nagarasyeva Radhasyeva Radhee Yadhaa Swasareerasya Maadhaavee Krityeshu Avahitao Bhavet.**

Charaka-Sootra 5—100.

Just as the Superintendent of City keeps all the citizens under his control for the welfare of the city, just as the chariot takes care of every little part of the chariot, so also a wise man shall keep the internal and external organs clean and the senses constantly alert and under control, always adjusting his activities to all environmental conditions due to time and place.

# REPORT OF THE ENVIRONMENTAL HYGIENE COMMITTEE HIGHLIGHTS AND SIDELIGHTS

by

A. V. Raman

*The Government of India constituted a committee by an order dated 16th June, 1948, to go into environmental hygiene comprehensively. The report of the committee was submitted to Government on 18th October, 1949. Copies of the report were sent to the members of the committee early in September, 1950. The author of this series of articles proposes not only to focus public attention on the highlights and sidelights but also to review critically the report as a whole.*

—Ed. P. H.

At the outset, I must express my grateful thanks to the Hon. Mr. A. B. Shetty, then Minister of Health, Madras, for having afforded me an opportunity to broach the subject of environmental sanitation to Dr. Jivraj N. Mehta, then Director-General, Health Services, and Secretary to the Ministry of Health, Government of India, who was on a visit to the city. The Hon. Mr. Shetty arranged a dinner at his residence in honour of Dr. Jivraj Mehta and invited his colleagues in the Cabinet, Col. S. L. Bhatia (now Major-General) the then Surgeon-General with the Government of Madras, Dr. Sir A. L. Mudaliar, Vice-Chancellor, University of Madras and a member of the Bhore Committee, among other leading men in the city. I was invited by the Hon. Mr. A. B. Shetty to attend the function, which was sometime in September 1947, I think. Mr. Shetty was also good enough to inform me beforehand that the purpose of the function was to have a discussion with Dr. Jivraj Mehta on the health problems of our Province and to enlist his support and sympathy in the furtherance of improvements in the provincial health services. Above all, the idea was to secure some funds from the Government of India for the implementation of the recommendations of the Water Supply and Drainage Committee. And hereby hangs a tale!

After dinner, all the guests and the host assembled in the spacious southern verandah of Mr. Shetty's residence. Mr. Shetty made a brief speech setting out the problems he had to face as the Minister of Health, Madras. Dr. Jivraj Mehta gave a courteous and sympathetic though formal reply, as usual, on such occasions. Thereafter there was a lull. None came out to pose any issue for discussion. I waited for some time in the hope that someone would raise some point on which some useful discussion might ensue; but in vain. At last, I took courage and as I now recollect, thundered continuously for nearly forty minutes. The subject on which I spoke so vehemently was a subject nearest to my heart, and a subject on which effusive lip service had been done by those in authority, without any tangible result. It was environmental sanitation—a profession which I deliberately chose nearly forty years back.

I drew the attention of Dr. Jivraj Mehta to the importance of the subject and the recognition given to it by no less an authority than the Bhore Committee. I protested that the Ministry of Health, Government of India, had done nothing to examine the subject, although the Bhore Committee, while recognising its importance were not able to go into the subject in detail. I drew Dr. Mehta's attention to the remarks of the committee

that the subjects relating to environmental sanitation are of "such importance and some of them raised issues of such complexity as would seem to justify special investigation before decisions could be reached in respect of each of them". I pointedly asked Dr. Jivraj Mehta to have the subject investigated, if necessary, by constituting a special committee.

In the course of the talk, a few friends interrupted me but in the heat of my talk, I was perhaps curt in brushing aside such interruptions and I proceeded with the theme I was developing. Immediately I had finished, Hon. Sri Kala Venkat Rao (then Minister for Revenue) shouted that I had "produced a Raman effect"; of course, in doing so, he was punning on my name, which happens to be that of one of India's great scientists.

Dr. Jivraj Mehta stood up to take leave of his host and naturally, all the guests stood up and one by one, they left. But Dr. Jivraj Mehta before boarding his car called me aside and told me that he was not at all annoyed with what I had told him that evening and, on the other hand, was greatly impressed by my earnestness to improve environmental sanitation. He requested me to send him a copy of the report of Water Supply and Drainage Committee, before he left Madras next morning by air for New Delhi. This was done.

People's Health, had in its issue for September, 1947, editorially put in a plea for taking immediate steps to train public health engineers in this country on a safe and sure foundation. I sent a copy of this issue to Dr. Jivraj Mehta as also the previous issues of the magazine for his perusal. I addressed a personal letter to him drawing attention to the aforesaid editorial notes.

I commended for consideration of the Ministry of Health Government of India, the names of Sri N. V. Modak, City Engineer, Bombay, and of Prof. K. Subramanyam of the All-India Institute of Hygiene and Public Health, Calcutta, for appointment as members of a special committee. I took the precaution of personally appealing to these two eminent

engineers to be so good as to agree for nomination as members of the proposed committee if and when an invitation was extended to them. I anticipated the difficulties of these engineers to find the time to serve in a special committee of this kind in addition to their normal duties.

Dr. Jivraj Mehta was good enough to take note of my letter to him dated 26th September, 1947 and replied to it in his letter dated 15th October 1947, in which he complimented me for the very fine get up of the magazine and added that the subject matter dealt with in it was interesting. He explained therein the difficulties which the Government of India had to face at that time. He wrote:

"At the present moment, we are so absorbed in the troubles concerning Punjab that there is hardly any time for taking up any constructive work. This upheaval might affect the economic and financial conditions of the country so very grievously that one is at a loss to know to what extent it will be possible to begin to put into shape the ideas of reconstruction of our country in all spheres of life—it seemed so rosy barely two months ago."

In the face of what Dr. Jivraj Mehta had said I was very reluctant to press my suggestion for the constitution of a committee. However, while fully realising the anxious time that he should be spending in those troubled days, I ventured to suggest that the constitution of a special committee consisting of only three members to go into the question of training public health engineers could not possibly add to the strain of the Government. The constitution of a special committee was all the more necessary in view of the fact that Dr. Jivraj Mehta and others were engaged in other activities at that time. I also explained to him the urgency of the question because of the fact that the Government of Madras and the University of Madras were then going forward with the proposals to institute a degree course in public health engineering as also a diploma course for sanitarians and health inspectors.

(To be contd.)

# Conference of Directors of Health Services of S. East Asia Region, at Kandy, (Ceylon)

## DECISIONS AND RECOMMENDATIONS



*"The health of a people is really the foundation upon which all their happiness and all their powers as a State depend", said Disraeli.*

*"No permanent advances in the general health programme can rest upon the structure of poor sanitation. Any improvement in the disposal of excreta, in the protection of drinking water, in the destruction of the fly and the mosquito, brings health and social advantage to man, woman and child", said the Director-General of W.H.O.*

*"In the campaign for improved health, drugs, vaccines and sera can in no way replace such essentials as a hygienic home, good food, fresh air and a safe water-supply", said the Bhole Committee.*

*Thus, much lip service has been done to environmental sanitation; but not a single environmental sanitarian had been invited to take part in committees and conferences organized by the medicine men, who profess to practise preventive medicine.*

*In the recent conference of Directors of Health Services of South East Asia Region, at Kandy, Ceylon, held on September 29 to October 1, 1950, no environmental sanitarian had been invited to attend and to take part in the discussions. This is sad.*

*The conference represented all the important States in South East Asia. It was presided over by so able, experienced and sincere a worker as Major-General S. L. Bhatia.*

*It is to be hoped that the Directors of Health Services of the States who had been parties to the resolutions passed at the conference, would take some effective steps to implement these resolutions in their respective States. We also hope that the highest priority would be given to organise a public health engineering section in each of the States.*

—Ed. P. H.

### Decisions and Recommendations

The Conference of Directors of Health Services of States within the South East Asia region of W.H.O. was held under the auspices of W.H.O. Regional Office for

S.E. Asia at Kandy on the 29th and 30th September and 1st October, 1950.

The Conference held five sessions—two sessions each on the 29th and 30th September and a short session on the 1st October, 1950.

Representatives from the following countries were present:—

|                     |    |
|---------------------|----|
| Afghanistan         | 1  |
| Burma               | 2  |
| Ceylon              | 1  |
| French India        | 1  |
| Government of India | 2  |
| Indian States       | 17 |
| Indonesia           | 2  |
| Portuguese India    | 2  |
| Thailand            | 1  |

The Regional Director of W.H.O. South East Asia opened the proceedings and the Conference, elected Major-General S. L. Bhatia, Director of Health Services, Hyderabad (India) as the Chairman of the Conference.

The Conference also elected a Resolutions Committee of 7 and a rapporteur.

At the fourth session of the Conference a seminar on W.H.O.—What it is and how it works—was held. Opportunity was taken by the officials of the regional office of W.H.O. to give a general background information on W.H.O. and to indicate WHO's financial resources, the kinds of assistance W.H.O. renders to governments and the procedures for obtaining WHO and UNICEF assistance.

Among the subjects discussed at the Conference were:—

- Public Health Administration
- General Promotion of Health
- School Health
- Health Education of the Public
- Training of Health Personnel
- Environmental Sanitation
- Control of Communicable Diseases and Health Statistics.

As a result of the deliberations the following recommendations were made:—

### Public Health Administration The Conference

RECOMMENDS that member States should conform to the following principles in their Public Health Administration—

- There should be a comprehensive Public Health Act in every State;
- Curative and preventive aspects of health work should be combined at all levels as soon as possible;

(c) The head of the Health Services should also be Secretary to the Government in the Ministry of Health; and

(d) Except in the case of Municipal Corporations which are constituted under separate legislation, the Health Administration in all other areas should be under the control of the state health departments.

The Conference also

RECOMMENDS that in conformity with the principles already laid down by the World Health Organization, the staff employed in the health services should, in general, consist of full-time workers, that they should be adequately trained and housed and should enjoy proper financial and social status.

### Finance

The Conference

is of the opinion that except in the case of a very few countries in South East Asia, the budget provision for health services is grossly inadequate. The Conference, therefore, strongly recommends that the highest possible priority be given to expenditure on health services and that wherever necessary loans may be raised for the purpose.

### Medical and Para-Medical Training

The Conference

RECOMMENDS that

- in the early stages of development of national health services, emphasis should be laid on the rapid training of an adequate number of medical auxiliaries such as medical assistants, nurses, health inspectors, health visitors, midwives and vaccinators;
- the U.N. Specialised Agencies be requested to collaborate with national governments in long term projects to provide training facilities for the various types of auxiliary health personnel; and
- training of personnel should be restricted to the number in each category that can be absorbed.

The Conference also

RECOMMENDS that in awarding fellowships for higher training the following principles should be followed:—

- (a) In countries where schools of public health do not exist scholarships should be offered by the country to selected candidates to go to one of the schools of public health in the region;
- (b) Scholarships should be offered to those desirous of specialising in the different fields of public health at a suitable institute within the region;
- (c) From amongst those who have specialised in the various fields of public health a certain number of senior workers should be offered foreign scholarships for advanced studies.

### Maternity and Child Health

The Conference

RECOMMENDS that

- (a) increased attention should be paid to paediatrics, both clinical and social, in the pre and post-graduate training of doctors and nurses;
- (b) adequate hospital provision for sick children should be made and that this should be linked with welfare centres for follow up; and
- (c) midwifery services on modern lines should be developed with particular emphasis on domiciliary service in rural areas.

### School Health

The Conference

RECOMMENDS that

- (a) provision should be made for the routine medical examination of school children at least three times during their school career in addition to any requisite special examination;
- (b) provision should be made for the adequate follow up and treatment of defects discovered;
- (c) Health education, as well as health propaganda programme should be

integrated into the school health programme. Environmental sanitation of school buildings and their surroundings should be matters of the highest priority;

- (d) School medical personnel, i.e. doctors and nurses, should co-operate in the work of hospitals so as to follow up their cases;
- (e) Adequate confidential and cumulative medical records in respect of children should be carried forward from welfare centres into schools and thence into the general body of public health medical records;
- (f) The Regional Director should be requested to assist governments in this regard;
- (g) It is desirable to provide a mid-day meal for school children, subsidised, if possible;
- (h) School health service should be an integral part of public health work. Certain aspects, such as the supply of mid-day meals should, however, be the financial responsibility of the Education Department.

### Health Education

The Conference

RECOMMENDS

- (a) that national and State Governments should without delay set up health education sections in their Health Directorates, if they have not already done so.
- (b) that the Regional Director of W.H.O. for South East Asia be requested to do all he can to provide W.H.O. assistance to Governments in developing such Sections.

### Industrial Health

The Conference

RECOMMENDS that in those States where industrial development is taking place a separate section of Industrial Health should be established in their health directorates.

### Environmental Sanitation

The Conference

RECOMMENDS that in every health directorate there should be a section on Environmental Hygiene in charge of a Public Health Engineer, who should work under the direction of the Director of Health Services.

### Health Statistics

The Conference

RECOMMENDS that the duty of reporting vital occurrences, and in particular the occurrence of communicable disease should be enforced by legislation.

### LIST OF DIRECTORS OF PUBLIC HEALTH SERVICES ATTENDING THE CONFERENCE

#### AFGHANISTAN

1. Dr. Faqir Mohamed, General Director (Public Health).

#### BURMA

1. Dr. Maung Gale, Deputy Director, Medical and Health Services, Rangoon.
2. Dr. Tha Mya, Director, Medical & Health Services, Rangoon.
3. Dr. C. T. William, Assistant Director of Sanitary Services, Rangoon.

#### FRENCH INDIA (Pondicherry)

1. Dr. Barbet, Chief Surgeon & Chief Medical Officer of the General Government Hospital, Pondicherry.

#### INDIA

##### Government of India

1. Dr. C. K. Lakshmanan, Director of All-India Institute of Hygiene & Public Health, Calcutta.
2. Dr. C. V. Ramchandani, Assistant Director-General of Health Services, Government of India, New Delhi.

#### INDIAN STATES

1. Bombay.—Dr. E. Benjamin, Director of Public Health.
2. Bhopal.—Col. R. K. Misra, Director of Public Health.

3. Bihar.—Dr. A. N. Duggal, Director of Public Health.

4. Coorg, Mercara.—Dr. C. B. Cariappa, Director of Public Health.

5. Delhi (Health Services).—Lt.-Col. Barkat Narain, Director of Public Health.

6. Hyderabad.—Maj.-Genl. S. L. Bhatia, Director of Public Health.

7. Kashmir.—Sir R. N. Chopra, Director of Public Health.

8. Madhya Bharat.—Col. Dr. Gargye, Director of Public Health.

9. Madhya Pradesh.—Dr. A. S. Grewal, Director of Public Health.

10. Madras.—Dr. T. Lakshmi-Narayana, Director of Public Health.

11. Mysore.—Dr. T. Chandrasekharala, Director of Public Health.

12. Pepsu.—Col. R. S. Marya, Director of Public Health.

13. Punjab.—Lt.-Col. P. C. Dutta, Director of Public Health.

14. Rajasthan.—Col. R. N. Kasliwal, Director of Public Health.

15. Travancore-Cochin.—Dr. N. Krishnan Tampi, Director of Public Health.

16. Uttar Pradesh.—Dr. A. N. Dass, Director of Public Health.

17. West Bengal.—Dr. B. C. Das Gupta, Director of Public Health.

#### INDONESIA

1. Dr. Soetopo.

#### PORTUGUESE INDIA (GOA)

1. Dr. Antonio Luis de Sousa Sobrinho, Director General of Health Services, Goa.
2. Dr. Pacheco de Figueiredo, Director of Medical College, Goa.

#### THAILAND

1. Dr. Luang Bhayung Vejjasatr, Director General, Public Health Department.

# YEAST JOINS THE FIGHT FOR HEALTH

by

Dr. J. Gordon Cook

[Yeast goes into bread and beer—and that is as much as most of us know about this tiny micro-organism. But medical science is learning more and more how vital yeast is to the health of the human body].

ONE of the things we are shortest of today is protein, the body building food we get from things like meat and eggs. And yet I have visited laboratories, where the scientists will show you bottles of first-class edible protein made from bracken, or straw or waste potatoes.

How is it done? By using one of the busiest little workers in the world—yeast.

Without yeast, we should have no beer. Nor would the baker be able to make our daily bread. These everyday jobs that yeast does for us are important enough. But they are nothing to what yeast could be doing to help the world in its struggle for food.

Yeast is a micro-organism—a tiny living plant. Seen under the microscope, a bit of ordinary baker's yeast looks like a lot of little eggs. These are the yeast cells—it takes 50,000 million of them to make an ounce. Three thousand of them lined up in single file would only cover an inch.

## When Growth Starts

Like any other living plant, yeast cells will grow if they are given food and warmth. But they have a way of raising families that is all their own.

When it starts to grow, the yeast cells sprouts a little bud that gradually swells up until it becomes a new egg-shaped cell as big as its parent. The new bud may remain attached to the parent cell and then start budding again on its own account; this can go on until long chains of attached cells are formed, like miniature strings of beads. Or the cells can break away from each other and set out to face the world alone.

To make it grow and reproduce like this, the yeast cell needs a supply of sugary food. And the thing that interests us so much in brewing and baking is that, as it grows, the yeast turns some of the sugars into two new things—alcohol and carbon-dioxide gas. The tiny egg cells are like miniature chemical factories: they take in sugar as raw material and deliver alcohol and gas.

In brewing, the sugary food needed by the yeast is in the 'wort' the sweet, dark liquid that is made by steeping germinated barley in water. In the great vats of the brewery, often as big as prefabs, yeast is thrown on to the surface of the wort and then left to grow in peace. The little egg-shaped cells start tucking into the sugars and other materials in the wort. They begin to bud, and in a matter of hours have raised millions of offspring. And during the process they turn some of the sugars from the wort into alcohol and gas.

## Top Priority Job

The alcohol dissolves in the wort, where it is wanted for the beer; the gas provides the frothy head.

In baking bread, yeast does a similar sort of job. But this time it is the gas that is wanted rather than the alcohol. Yeast is mixed into the dough, and when it is warmed up a bit it starts feeding on the sugars. As in the brewery it begins to bud and grow, turning sugar into alcohol and gas. The gas fills the dough full of holes so that the bread is light and spongy when it has been baked. The alcohol, this time, is evaporated by the heat of the oven.

In both these jobs, the new yeast cells that form as the yeast grows are really incidental. It is the effects of the growth that are important. But things have started changing now, and the yeast itself is coming into its own. Scientists have found that yeast cells are built up from protein similar in food value to the protein we get from meat. Half the total weight of yeast consists of this essential muscle-building food.

In addition, yeast cells are one of the richest known sources of vitamin B, and make their protein several thousand times as quickly as the bullock makes his beef.

In 1938, the possibilities of using yeast as a large-scale human food were examined by the League of Nations Technical Commission on Nutrition. They recommended that yeast should be included in the diets of people in tropical countries, where meat protein and vitamins were lacking. Special factories would be needed to manufacture yeast in large quantities for human food.

When war broke out in 1939, scientists set to work on the top priority job of growing yeast. One of the problems to be solved was what to feed the yeast on. Sugar itself was out of the question. So we began to try every possible source of waste material that could provide some sort of sugary food. Yeast was grown on bracken, hop waste, grass, straw, rotten apples, flax waste, peat molasses, and even banana skins. Molasses, the syrupy stuff left behind in sugar refining, was eventually chosen as the most suitable material.

## Factory in Jamaica

By 1941, the Ministry of food had set up a company to manufacture 10,000 tons of food yeast a year. This was later superseded by the Colonial Yeast Co., under the control of the Colonial Office, and it was decided that instead of bringing molasses into Britain, we would build the food yeast factory in the West Indies. Jamaica was chosen and it is there that our first food-yeast factory is operating today.

Meanwhile, scientists have been carrying out experiments to find out how yeast can best be used as human food.

At a school in Oxfordshire, for example, 79 children between the ages of six and ten were given a daily biscuit containing a small amount of food yeast. A similar group of children received a biscuit without any yeast.

After 10 weeks, the yeast-takers had increased their weight by an average of over 27 ounces, as against about 19 ounces in the case of the non-yeast eaters. After five months, the difference was even more impressive. The gains were 4 lb. 6 oz., for the yeast-eaters and 3 lb. 2 oz. for the others.

## Valuable Addition to Diet

From this and other experiments, it has been shown quite definitely that a doze of yeast of up to half an ounce a day is an invaluable addition to our daily diet.

But these tests were carried out on British children; their diet was in any case well balanced. In many parts of the world people are often desperately short of meat proteins and vitamins. And it is in conditions like this that yeast can play its most important role.

In tropical countries, cereals often provide the staple diet. Though these plant foods contain a supply of protein, they often lack essential types of protein that are needed for proper human growth. To provide these proteins they need a supply of meat. Or Yeast.

Wherever there is this lack of proper balance in the diet, deficiency diseases are often accepted as a part of normal life. And yet it needs nothing more than a supply of yeast to cure them.

In Nigeria yeast was added to the diet of natives suffering from a deficiency of B2 vitamins. A daily dose of a quarter of an ounce of yeast reduced the number of deficiency patients by half in less than two months, and the severity of the symptoms was dramatically reduced.

In another experiment in Nigeria, 18 prisoners were suffering from B2 deficiency were given an eighth of an ounce of yeast every day for five weeks. After this treatment, only five retained deficiency symp-

toms. But when the addition of yeast to the normal diet was stopped, the symptoms reappeared in the patients who had been cured.

At a leper settlement in Trinidad, patients were given supplies of yeast with their normal diet. The leprosy symptoms prevented any accurate assessment of the effect of nutritional deficiency. But the patients developed such appetites that the rations had to be increased.

In the Jamaica factory, food yeast is being grown at a rate of several tons a day. It is being exported all over the world to help out in places wherever people are short of the right kinds of food to eat.

#### Distribution Difficulties

One of the difficulties in making more

widespread use of yeast lies in getting it distributed and used. Even when people are suffering from deficiency diseases caused by badly balanced diet, they will often resist a change from their traditional foods.

In Trinidad, food yeast is added to the bread before it is baked, so that everyone gets a share. And in other countries, wherever communal feeding has been established, it goes into biscuits, soups and stews, providing a supply of vitamins and protein that would otherwise be lacking.

So, in our hungry world, this tiny plant has started doing a really man-sized job of work. All it asks in payment is a steady supply of waste material on which to grow.

*Courtesy—Everybody's Weekly.*

#### The Dietetic Value of Yeast

Although yeast, in strict nutritional parlance, can be classed as a foodstuff, it can hardly be regarded as such in the ordinarily accepted sense of the term. In practical dietetics it should be looked upon as a food supplement whose value lies in its high content of vitamin B-1, and of the other vitamins of the B complex, and—to a somewhat lesser extent—in its richness in good quality protein.

The amount of vitamin B-1 depends to a large extent on the nature of the medium in which the yeast is grown. The amounts of riboflavin and nicotinic acid, and probably also of the other members of the vitamin B-2 complex, do not vary greatly between the different types of yeast. The protein content is about 40-50 per cent. of the dry matter.

Two forms of yeast require consideration in dietetics: ordinary baker's or brewer's yeast and food yeast.

Baker's yeast has, for many people, an unpleasant taste and this limits the amount that can be eaten. Compressed yeast has a high water content (70-80 per cent.) and does not provide much more vitamin B-1 than can be obtained from

same weight of bread made from high extraction flour. There is evidence, too, that the absorption and utilisation of vitamin B-1 from compressed yeast is less complete than that from dried yeast. Indeed very little vitamin B-1 may be absorbed from fresh yeast. Compressed yeast must, therefore, be looked upon chiefly as a source of vitamins of the B-2 complex. Even so, relatively large amounts—2 oz. upwards daily—must be prescribed if significant amounts of these vitamins are to be administered.

Fresh yeast is apt to cause digestive upsets. For this reason dried yeast is preferable as a curative agent. Dried yeast contains only 5-10 per cent. water but amounts of 1 oz. and upwards daily are necessary to secure an intake of B vitamins in therapeutically significant amounts, except in the case of a specially manufactured B-1 rich yeast. Dried yeast can be obtained either in powdered form or in tablets. Some of the latter, however, contain only a few grains of dried yeast, so that their use in the treatment—as distinct from the prophylaxis—of vitamin B deficiency diseases is not practicable.

*—Ministry of Food U.K.*

## HOW DAIRYING SERVES MANKIND

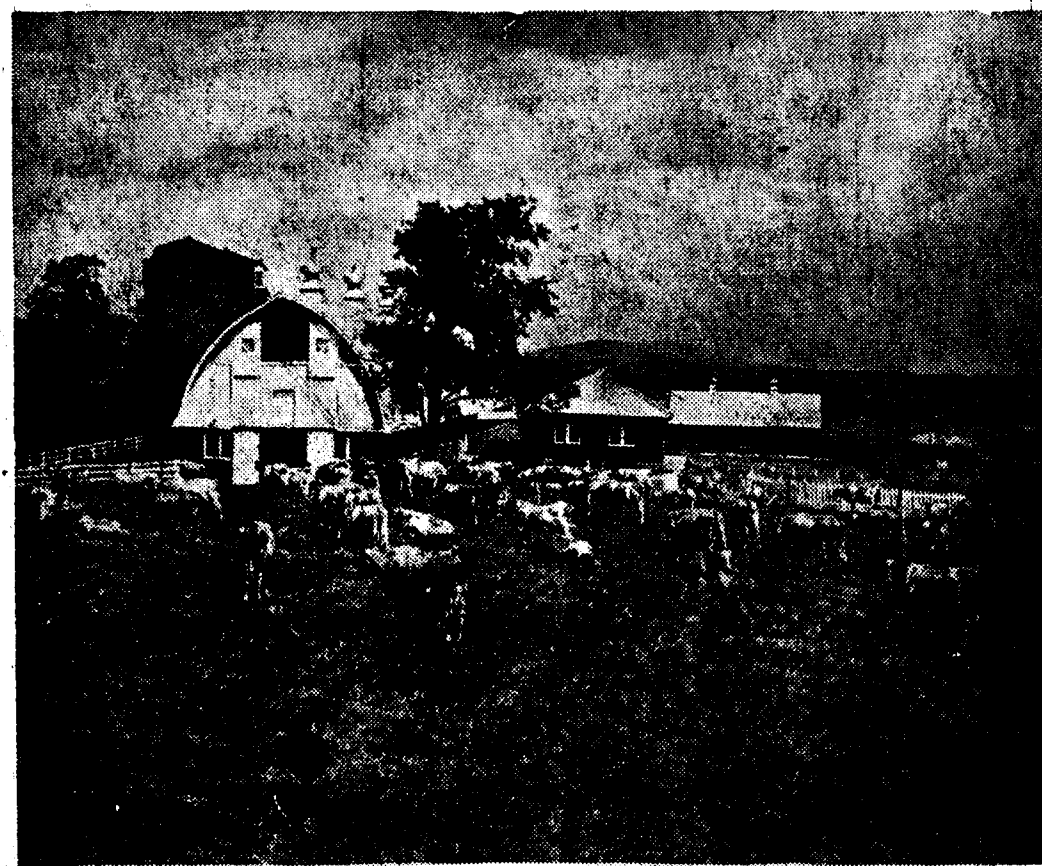
The progress and magnitude of the dairy industry in the United States has contributed to the health of the nation

By MILTON HULT

*This article appeared in the February 1950 issue of Think, a monthly magazine published in the United States by the International Business Machines Corporation. Milton Hult is president of the National Dairy Council. Four photographs accompany this article.*

**T**ODAY dairy products comprise more than 25 percent of the food consumed by the United States' 150,000,000 people. These men, women, and children annually consume more than 118,000,000,000 pounds of dairy foods.

Milk, known as "nature's most nearly perfect food," is constantly in the limelight as 60,000,000 quarts of fresh milk and cream are distributed daily to American consumers through doorstep deliveries and stores.



HOW DAIRYING SERVES MANKIND.

1. This is a scene on a typical dairy farm in the United States. There are nearly twenty-three million dairy cows in the country.



HOW DAIRYING SERVES MANKIND.

2. Electric milking machines on many American farms speed production and aid in sanitation.

The health of the people of the United States, to a large degree, has improved as invention and science have stimulated progress in finding new food values in milk and its products for the human diet.

Milk was an important article of food long before 6,000 B.C. when the oldest written records of the human race were recorded in Sanskrit and preserved in India. To the early peoples of Central Asia the cow was so important that wealth was measured in numbers of cattle. In fact, the cow at times was made a sacred animal and is still so considered by a substantial portion of the population of India.

When the English Pilgrims landed at Plymouth in the eastern State of Massachusetts, in 1620, they failed to bring with

them a cow to provide children and adults alike with milk, butter, and cheese. But conditions improved several years later when the ship CHARITY brought new settlers and cows from England. As the early settlers moved westward, their covered wagons were always followed by two or three cows.

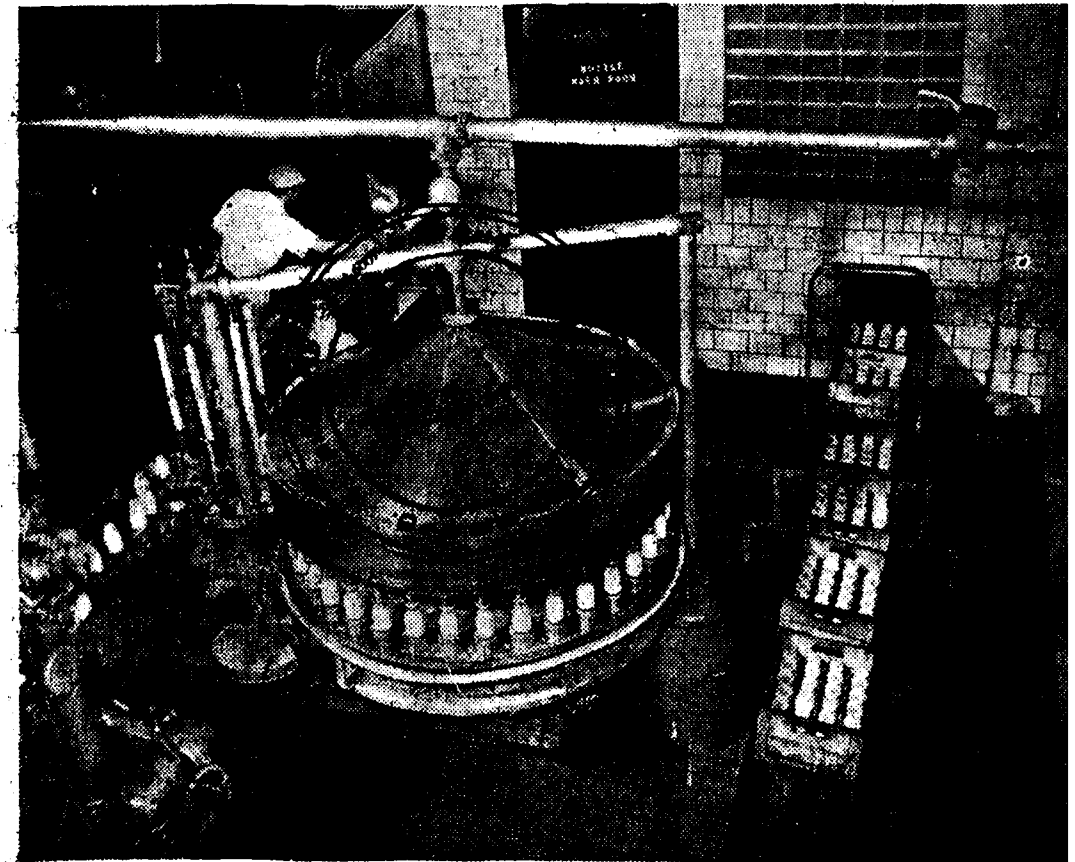
Several hundred years slipped by before significant changes took place in methods of handling milk or in manufacturing dairy products. One outstanding development that stimulated growth in the dairy industry in the United States and other countries was the invention of a test to measure the content of fat in milk. Discovered by Stephen Moulton Babcock in 1890 and known as the Babcock Test, it serves as a

an instrument in handling and processing dairy foods.

To Louis Pasteur, the noted French scientist, goes the credit of adding another major link to the chain of progress in the dairy industry. His pains-taking research led to the discovery of the pasteurization process which guarantees the purity and keeping qualities of milk and milk products.

Among other noteworthy inventions in handling milk and its products are the cream separator, pasteurizer, milking machine, churn, cooling systems, filling machines, ice cream freezers, evaporating and milk drying equipment, and scores of other essential machinery, all playing an

important role in speeding production and improving the quality of dairy products. Contributing to this trend toward modernization were the railroads, which began to build special refrigerated milk trains to ship milk from milk areas to industrial centers for processing milk for delivery at the nation's doorsteps and for manufacturing butter, cheese, ice cream, and many other products. Then came tank cars and huge tank trucks, all of which enable the dairy industry to haul milk and its products many hundreds of miles every day of the year. Back of these important mechanical developments which contributed immeasurably to the growth of the dairy industry was an ever-increasing fund of knowledge from America's leading scientific

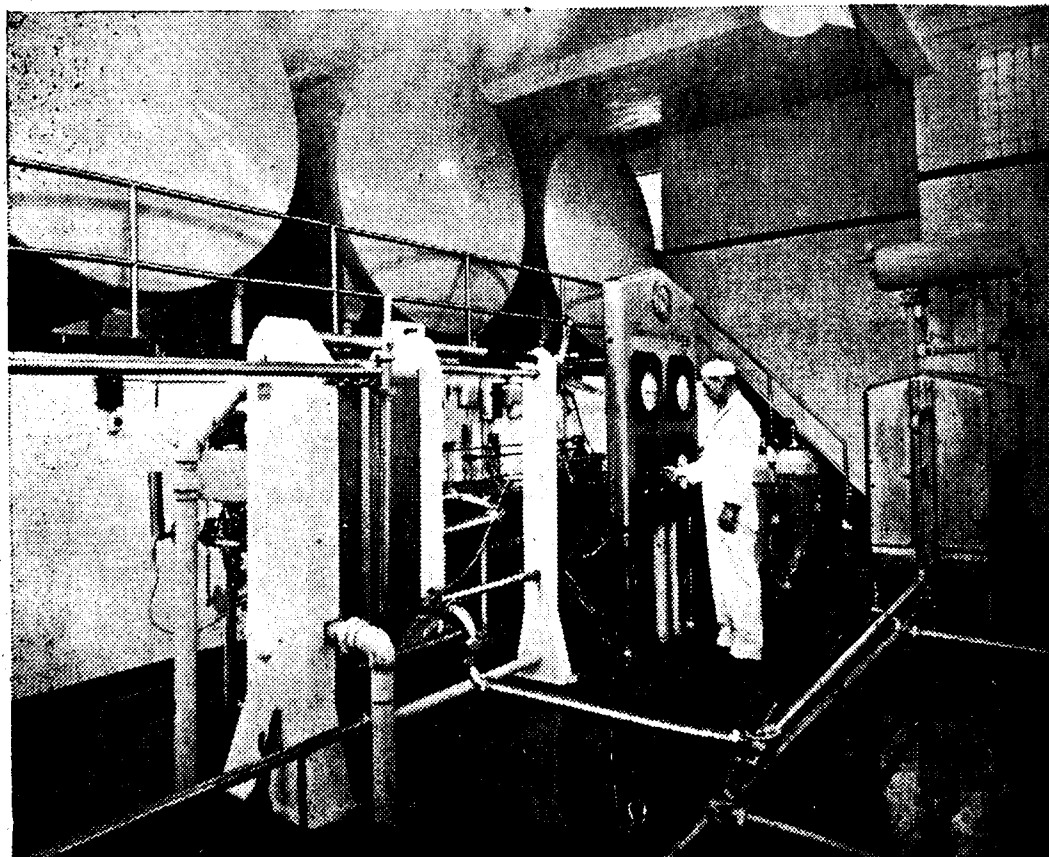


HOW DAIRYING SERVES MANKIND.

3. In American creameries the milk is pasteurized, homogenized, and hygienically sealed and bottled by machine methods. This picture shows a bottling machine.

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#### HOW DAIRYING SERVES MANKIND.

1. Many creameries in the United States have their own laboratories, cooling systems, and evaporating and milk-drying equipment.

laboratories where men toiled incessantly to discover the dietary values contained in dairy foods.

About 20,000,000,000 pounds of milk was produced or consumed in the United States in 1949. It is difficult to visualize that amount of milk, but if milk produced in America in a single year were placed in tank cars, each of which would hold 56,000 pounds of milk, it would require 42,857 trains of 50 cars each. A single day's production would require 117 such trains.

Although milk and its products are generally considered as food for human consumption, they are also used in a wide variety of industrial products, such as plastics, textiles, paper coating, paint, glue, films, pharmaceuticals, insulation, fertil-

izer, insecticides, penicillin, plaster, dyes, animal feed, preservatives, explosives, and electro-plates.

The magnitude of the dairy industry is apparent when it is considered that one out of every 15 families in the United States is dependent on milk for a livelihood. Actually, the dairy industry employs full time at least 1,500,000 people in the production, processing, and distribution of milk and dairy products. Nearly every segment of the manufacturing, technical, and professional skills of the United States are drawn into the industry at one point or another. Among them are veterinarians, building suppliers and construction men, fabricators of milk cans, milkers, filters, machinery of all types for processing and

manufacturing, producers of raw materials from lumber through most of the metals, and transportation, including rail, truck, and ship.

Although dairying is national in scope, in 11 States it is the principal source of farm income. Some milk is produced on at least 75 per cent of America's farms, and about 10 per cent of the farms, or 585,900, are specialized dairy farms.

Every American family is a part of an industry that employs millions of people and produces billions of pounds of dairy foods. Cash farm income from dairy products is around \$4,000,000,000 annually. Significantly, this income to the farmer is on a daily or monthly basis while most of his other receipts from agricultural products are seasonal.

Dairying has always been a stable branch of agriculture. It has fluctuated less than the national income. A productive dairy herd proved the salvation of many a farm family during the economic depression of the 1930's when net income from other

livestock and grains was entirely wiped out. Today the average dairy cow will produce annually 5,036 pounds of milk compared with 2,360 pounds in 1850. In fact, improved herds will average around 8,835 pounds. This increased production is the result of improved feeding and breeding programs stimulated by leaders in the dairy industry, breeding associations, and the colleges of agriculture in Land-Grant schools throughout the United States.

The American dairy industry has spent and is spending now millions of dollars in the interest of finding new food values and new uses for its products. The dairy chemists are constantly engaged in converting what was formerly waste into additional income for the farmer and into new, improved products for the consumer. To illustrate, defatted milk, totalling well over 10,000,000,000 pounds annually, is worth about 40 cents per hundred pounds today, while 20 years ago it was practically worthless. Both industrial research and nutrition research insure security for the future of farming as a sound business.

#### Milk Statistics

According to a recent survey of the Agricultural Marketing Department of the Government of India, the total gross production of milk in the Indian Union has been estimated at 5,827 lakh maunds. Of this total, 46.7 per cent is cow milk, 50.2 per cent buffalo milk and the rest goat milk. Deducting the quantity of milk fed to the calves, the net available quantity is 4,815 lakh maunds. The import of milk products is comparatively negligible and amounts to less than 6 lakh maunds per annum estimated as fluid milk. Thus the average *per capita* consumption is 5.5 oz. per day in terms of liquid milk. For the production of the above quantity of milk the country maintains 41.1 million cows, 19.6 million she-buffaloes and about 8.2 million milch goats. Our dairy industry is essentially a rural one and about 95 per cent of the stock is maintained in rural areas. The intensity of milk production varies a great deal. It is highest in places like Delhi, Baroda and East Punjab and lowest in Mysore, West Bengal and Assam. It has been calculated that the average

quantity of milk produced per square mile, per day, for the country as a whole comes to only 83 lbs. In Delhi State where milk production is supposed to be highest, the maximum production comes to hardly a thousand pounds per day.

With regard to the utilisation of milk, only about 36.2 per cent. of the net available milk is used for fluid consumption and the rest utilised in the form of milk products. The most important of these is *ghee*, of which nearly 43.3 per cent. of the available quantity, amounting to 2,085 lakh maunds, is annually used. Curd, *Khoa* and table butter are estimated to consume 19.5 per cent. of the total milk production. At present it is estimated that nearly 441 lakh maunds of fluid milk is consumed in the urban areas and probably an equal quantity in the form of various products, thus accounting for nearly 19 per cent. of the total milk production. The price paid by the consumers for milk in the urban areas is probably the highest in the world in spite of the fact that milk is sold loose without any processing.

—Indian Affairs.

# NUTRITION AND INFECTION

*An adequate diet is universally accepted as one of the protective measures against infection by the tubercle bacillus and as an essential factor in treatment. In infections caused by other organisms, however, the relationship between resistance and good food is not clear cut and much careful research remains to be done.*

Every mother of a family, and every doctor in practice, firmly believes that the best bulwark against infection is good wholesome food. The association of tuberculosis with poverty and malnutrition is particularly noteworthy. In the late war the countries with the highest incidence of tuberculosis were those that suffered the greatest privations and food shortages. But, other factors besides nutrition may well have been involved. The poorly fed community often suffers from fatigue, low morale, anxiety, overcrowding, and poor hygiene, and its hospital and public health organizations are likely to be defective. Moreover, in spite of the appallingly low nutritional standards in Germany at the end of the war, there were no major epidemics. Then again, children brought up in apparently admirable living and dietary conditions still contract measles, chicken-pox, mumps, and poliomyelitis, and well-fed adults catch colds and influenza. Poliomyelitis, indeed, seems to have a predilection for young adults in excellent physical condition; and the incidence appears to be much higher in well-fed countries like the United States than in, for example, the ill-nourished African. Most bacteriologists, therefore, hesitate to accept the view that malnutrition increases susceptibility to infection.

The influence of heredity, both in the host and in the infecting organism, cannot be overlooked. Webster, by inbreeding and selecting from a common stock of mice, bred two strains, one of which was almost completely immune to a given infective dose of *Salmonella enteritidis*, the other suffered almost a 100% mortality. Such inbreeding and selection, however, did not produce resistance to other organisms.

If nutrition plays a part in the resistance to infection, one would expect antibody

production to be affected, particularly as antibodies are derived from the serum proteins, which are lowered in frank malnutrition. At the end of the war Gell had an exceptional opportunity for studying the relation between protein deficiency and antibody response in patients and prisoners from the Ruhr suffering from malnutrition—they were on a diet of only 1,000 calories daily. Their antibody response, as measured by agglutination tests, was determined before and after infection with a rather bizarre mixture of tobacco mosaic virus and avian red cells, chosen because there could not be preformed latent immunity to them. British troops served as controls. The results showed that the well-nourished British soldier had a better antibody response than the half-starved German, but the differences, though statistically significant, were not as great as might be anticipated. Gell concluded that "under-nutrition does not play as large a part in widespread epidemics as is generally supposed."

Vitamin-C was once thought to be associated with immunity mechanisms in the body, but evidence is not very convincing. Early work indicating a direct correlation between blood vitamin-C levels and complement formation has not been confirmed. On the other hand, a controlled experiment of Glazerbrook and Scott Thomson, in 1938 seemed to show a definite increase in the resistance of schoolboys against tonsillitis, pneumonia, and acute rheumatism—but not colds—when they were given full doses of vitamin-C. There is evidence that vitamin-C is bacteriostatic, but only in concentrations that could never be reached in the body. Large quantities of vitamin-C are often given to patients with infections because their excretion of the vitamin is diminished, but whether the vitamin-C level in the tissues and blood of

the normal person affects his susceptibility to infection or the virulence of the attack is improven. Vitamin-A has been named the "anti-infective vitamin" without very firm evidence.

Much work has been done in the last decade on the effect of nutrition in experimental infections in animals but most of it presents such confusing and, at times, conflicting results that it is difficult to draw any general conclusions. Experimental work on viruses, however, has established that the virus and the cells of its host compete for nutrients that are essential for vital enzyme mechanisms in both. If the virus prevents the host cells from utilizing these essential nutrients, and appropriates them for its own purposes, then the host cells will suffer and may eventually die. Conversely, if the virus is starved of some of its essential nutrients, it cannot live. Viruses thrive best in tissues whose metabolism is active—as in the developing hen's egg—and the typical picture of several virus diseases in animals can be markedly altered by a variety of dietary deficiencies. Animals on diets deficient in members of the vitamin-B complex often show a heightened resistance to some viruses, such as that of poliomyelitis, so that if they do become infected the disease runs a mild course. This and the low incidence of poliomyelitis among poorly nourished people may be examples of "starving out the virus." With bacterial and protozoal infections a deficiency in vitamin-B complex generally increases susceptibility to infection. Lack of some members of the B complex produces leucopenia, which interferes with phagocytosis. Interesting as these experimental observations are, we must not assume that they have an immediate application to human problems. Nevertheless, Howie suggests that experiments on mice "offer the best hope of giving shape to the present vague mass of information."

—The Lancet—London.

1. Remember that despite researches, the structure and working of the human body have not as yet been completely understood. It is only subject to this limitation attempts are made to cure diseases. It is something like 'heads I win, tails you lose'.

2. Do not read about diseases and begin to imagine that you are yourself developing the signs and symptoms of each of the diseases you have read about. The mind can make many things.

3. The health of the mind is bound up with the health of the body. Let your thoughts reinforce your health.

4. Enjoy life; have fun; keep alert and interested.

5. Be proud of your job and have confidence in your ability to work.

6. Face facts as you find them; however hard they may be, never let them beat you.

7. Know your good points and develop them.

8. Plan for the future and work for it today with hope and confidence.

9. Cultivate the habit of sticking to your work until you achieve your aim; be dependable.

10. Avoid grouches and fault-finding. Develop a spirit of cooperation and friendliness with fellow workers and others.

11. Spend your off time on doing what you like best; develop a hobby and thereby relax your mind and take it off your work for a little while. When you resume work, you will do so with vigour in body and mind.

—A Blue-Printer.

# BALKAN-JI-BARI-AKHIL HIND BALAK SANGH

by

Shewak Bhojraj,

General Secretary, Balkan-ji-Bari

When Rupert Brooks said the future of the race marches forward on the feet of little children, he would have little expected an organisation to take his words for a motto and render service to young ones. But Balkan-ji-Bari, in Bombay State, with its numerous institutions linked to it, is now in its twenty-fifth year of social service, and is celebrating the occasion. Apart from its record of very useful work over these years, it has one more claim upon our support; it has for its President, the Hon'ble Shri B. G. Kher, the State Chief Minister, who is one of the most genuine of Congressmen, now in office, and for its Jubilee Committee's Chairman, Rani Maharaj Singh, a noble lady and a social worker of many years' credit. They have launched an appeal for money to construct a Headquarters for the Bari, worthy of the great cause for which it stands. We are confident there will be a generous response to their appeal. The author Shri Shewak Bhojraj is the heart-and-soul in the work of helping children, and his services, unselfish and earnest, are sure to bear fruit. We wish similar efforts are made in other States too, to organise Baris, and take up the children's cause with faith and zeal.

—Ed., P. H.

**B**BALKAN-JI-BARI is an organisation which brings children together in their leisure time for recreation, but it is based on the belief that recreation is a medium of education in the most liberal sense, and that the way a child spends his leisure hours will determine what sort of man or woman, he or she is to become. It is, therefore, a school of discipline, but the discipline is that of a democracy in which the citizen is primarily responsible for the fulfilment of those duties which citizenship implies. In most of his life, the child is under orders, at school or at home, but Balkan-ji-Bari is his own affair. Boys and girls meet in these Centres as often as possible,—every day if convenient, or once a week at least, and arrange varied programmes. The Bari has also a Pen-Friendship Section which brings children of different places, here and in foreign countries, in contact with each other. Thus the organisation is *national* in its way of working and *international* in its outlook.

Balkan-ji-Bari has Children's own Libraries and Libraries for Child Welfare Workers at several places, consisting of books in different languages. They are, however, small libraries, and need to be expanded. The Bari has also a Poor Children's Fund, out of which study scholarships are awarded to its poor, deserving members. It also helps in making collections for deserving causes during famine, earthquake or floods. The Association conducts a number of monthly journals in English and other languages as well as Children's Corners in *Bombay Chronicle* (English), *Bombay Samachar* (Gujerati), *Anand* (Marathi), *Swadesamitran* (Tamil), *Hindustan* (Sindhi) and other papers.

Balkan-ji-Bari has been holding its periodical excursions and tours, as well as Workers' Camps. Our Workers are all voluntary—men and women whose enthusiasm has spurred them to devote their spare time and energies to the work. It is realised, however, that the task of helping

children to grow into worthy manhood and womanhood is too important to let it be the toy of well-meaning incompetence; it is a noble task for any citizen, but he must have the character and skill to carry it out. Balkan-ji-Bari, therefore, arranges periodical training for them. Children have been taken on distant trips twice, and so far about five Workers' Training Camps have been organised. The All-India Balkan-ji-Bari and Child Welfare Workers' Conference are also arranged from time to time.

## Its History and Growth

Balkan-ji-Bari is originally a Sindhi phrase which, according to Kaka Saheb Kalekar, has been adopted by Hindustani, and it means "Children's Garden." The chief aim of the Association is to make children as happy as possible and to let them develop by themselves. According to our President, Shri B. G. Kher's recent announcement, Balkan-ji-Bari must become a body which could be referred to for solutions of all problems connected with children up to the age of eighteen years. The Association has been progressing slowly and steadily, and it would be celebrating its Silver Jubilee shortly. It is hoped and wished that it shall be able to achieve its aims and objects before long.

Balkan-ji-Bari, was started in 1926 by a Brother who prefers to be known as Dada (an elder brother). He felt that as we were growing older and older, we were becoming more and more selfish, and therefore, we were losing our real happiness. He thought that children who were already happy should be able to retain their happiness even when they grew old. Thus happiness which everyone is after, which everyone yearns for, would come to stay. With that idea, he first started by writing for children, then collected a few of them and arranged programmes for and by them, and later, their provincial and all-India gathering were held. Children who did not know even each other's language felt happy in each other's company. And Dada's expectations began to be realised in seeing children of all castes and creeds forming into one Great Brotherhood.

Balkan-ji-Bari under the present conditions, was dissolved as a Society registered, in Karachi, and was registered in Bombay in 1948. Now Balkan-ji-Bari has Provincial Organisations in Bombay, Delhi, Uttar Pradesh and Gujerat. It has been recognised as an Educational Institution by the Government of Bombay. Its Units are spread in almost all parts of the country, including Bengal, Punjab, Madhya Pradesh, Bihar and South India, totalling more than 200, and its membership is nearly 30,000. Efforts have been made to start Balkan-ji-Bari Centres also in different Relief Camps. A special Bari Centre is carrying on an experiment in stopping delinquency in children. The Bari has been trying to establish Special Children's Parks and Playgrounds.

## Symbolic and Directive Guidance

The concrete things that we want to do in order to fulfil the aims and objects of our Association, are narrated below. First of all, we wish to educate children in such a manner that they become patriotic and self-reliant Indian citizens having power of endurance and self-sacrifice. To achieve this, undoubtedly, the process would be a very long and sustained one, but our organisation will continue to put forth its efforts. However, what it is able to do will more or less be symbolic, because education is the concern first of the parents and homes and then of the schools and whole-time institutions.



A happy time on the sea-shore.

Balkan-ji-Bari, at most places, is able to do work only for about ten or twelve hours spread over one whole month, as it is active mostly on Sundays, and that too far not more than two hours, according to the convenience of the Honorary and Voluntary Workers. Within such a short time, the work that the organisation would be able to do, can just be symbolic and directive. Wherever the organisation has a Centre or a Unit, it does only such work as is necessary in the interests of the children, and which can be a sort of pointer in that direction—a pointer both to the parents and schools.

In the past, children have gone out from school into the world of work with the accepted idea that they are primarily earners. It is probably true to assert now, for the first time, the public opinion of the nation that during their adolescence, boys and girls must be regarded primarily not as earners but as learners. The child's problem falls into three parts: The first is the provision of formal education in school, the second is the organisation of work for juveniles, and the third is what is done to provide facilities for recreation—The child at school, the child at work and the child at play.

Children are naturally inconsistent, and their interest also waxes and wanes. It is a fairly safe rule that we are happiest when we are doing what we can do best. It is, therefore, important that as far as possible children should be guided to do the work for which their intelligence, aptitude and character fit them, because that is what they will do best. The method of training is to give the children pursuits which appeal to them, such as games and recreative exercises, which lead them on to learn for themselves many useful crafts.

### Our Ambitions and Aspirations

India will become stronger as its young citizens have informed, critical and active minds, and are inspired by a living sense of responsibility to the community. Within

that framework is room for the development of the strongest individual personality, which is the essential substance of a nation. In general principle, the likeliest, indeed the only, way to succeed in working out a right technique for this is to find out where a child's interest lies, and what he can do best, and give him opportunity of developing the ability and satisfying that interest.

The organisation desires to start an All-India Children's Volunteer Corps in order to increase the children's physical and mental efficiency. Then, it wants to become a single common platform for unity—cultural as well as social irrespective of any class, rich or poor, any religion, Hindu or Muslim, any Province, Maharashtra or Madras. Besides, it wishes to establish Children's Mutual Aid Centres in all its Units. Over and above all that, this organisation will endeavour to supplement the home and school activities with a view to directing the children's emotions in a proper manner. Balkan-ji-Bari aims at becoming an organisation whose Branches will be ready, willing and able to solve any difficulty or problem facing parents, schools, society or Government, in respect of children.

The Children's own Library of Balkan-ji-Bari will contain all kinds of books meant for and relating to children. Its All-India Children's Own Museum will contain whatever the boys and girls might collect out of the hobbies or aesthetic sense, as well as



Busy making sand castles.

things and materials which will interest and educate them. It will establish study classes on Child Psychology and on Legislation regarding children of this country and also of other countries, and whenever necessary, the organisation will agitate for their betterment. It will try to have a net-work of Children's Schools on idealistic lines. To sum up, it will establish an All-India Children's University.

Balkan-ji-Bari desires to work along the lines indicated above, only with a view to educating children, as mentioned heretofore, that they may become patriotic and self-reliant Indian citizens with enough power of endurance and self-sacrifice for the toughest days that are still ahead of us. To-day the organisation does work on these lines, but on a very small scale, and as if negligible. None-the-less, it is the Bari's ambition to show that all these things are realised and not only visualised.

### Some Necessary Information

1. If you are under 14 years, you can become a Primary Member by paying an yearly subscription of Four Annas, and if you are between 14 and 18 years of age, you can become a Companion Member by paying Eight Annas annually, and the forms should be signed by your parent or guardian. Poor children may be enrolled free at the discretion of the Executive Council.

2. If you are 18 years or over, and are prepared to undertake some voluntary service for the Association, you can become its Associate Member by paying an annual subscription of Rupee One at least (through the nearest Unit).

3. To join the Association there is no distinction of caste, creed, colour or sex. You must only fill up a form which you can obtain from the nearest Unit or directly from the address given below\*, and after its acceptance a certificate will be issued to you.

4. Sympathisers are enrolled on payment of Rs. 100 in lump sum, donors on payment of Rs. 500 and patrons on payment of Rs. 1,000. They can send their donations

to the Secretary or to the Treasurer by money order, cheque or otherwise, the receipt for which will be sent as soon as possible. They have also to fill up the prescribed forms.

5. A Unit of the Association could be formed with the minimum membership of thirty members, of whom at least half the number should be Primary Members and two Associate Members. Their activities will be to meet under the guidance of some responsible lady or gentleman, and conduct every day if possible, or at least once a week, classes or meetings where they will try to keep up to the motto and put into practice the aims and objects of the Association slowly and steadily. They should also try to have outings and excursions as frequently as possible.

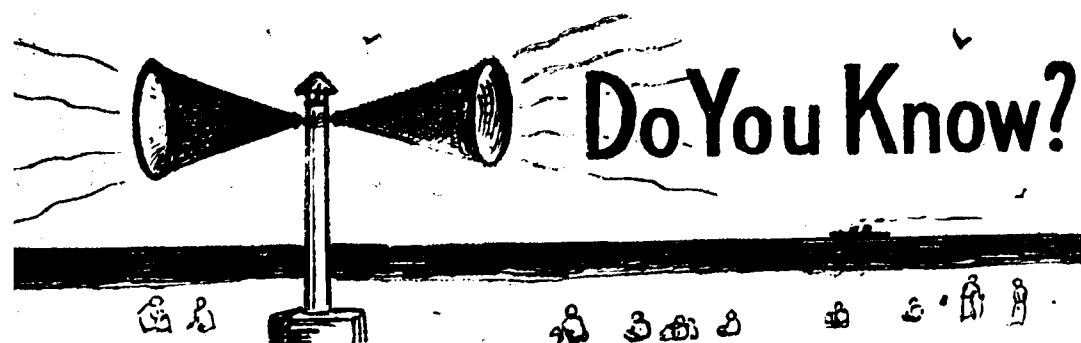
6. A provincial organisation can be formed with a minimum number of six units.

7. Detailed particulars, including the Society's Rules and Regulations, hints to Workers on starting and conducting Balkan-ji-Bari activities, and lots of other information, are contained in the "Balkan-ji-Bari Hand-Book," available at Rupee One. The Balkan-ji-Bari Badges can be had at Twelve Annas each.

\* General Secretary, Balkan-ji-Bari, Akhil Hind Balak Singh, "Gulistan, Khar, Bombay" 21.



Hearing a story.



### Hiccups in Babies

**Q.**—A two-week old baby has hiccups, usually severe, after every feeding. Giving the baby sips of water and sitting it up straight were tried in vain. What can be done to secure relief?

**A.**—Practically always, the reflex that causes hiccups arises in the stomach. In the child, possible factors are too rapid feeding, too hot or too cold milk if the child is bottle-fed, too much food in the stomach or swallowing air. In passing, we might note that breast-fed babies are much less likely to have hiccups than are bottle-fed babies. Of the causes listed, swallowing air is most commonly responsible for hiccups. It would be wise to interrupt the feeding at frequent intervals, especially if the child is taking the milk in hungry gulps, hold the child over your shoulder and pat it on the back. Usually the air is returned, and feeding can be resumed.

Although organic causes are not likely in the child, if the hiccups continue it might be a good idea to have your doctor make a study of its general physical condition. It is always wise to have a child nurse in surroundings as quiet as possible, and the mother should do all she can to make it a pleasurable, relaxing experience.

—Adapted from Today's Health.

### Why Babies Cry?

**Q.**—Should a baby cry?

**A.**—Everybody must have exercise and practically the only exercise that a small baby can indulge in is to cry. This action has a very valuable effect in expanding the lungs and in exercising a large number of muscles. Later, when the baby can move about, other forms of exercise are possible, but crying is still useful because it is the only way in which the child can express its feelings of discomfort and signify that

it requires something. Crying, therefore, should not be looked upon as a vexatious habit of babies, but as a sign which we adults must endeavour to interpret correctly.

### Physic

**Q.**—When was physic first given?

**A.**—It appears to have been first administered by the Egyptian priests, who made a study of medical science. Pythagorus endeavoured to explain the philosophy of disease and the science of drugs and physic 529 B.C., and Hippocrates followed him later.

### First Surgeons

**Q.**—Who were the first surgeons?

**A.**—In former times, the profession of surgery was a somewhat disreputable one; operations being for the most part undertaken by the local barber—hence the barber's pole (representing a splint unwrapped by a bloodstained bandage). The first step in the direction of regeneration came when Henry VIII granted a charter to the Barber Surgeon's Company. The two professions were separated in 1745, and the College of Surgeons were granted their first charter in this year. The charter has been renewed and extended in 1800, 1843, 1852 and 1859.

### Glutton

**Q.**—What is a glutton?

**A.**—It is an animal living in Alaska and North America, generally. It is a kind of weasel and grows to some three feet in length. It has an enormous appetite, hence the use of its name for people who eat too freely.

### Fly's Feat!

**Q.**—Why can a fly walk on the ceiling?

**A.**—It seems as though a fly or any other creature when attempting to walk on the ceiling should fall to the floor. The reason it can remain inverted and so defy gravity is that its feet are provided with a cavity which, when pressure is applied and the air forced out, forms a vacuum. The leather sucker on a piece of string which some boys delight to use in wet weather acts on the same principle.

### Eating House

**Q.**—What is restaurant sanitation?

**A.**—It is to serve in a courteous and cheerful manner, amidst environmental delight, quality food, properly prepared under immaculate conditions and to maintain at all times this standard of excellence that will merit the return of our best friend—the cash customer.

—Arthur C. Robinson, R. S.,  
In the Sanitarian.

### Range of Flight

**Q.**—How far do birds travel?

**A.**—Perhaps the most striking instance of bird migration that has come under notice is that of a song thrush. One of a brood of chicks marked in their nest at Skene, in Aberdeenshire, in June, 1910, was shot at Leiria, in Portugal, five months later. The two localities are about 1,250 miles apart as the crow flies.

### Rats' Range of Travel

**Q.**—How far can rats travel?

**A.**—It is well known that rats are great travellers. Sometimes they set out singly in search of new homes; sometimes they go in shoals. The longest distance a rat has been known to travel is 190 miles. The particular specimen in question was marked and released in North London. In six months it turned up at Bradford in Yorkshire.

### Obesity

**Q.**—Especially after what age is obesity a health hazard?

**A.**—Forty.

### Heart Trouble

**Q.**—What are some underlying causes of heart attack?

**A.**—Congenital defects, rheumatic fever, thyroid disease, arteriosclerosis and hypertension.

—Today's Health.

### When Was Tea First Drunk as a Beverage?

Confucius advised his followers 'Be good and courteous to all, even to the stranger from other lands. If he say unto thee that he thirsteth, give unto him a cup of warm tea, without money and without price.'

It is probable that most people would state that tea is quite a modern beverage, yet the Chinese sage, Confucius, lived some five hundred years before the birth of Christ.

### Cheap Vitamins

**Q.**—Which is that cheap thing containing all the A, B, C, D, E & F vitamins in sufficient quantity, available throughout the year for the labourers?

**A.**—Except milk which is the nearest approach to perfect food, no other single food contains all the vitamins in sufficient quantities. Tomatoes, however, are good sources of A, B and C. (Vitamins E and F are not very important from nutritional point of view).

—Food And Nutrition.

### Rule of Medicine

**Q.**—What is "the prime rule of medicine"?

**A.**—The right kind of food is the most important single factor in the promotion of health, and the wrong kind of food the most important single factor in the promotion of disease.

—Sir Robert McCarrison.

### Wasp-Sting

Dip a piece of ordinary paper in water and apply it over the sting. It immediately stops pain and inflammation. Repeat the process after ten or fifteen minutes if necessary.

### Scorpion-Sting

Application of saturated solution of alum powder relieves the pain.



*Wit's an unruly engine, wildly striking,  
Sometimes a friend, sometimes the engineer.*

—George Herbert.

### Decoded and Bottled

An invitation to dinner had been sent to the new doctor. In reply, the hostess received an absolutely illegible letter.

"I must know if he accepts or declines," she declared.

"If I were you," suggested her husband "I should take it to the druggist. A pharmacist can always read a doctor's writing, however badly written."

The pharmacist looked at the sheet of notepaper which she had handed him and, without waiting for her explanation, went into his dispensary. He returned a few minutes later with a bottle which he handed over the counter.

"There you are, madam," he said. "That will be fifty cents."

### A Convincing Explanation!

Doctor Fordyce sometimes drank a good deal at dinner. He was summoned one evening to see a lady patient, when he was more than half-seas-over. Feeling her pulse, and finding himself unable to keep its beats, he muttered "Drunk, by God!" Next morning, recollecting the circumstance, he was greatly vexed and just as he was thinking what explanation of his behaviour he should offer to the lady, a letter from her was put into his hand. "She too well knew," said the letter, "that he had discovered the unfortunate condition in which she was when he had visited her; and she entreat-

ed him to keep the matter secret in consideration of the enclosed (a hundred-pound bank-note.)"

—*Recollections of the Table-Talk of Samuel Rogers, 1856.*

### Rest

Rest is not quitting the busy career;  
Rest is the fitting of self to one's sphere.

'Tis the brook's motion, clear, without strife,  
Fleeting to ocean after this life.

'Tis loving and serving the highest and best;  
'Tis onward, unswerving, and this is true rest.

—Goethe.

### Unseen are Eternal

The things that are seen are temporary;  
the things that are unseen are eternal.

—Emerson.

### A Common Factor in Disease

A common denominator of disease has been found in the blood of patients suffering from cancer, tuberculosis, rheumatic fever, rheumatoid arthritis.

According to a report presented to the African Chemical Society on the research work done by two U.S. doctors, an abnormal amount of the simple sugar fructose bound to proteins in the blood serum links

all four diseases together for the first time. The sugar was detected by the deep purple colour it produced when tested with a chemical compound from tar, called diphenylamine.

"The fact that cancer, rheumatic fever, rheumatoid arthritis and tuberculosis have the common property of an increased level of certain mucoproteins in blood serum is both interesting and significant," says the report. "It indicates that in part at least the biochemical mechanism of these apparently unrelated diseases is similar. This fact was discovered during research on an unusual colour reaction given by serum. When diphenylamine, a substance found in coal tar, is dissolved in sulphuric acid and added to the serum of animals or humans, a purple colour develops.

"The serum of individual suffering from acute rheumatic fever, rheumatoid arthritis, cancer and tuberculosis gives a purple colour of greater intensity than does the serum of healthy people."

—Globe.

### The Place of Teeth—Not in Mouth

The doctor was trying to elicit from the old man whether there was shivering before the rise of temperature.

"Did your teeth chatter when you got the fever?"

"I do not know, doctor. They were on the side table."

### Rich without Wealth

Rich, from the very want of wealth, In heaven's best treasures, peace and health.

—Gray-Ode.

### A Spade's A Spade

Young Wife: "Dear, how does it happen that you told me that your father was a doctor back in your home town? It says here on his letterhead that he's an undertaker."

Husband: "You're mistaken. I never said that the old man was a doctor."

Young Wife: "But I'm quite sure that you did tell me that very thing some time before we were married."

Husband: "No. I merely said that he followed the medical profession."

### Warning

While walking along the street an epileptic dropped in a fit and was quickly rushed to the hospital. Upon removing his coat one of the nurses found a piece of paper pinned to the lining, on which was written: "This is to inform the house surgeon that this is just a case of plain fit—not appendicitis. My appendix has already been removed twice."

### It Might have been Old Age

A Washington physician was once walking on Connecticut Avenue with his five-year-old son when they were obliged to stop at a side street to await the passing of a funeral procession.

The youngster had never seen anything of the kind. His eyes widened. Pointing to the hearse, he asked, "Dad, what is that?"

"That my son," said the physician, with a grim smile, "is a mistaken diagnosis."

### You can't please Everybody

Doctor (after examining patient): "I don't like the looks of your husband, Mrs. Brown."

Mrs. Brown: "Neither do I, doctor, but he's good to our children."

### Hard Way

"Well, Doc, you sure kept your promise when you said you'd have me walking again in a month!"

"Good! I'm glad to hear that."

"Yeah, I had to sell my car when I got your bill."

### While There's Life

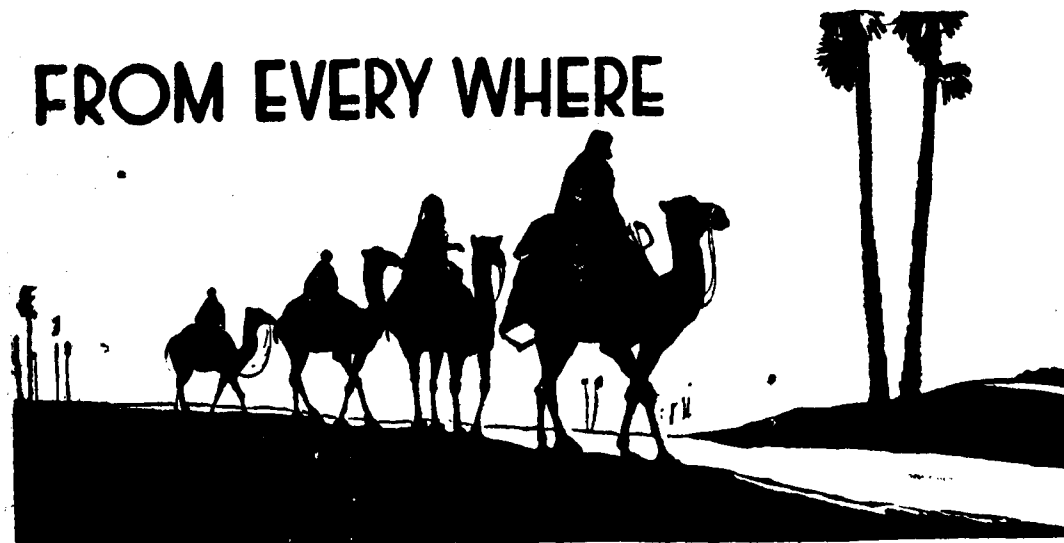
Looking down at the sick man the doctor decided to tell him the truth: "I feel I should tell you that you are a very sick man. I'm sure that you would want to know the facts. Now—is there anyone you would like to see?"

"Bending down toward his patient the doctor heard him feebly answer "Yes".

"Who is it?"

In a slightly stronger tone the sufferer said, "Another doctor."

# FROM EVERY WHERE



## WHAT DO THEY SAY ABOUT IT?

Readers can contribute to this section. They are requested to send extracts of current literature which, in their view, would interest the people.

—Ed., P.H.

### Babies' "Suffocation" Often Wrong Diagnosis

Dr. Bowden has discovered that many babies that were found dead in their cots and were thought to have suffocated in the bed clothes were in fact victims of natural disease.

In an article in the "Medical Journal of Australia", Dr. Bowden states that he studied 40 unselected autopsy cases of babies suddenly dying in bed. A primary diagnosis of "accidental suffocation" had been made in 24 cases.

Microscopic examination in most cases revealed some previously undiscovered natural disease. Inquiry into medical histories showed that many children were not in perfect health before death.

Typical case is that of a child who was found dead; face downwards in its cot. This suggested suffocation because the parents thought the child was perfectly well. Routine microscopic examination revealed acute bronchitis and acute heart trouble.

On what evidence is the diagnosis of accidental suffocation by the bed clothes made?

An apparently well baby is found face downwards dead in his bed. He is livid.

There is pallor about the face. The heart and the veins may be full of dark fluid blood. There may be froth in the bronchial passages.

This is a picture found in suffocation, but it is a picture found in disease states as well.

The natural tendency of most babies who can move freely is to turn over into their faces to sleep. If some of them should die of unsuspected natural disease, it is therefore to be anticipated that they will be found dead face downwards.

Dr. Bowden points out that most healthy babies can look after themselves, if normal care is exercised in putting them to bed. Their capacity for yelling when in trouble is an excellent safety valve.

Dr. Bowden says it is only by getting rid of the myth of accidental suffocation that parental fussiness, and even tragedy, can be avoided. The stigma attaching to a diagnosis of "accidental suffocation" may have a serious effect upon the mother.

Dr. Bowden cites a case of one mother who was afraid to go out on the street lest other women should say something implying maternal carelessness. Another mother committed suicide.

In an American magazine recently there was an article stating that "30,000 babies die each year in America from accidental suffocation." A society has been formed for the prevention of accidental suffocation.

Dr. Bowden suggests that a society for the performance of complete post-mortems would greatly reduce these exaggerated figures.

—New Pakistan Medical Journal.

### Artificial Fertilizers and Human Health

The fact that Germany lost about 25 per cent of its agricultural area, while its total population has remained about the same, makes it necessary to cultivate this smaller area more intensively. In order to increase the productivity of the soil, the increased use of artificial fertilizer is proposed. Gericke points out that objections have been raised to this practice, on the ground that such fertilizers are injurious to health. To see whether there is any basis for such objections, he undertook to investigate statistically any possible relationship between the use of fertilizers, infant mortality, and the frequency of cancer deaths in 16 European countries. No relations between these factors were established. Gericke concludes, therefore, that plans to increase the use of artificial fertilizers should be furthered as much as possible. In fact the increased production of food will aid immeasurably in improving health.

—A.J.P.H.

### TULAREMIA, Illinois Health Messenger, December 1949—

This is the *Messenger's* annual warning about tularemia. In Illinois this disease has attacked an average of 135 persons per year with about 5.6 per cent resulting in death. The causative organism is *Pasteurella tularensis*. The incubation period is from three to four days. Symptoms are: a pimple-like elevation where the organism has entered the skin, fever, chills, weakness, and prostration. Duration of the disease in man is from three weeks to much longer periods. It is believed that one attack provides permanent immunity. The principal source is the wild rabbit. Other sources are: ground squirrel, rats,

mice, muskrats, opossums, gophers, porcupines, chipmunks, beavers, grey foxes, coyotes, woodchucks, and sheep. The disease has also been reported in quail, grouse, sage hens and pheasants. Rarely has tularemia been found in domestic animals. Human infection may occur by handling infected animals or parts thereof, or eating inadequately cooked animals; it may also occur through the bite of the wood tick, the dog tick, and the deer fly. WALTER A. Lyon.

—P. H. Eng. Absts.

### Population Problems

A problem of considerable concern in Germany today is that of population. Gramm discusses this question in connection with the policy in the eastern zone of Germany to permit abortions for social reasons. He points out that the population has decreased and will probably continue to decrease. Every effort should therefore be made to protect, not to prevent pregnancy. This requires positive measures in terms of social policy. In 1948 there were over 500 interruptions of pregnancy on social grounds, and it is estimated that in addition there are about 4,500 abortions a year. Gramm proposes therefore that in each case where such permission is given, positive action be taken to prevent any need for future legal abortions.

Accepting the need for control of pregnancy, Ruge insists that prevention of conception is more important than interruption of pregnancy. He therefore calls attention to an occlusive pessary which allegedly has no disadvantages and is cheap. It is proposed that the social insurance funds provide these when indicated.

—A.J.P.H.

### Fly Control in the Prevention of Disease

In an effort to control the spread of enteric disease, fly control campaigns have been undertaken in various parts of Germany. Hormann describes the campaign in Hamburg as it was carried out from July 1 to September 30, 1947. DDT sprays were employed. Special attention was given to hospitals, abattoirs, garbage

cans and wagons, toilets and latrines at railroad stations and other places where large numbers of people gather such as emergency housing settlements, and food storage facilities. In addition the population was informed about the purpose of the project, and the insecticide together with instructions for use was distributed to be employed in dwellings. Owing to lack of staff, emphasis was placed on an educational campaign. Leaflets, posters, press releases, and slides projected in motion picture theatres were employed to enlist the co-operation of the public. The fly population was successfully reduced. The authors point out, however, that the direct effect of such a campaign on the incidence of enteric disease cannot be judged, as many other factors are involved.

—A.J.P.H.

### "Migraine" Headaches

The exact cause of "migraine headache", which brings severe pain and nausea, is not yet known. At one time, nothing could be done for the victim. But recently doctors have discovered that injections with certain drugs will bring at least temporary relief to most migraine headache sufferers.

But it must be stressed that frequent headaches are a sure sign that something is seriously wrong with a person's health. Patent medicine "headache relievers" which are self-prescribed may bring temporary relief, but they are not cures. The cause and relief of these headaches can be found only through prompt and proper medical care and treatment.

—NTA Reporter.

### The Mosquito has an Eye for Colour!

It seems the mosquito has an eye for colour. So if you want to be a juicy dinner for Mrs. Mosquito and her clan, wear black, blue or red. Entomologists say these colours are most attractive from a mosquito's point of view. White and yellow are the colours which mosquitoes like the least. Therefore, said the entomologists, white or yellow clothes are the best choice for protection against these insects.

The tests were made in mosquito-infested areas in Oregon. Men wearing shirts of seven different colours acted as bait for the insects while entomologists counted and checked for set periods of time. During one half-minute test 1499 mosquitoes of one species were counted on a black shirt in contrast to only 520 on a white shirt.

### Problems of Small Surface Water Supplies

W. Towne. Public Works, February 1950.

Several small South Dakota municipalities have constructed 100 gpm. capacity water treatment plants. The source of supply is from small impoundments constructed primarily for recreational use but now serving a dual purpose. Much of the available groundwater is undesirable for domestic use because of the extremely high mineral and hardness content and natural surface waters are not plentiful. The waters from the artificial lakes—storm runoff—are much less in mineral content and are amenable to treatment. The catchment areas are primarily range and agricultural lands. The surface runoff does not carry high pollutional loads but because the watersheds cannot be controlled and because the lakes are used for bathing, fishing and boating, treatment facilities must be adequate to provide proper purification under all conditions. Usual plant design includes mechanical mixer, plain sedimentation basin, two filter units, chlorination and necessary chemical feeders. Operation is equally important in ensuring a potable water and as these small plants are operated by non-technical men the new operator should have certain inherent qualifications, including an inquiring and analytical mind, mechanical knowledge and ability, dependability and integrity. Due to the shallowness of the lakes and high summer temperatures, algae problems are encountered. Copper sulphate treatment of lakes has provided best taste and odour control measure. The Division of Sanitary Engineering usually trains new operators. One plant was financed by revenue bonds issued on the anticipated earnings of the municipal liquor store.—W. Towne.

—P. H. Eng. Absts.

### Housing for Workers

Only 12 factories had provided some housing accommodation to their workers. The WIMCO factory at Madras had 54 quarters accommodating about 5.6 per cent. of the workers. The monthly rent charged per quarter was Rs. 3 inclusive of light and water charges. Another factory in the Madras State had provided housing free of rent for about 5 per cent. of their workers.

In the United State of Travancore and Cochin only one factory out of seven, which furnished replies, had provided free quarters to engine drivers and other mechanical staff.

The WIMCO unit in Bombay had 411 tenements and two temporary sheds for their workers. Thirty-three per cent. of the workers were thus housed. The monthly rent per tenement was Rs. 3-3.

Another factory located in Madhya Pradesh had provided free accommodation to 10% of its labour. Non-local labour of Meerut Match Works (U.P.) was provided with housing free of charge. Each quarter in this concern consisted of one room having a verandah, kitchen, latrine and a courtyard. At Badeilly (U.P.) the WIMCO had provided 50 single room and 33 double room quarters. These accommodated about 6 per cent. of the labour employed in the factory. The rents charged varied from Rs. 2 per month to Rs. 6 per month.

In West Bengal two of the three factories had provided housing accommodation to the workers. One of them accommodated 20 per cent. of its workers without levying any charges for the accommodation. The second factory (WIMCO Unit in Calcutta) had provided accommodation for only 8.1 per cent. of its workers. The rent for each room was Rs. 4-8 per month. The Assam Match Co. had only 49 quarters accommodating 4 per cent. of their workers at a monthly rent of Rs. 1-11 per quarter. The WIMCO unit at Port Blair had provided 35 of their workers with free quarters made of wood. The factory in Orissa reported that some quarters consisting each of one room with

verandah were available for the workers but the workers preferred to live in their own houses.

—Indian Labour Gazette.

### Malaria Control Engineer—His Duties:

The basic education of this member of the Malaria Control Unit should be that of a sanitary engineer trained especially in insect control technology. The Malaria Control Engineer should act as the operations and supply officer, giving technical direction concerning all insect-reductive measures for malaria control. He should see that the provincial malaria control personnel thoroughly comprehend their responsibilities and how they are to be discharged. To this end, he should conduct in-service and refresher training courses as needed. He should maintain records of anti-malarial materials, equipment, and transport on hand and distributed in the provinces. He should see that stocks are securely stored, that proper records of issue are maintained and that this material is used only in accordance with the objectives of the malaria control campaign. In anticipation of the future needs of the programme, he should verify and consolidate the supply estimates submitted from the provinces, see that these are expeditiously and advantageously procured, and provide for their distribution to provincial headquarters. He should ever strive to reduce the unit costs of insect control operations without impairing their effectiveness. Especial attention should be paid to the operation of old and construction and maintenance of new irrigation projects, with the object of preventing unnecessary mosquito production. He should visit local projects freely, inspecting their equipment, supplies and procedures, and make constructive suggestions for their improvement.

—CDC Bulletin.

### Ratio of Medical Men to People:

The United States at the beginning of 1950 had 201,278 physicians or one for

every 750 persons, according to the American Medical Association. This is the best showing for any nation in the world, with the exception of Palestine where temporarily high ratio exists because of an influx of refugee doctors.

The net increase in the number of physicians in the United States and its territories and possessions in 1949 was 2,266. During the year, 5,866 physicians were licensed for the first time and 3,600 deaths of physicians were reported to the AMA.

Next to the United States, the largest supply of doctors in relation to population exists in Great Britain where, based on latest available official figures, there was one doctor for every 870 persons. Other countries in order are: Iceland, 890; Denmark, 950; Canada and New Zealand, 970. Other nations range from 1,100 persons per doctor to 25,000 persons per doctor, a situation which exists in China.

—Bulletin of NTA.

Assuming the population of India as three hundred millions, the proportion of doctors to population is approximately 1: 6,300. Taking the Provinces, the figures are as under:

| Provinces.                  | Doctors registered: Total. | Ratio of registered medical practitioners to population. |
|-----------------------------|----------------------------|----------------------------------------------------------|
| Assam                       | 1,359                      | 1 to 7,509                                               |
| Bengal                      | 12,276                     | 1 to 4,913                                               |
| Bihar                       | 3,253                      | 1 to 11,171                                              |
| Bombay                      | 9,401                      | 1 to 2,218                                               |
| Central Provinces and Berar | 1,153                      | 1 to 14,582                                              |
| Delhi                       | 256                        | 1 to 3,586                                               |
| Madras                      | 8,030                      | 1 to 6,145                                               |
| N. W. Frontier Province     | 282                        | 1 to 10,773                                              |
| Orissa                      | 664                        | 1 to 13,145                                              |
| Punjab                      | 6,324                      | 1 to 4,494                                               |
| Sind                        | 323                        | 1 to 9,487                                               |
| United Provinces            | 4,048                      | 1 to 13,586                                              |
| Total                       | 47,524                     | 1 to 6,300                                               |

—Bhore Committee Report, Dec. 1945

## AJAX ABRASIVES

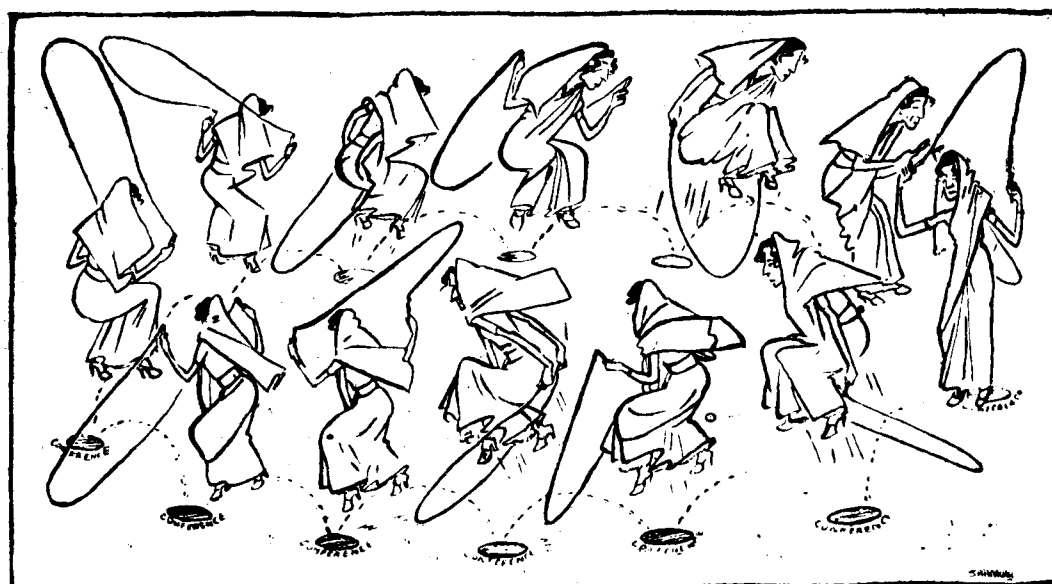
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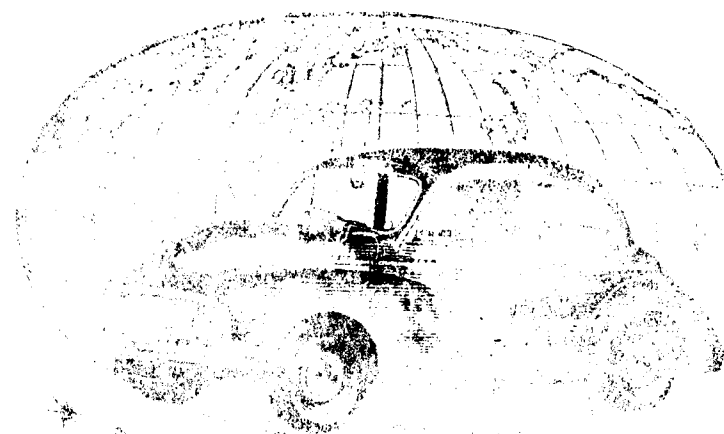
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