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Editorial

The Nine 'S's for Health

NINE is a significant number, as it is closely associated with some magnificent things. There are nine planets which are said to make or mar men's fortunes and there are nine gems 'of purest ray serene'. According to Ayurveda, and anatomically, too, there are nine important orifices in the human body *viz.* eyes 2, ears 2, nostrils 2, mouth 1, the organs of excretion 2. Similarly, we have nine 'S's which are indispensable to health and which bestow on mankind happiness and longevity on earth. All of them begin with the same letter 'S' and hence the above title. The nine 'S's for Health, arranged in the ascending order of their importance, are: (1) Stomach, (2) Sewage, (3) Starvation, (4) Sleep, (5) Sun, (6) Sex, (7) Smile, (8) Song, (9) Service. Let

us briefly discuss them here seriatim:—

1. *Stomach*.—This is the worst sinner and the greatest enemy to healthful living. Bhrigu, the son of Manu, was once approached by his disciples and was interrogated thus: "Why should men die, even after they read the Vedas and perform the rituals prescribed therein?". The answer was, "Because they partake of wrong food or more food or food at irregular intervals, which acts as poison to their systems and brings on disease, decay and premature death". Thus, from time immemorial, food was considered by the Hindus as both life-sustainer and life-destroyer. Modern Science upholds that view now. Food is given prominence today in Health Propaganda and recent researches have shown that sufficient

nutritious food, taken in a hungry stomach, will produce good blood, vim and vigour, ward off diseases and prolong life. That kind of food can be had not in the Kitchen but in Nature in the shape of milk, fruits, vegetables, eggs and so on. It had been more than once pointed out in these columns that the typical Indian dietaries showed serious deficiencies and we do not therefore wish to dilate on this point any more. Suffice it to say that the Indians are living largely on a cereal diet with no milk or eggs. Pulses, though rich in vegetable protein, are not of the same nutritive value as milk or eggs. The use of milled, instead of 'home-pounded' rice is another great handicap. So, if you want to be healthy and long-lived, you must take nutritious food in sufficient quantity. At the same time, you must not over-eat nor over-tax your stomach. You must give sufficient rest for it. If you take proper care of your stomach, the stomach will certainly take care of you.

2. *Sewage*.—What all you eat, are not completely digested, absorbed and assimilated. Some undigested and indigestible residues are left which must be thrown out. Further, some toxins or poisons are produced in the system which must also find a way out. Otherwise, the system itself will get gradually poisoned and disease and death will ultimately result.

Nature has provided a wonderful sewerage system in the human body to eliminate the waste products and toxins. The waste products come out as urine and fæces and poisons, as sweat, through millions of pores in the skin. There should be daily flushing of these drains and the clean-

ing of these pores, otherwise, your health will get affected. Water is the best and cheapest flusher and cleaner.

3. *Starvation*.—Nature has provided yet another method of eliminating the poisons and waste products from your system and that is starvation. The Indians have great faith in this method and have enjoined it as a religious duty not to be overlooked or neglected. 'Fasting once in a fortnight on *Ekadesi* days will bring Heaven nearer to you and fasting at least once a year on *Vaikunta Ekadesi* day in December—January, will surely lead you to salvation and eternal bliss'. Stripped of its allegory, it means that you must starve completely for at least one day in a year, if you cannot starve twice monthly. But this wise injunction, which even modern Scientists have endorsed, remains unheeded, and those who say they fast on these days, merely make a pretence of it, by taking some varieties of rice, on *Ekadesi* days, if not the usual rice food itself. Fruit juice would be a desirable substitute, for those who could not starve.

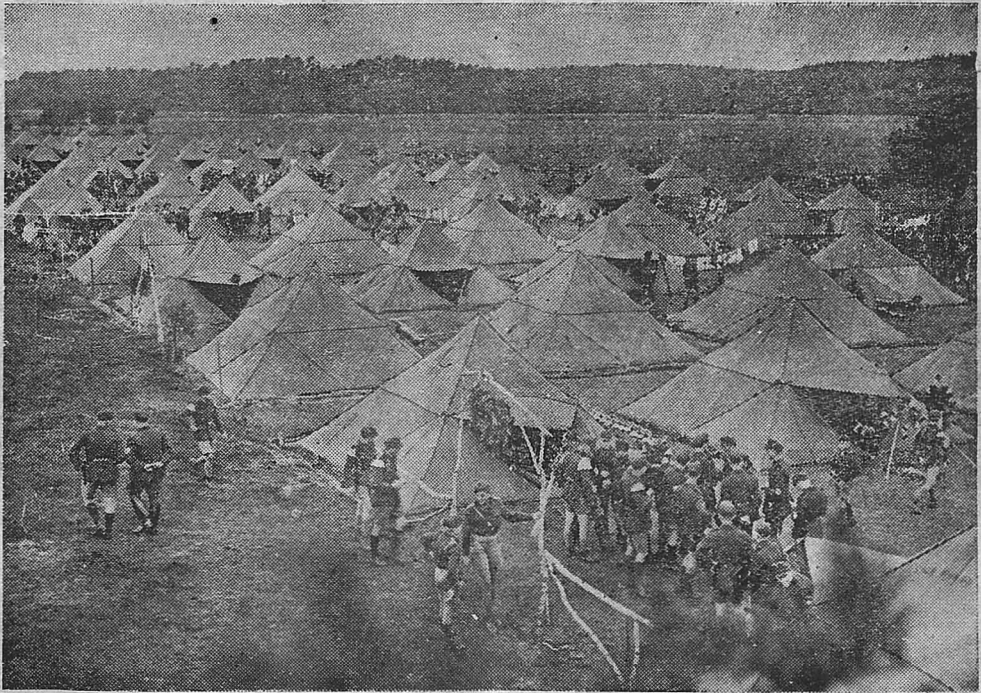
4. *Sleep*.—The human body may be compared to a machine, working all day long. The machine wants rest and the parts of the machine also get worn out. Sleep gives the much-needed rest to the system and repairs the wear and tear of the tissues then and there. Sleep is a good tonic prescribed for man by Dr. Dame Nature and if you don't take that tonic daily, your body will rust and rot. "Early to bed and early to rise makes a man healthy, wealthy and wise" is an old saying, the truth of which, even the modern scientists do not dispute. Unfortunately, Modern Civilization has

produced many insomniacs and modern Science is trying to invent sleep-inducing machines for them. Prof. John J. B. Morgan is credited with having invented such a machine more effective than a lullaby and he has used it to put his own students to sleep. Here is a great opportunity for big businessmen to set up roaring trade in sleep-inducing instruments!

5. *Sun*.—This is another Nature's good Tonic and Energiser. The Aryans of old devised a system of sun-bath,

enjoined every one, irrespective of caste, creed or religion to pursue the old Aryan tradition of Sun-bath for the conservation and preservation of Health. Sun is, thus, a great factor to be counted in health.

6. *Sex*.—This is another important factor for the promotion and preservation of health, but too often neglected. Sex urge is a natural phenomenon but if carried to excess will bring on disaster. Promiscuous intercourse will be the cause of viru-



Small children and youths belonging to the National Political Academy of Germany, are being trained to commune with Nature and lead village life by being taken to Lueneburg Heath, where they live in camps and learn.

which was a happy blending of Religion and Science. While devotion and concentration during sun-bath kept the mind pure and devoid of all evil thoughts, the sun-bath itself purged the system of its poisons and put forth sufficient energy into it. Modern civilisation ridiculed the idea but Modern Science, happily, has revived the system and has practically

lent venereal diseases which will make a person impotent and crippled for life and may even endanger life. Every one must have sufficient knowledge of sex hygiene, so that it may stand him in good stead in his relationship with the other sex. There must be a careful spacing out of family, so that the women-folk may not feel the strain and consequent disability

caused by too frequent pregnancies and the progeny may not be weak and feeble.

7. *Smile*.—‘Laugh and grow fat’ is a maxim which you should not forget. You must drown your sorrow with a smile. You must banish worry with a smile. Then your mind will certainly be at ease. If your mind is kept well-poised, your body too will be well-poised and your health will be assured, worries and troubles notwithstanding. Smile is said to be an aid to digestion. So, never allow sorrow to overtake you, on the other hand, try to root out sorrow with a smile.

8. *Song*.—This is another aid to mental health. ‘Sound charms the soul and song charms the sense’—so says Milton. One of our four great Vedas—the Sama’ Veda—was set to music. It was a devotional song, more appealing than the mere chanting of mantras. The Aryans of old were

not unaware of the efficacy of song in promoting the health of the body and that of the mind. Sing your praises to God. He will certainly hear you and help you in distress.

9. *Service*.—This is the last of the ‘S’s, though not the least, which conduce to health. Service and sacrifice, not selfishness, ought to be the motto of every man. You must do your bit to your needy brethren and the suffering humanity. To serve man is to serve God. God will be more pleased with this form of devotion than prayers and penances. Lust, hatred, miserliness, avarice, pride, enmity and all such bestial thoughts will be banished from man’s mind and the man will thenceforth be in close communion with God.

In these nine ‘S’s are combined the physical, mental, moral and spiritual well-being of man, without which, real health will be impossible of attainment.

“Cultivate the amenities”, said Lord Horder, recently, by which he meant “clear air to breathe; close contact with the earth and sky and sun; the sight of beautiful sounds; quiet and leisure to enjoy all these. Physical fitness,” he added, “could not be separated from mental, and even from moral fitness.”—*Good Health*, (London.)

Health Talk

(At Trivandrum.)

By Dr. G. Raman Pillai,

M.B., Ch.B., (Edin.).

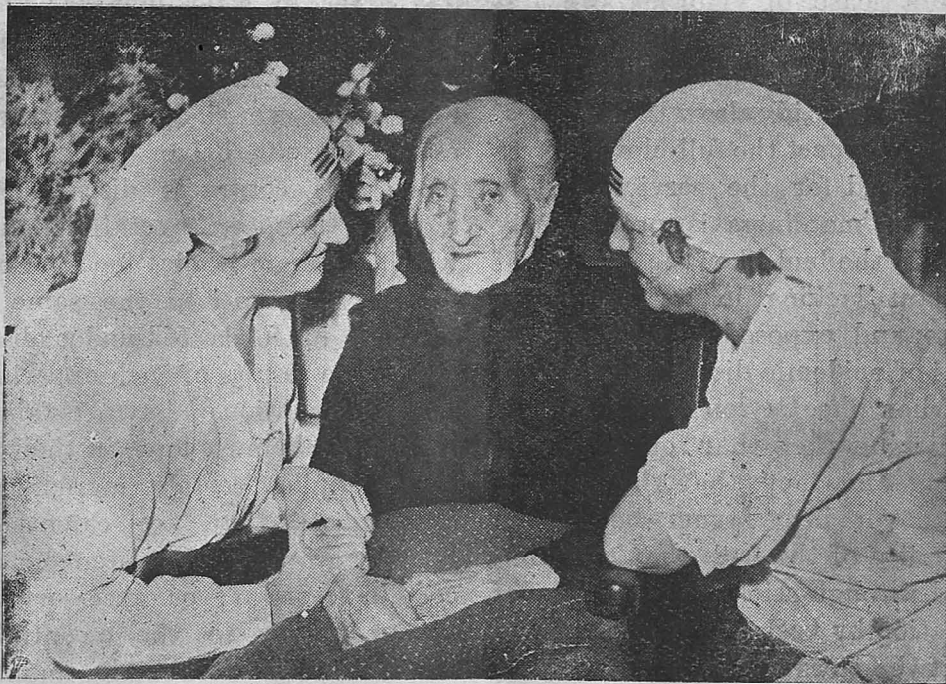
Retired Brigade Surgeon, Trivandrum.

THE NOURISHMENT OF THE BODY.

It may be asked why we are making such a fuss about what we eat. Why not eat what we like and what we relish? Are not our habits and our palates a reliable guide of what our bodies need? Are not the Scien-

of old, and they seem in excellent condition, until they are transported to an artificial life in a menagerie in the middle of a city and in charge of a Veterinarian. These are pertinent inquiries that demand explanation.

The fact is that the man in the



A 100 year old woman whose birthday was celebrated in Salpetriere, France.

tists a set of inquisitive enthusiasts, who make it a point of prescribing the bitters where a poor fellow is overfond of sweets, or compelling him to go dry where he has been rather particular to keep wet? Would not the experts on diet start prescribing for us outlandish dishes that we have no stomach for to be compounded out of foods never heard of in our climate or continent? The animals in the forest eat the same dinners as

modern city, as the lion in his confining cage, has so departed from the natural habits of his ancestors, especially as regards his food, that the human race has become stunted and degenerated and subjected to certain diseases never before experienced. Time was when a man's lifetime in America was but 25 years; at present the average man there lives up to 60 years, through the efforts of Science, that, among other things,

cultivated on a large scale the most essential foods that the human body requires. The average life in India is only 24 years long in our present benighted age of one-sided culture. Food culture should aim first at feeding our own home populations with the valuable animal foods such as milk, butter, eggs and fish, much of which we export for gain, contenting ourselves mainly with the cheaper and poorly nourishing rice. Thanks to our exports of them, the foreigner enjoys a lease of vigorous life and amasses wealth by selling us his patented foods and drugs that bring new diseases, if also their cures. Where we expect the full-blown flower of manhood for the service of the nation, our manliness is prematurely nipped in the bud like the flower of the plant lacking in its nourishing manure, and exposed to devastating storms of epidemic disease. We protest when the Ceylon cocoanut finds a readier market than our own, not realising the fact that the foreign produce got into favour because of the quality of the fruit that was improved through scientific methods of cultivation, by better nourishment and care of the trees and conservation of the soil in which they grow. Health and Manhood are likewise products of Cultivation; and poor physique steals upon us unawares through generations of neglect and indifference until we find ourselves beaten in the game of life by the hardy nations. It is of little avail to grumble, that we are lagging behind in the race with other peoples, that our children grow rickety with delicate bones and flabby muscles, 'sans healthy teeth, sans unaided eyes' before they reach maturity and that our mothers 'go dry' before

they have suckled their babes many weeks. Things can be improved as in America, and must be improved at all costs. To do this, we have to enquire into the root cause of this degeneration of the race in India. The causes of degeneracy in animals have been recently investigated by feeding normally short-lived animals like the rats on different kinds of foods. Our own defects are obvious to those who take long views through science. The rat normally runs through its career in a few months; and we have here a more convenient medium of study of changes in an animal's body than we shall obtain through man. The rat thrives best on certain foods and contracts diseases when any of these or several of them are withheld from their food. Poultry farmers have noticed the same phenomena in fowls fed under observation. The results of such experiments and observations have established that animals must have in their daily food supplies certain ingredients or components that are essential for healthy growth and existence, as also certain secondary or accessory substances added to the essentials, in minute but not negligible quantities. It is necessary that these essential components of food are taken in certain proportions so that the body nourishment may be *balanced* and not lop-sided or over-weighted in favour of one ingredient against another. Man thrives best when his essential food elements are balanced in a sufficiency of the total nourishment. A few generations of ill-balanced feeding that escapes our individual notice bring on such troubles as decadent teeth in our children for which our dentists, in despair, advise a rigorous

course of calcium in exquisitely packed and expensive forms from the chemist. We seem hard to convince that our bodies can suffer from a calcium deficiency when there is so much of it lying about us in our cities. It is not a question of plastering our insides with lime. The problem is how to take it in an assimilable form and quantity—as it is in our foods such as milk and leafy vegetables. It would be obvious that ‘calcium’ is not going to do any good in a hurry; the defective teeth cannot be put right in a few days by a bottle or a dozen bottles of expensive calcium in the most elegant forms. The utmost it can do is perhaps to stay the process of further defects in the person taking it. But calcium in our daily foods may save our children from inheriting this calcium deficiency, if mothers take this important substance in their foods. Cow’s milk is an excellent food containing calcium; and the habit of milk-drinking that we are forgetting would remedy the defect in our teeth. If the indiscreet diet of our progenitors gave us some of our troubles, let us see to it that we, who have discovered their cause, save our posterity from a similar fate. Let us therefore follow the advice and guidance of Science rather than the dictates of our palate or of ignorant custom. What has Science got to say about our diet?

Science has established that our daily food,—be it made up as an ‘English diet’ or ‘Indian diet’ or as ‘Vegetarian’ or ‘Military’ diet,—must consist of the three essential constituents—called the ‘*proteins*’ like the white of egg and meat; the ‘*fats*’ like ghee and butter; and the ‘*carbohydrates*’ like rice, wheat and sugar.

These constituents are rarely found in the purest state in nature; they are mixed with others in our victuals. Especially is this the case with the more precious proteins for which there is always a universal demand from other forms of living things and animals. We shall take up the accessory foods like calcium, iron, phosphates and vitamins for future consideration. The three essential constituents, *proteins*, *fats* and *carbohydrates* are found in most foods that we take, in variable quantities; and they have therefore to be so gathered that the sum-total of each of them shall supply our entire day’s requirement. Thus, rice, that consists mostly of carbohydrate, has a little of proteid also in it. Eggs that have proteids and fat in them, have no carbohydrate at all. And sugar is purely carbo-hydrate without any starch or protein in it. We cannot live on pure proteid alone, any more than we can live on pure carbohydrate alone or on pure fat by itself. Who can perform the miracle of health by devouring sugar alone day in and day out? Children would love to take ‘*jilabi*’ or *toffee* alone for days and days; but soon they would get sick of it by satiety which is nature’s limit of tolerance of a lop-sided diet. Adults may live upon rice and little else for years when they contract an intolerance of it ending in the disease ‘*diabetes*’. Or, other persons may confine themselves to meat and fish—mostly proteids—until they get the ‘*gout*’ and worse troubles. The proportion of each of the components should therefore be so balanced for man that experience suggests as best suited for him. This is what we call a “*Balanced Diet*”. The composite

balanced diet of man may be described as a 'trinity' or union of the three essential elements—the protein, the fat and the carbohydrate. Foremost among the triad comes the *protein*, the creator of new tissue in the body. The new-born infant builds up its body from the protein contained in its mother's milk. Without this protein the infant would wither away. This protein of the infant has to be of animal origin—unlike the case of the mature adult who can utilise proteins from vegetable sources also. Children require increasing amounts of protein, especially from the 10th year to the 18th when the growth is most vigorous. The full-grown man needs about $2\frac{1}{2}$ ounces of pure, assimilable protein per day in India. How to get at this is our problem. No food that we take is made up entirely of proteid. The greater bulk of foods consists of either water, fat, or starch, with very small quantities of protein in them. Thus, cow's milk has only about 3 parts of protein in 100 parts of milk that is mostly water. Mutton and fish have some 18 parts of protein in 100 parts consisting of fat and about three-fourths of water. Eggs hold some 13 parts of protein in 100, with mostly water.

To get $2\frac{1}{2}$ ounces of our daily protein from only a single article of food is not our aim or our inclination. We want variety; and indulgent nature has provided us with a vast choice and latitude for the table that make for the pleasure of living. The total of $2\frac{1}{2}$ ounces of pure protein can be obtained from about a pound of mutton a day, or 4 pints of milk or some fifteen eggs. Nobody would like to live on fifteen eggs a day and nothing else for many days in order

to obtain a degree of mathematical exactitude. We do not want mathematics to spoil an otherwise agreeable meal. But, unfortunately, we need not be so bound to the rules of calculation. The best way to make up our protein total is to enquire what quantity of it we are now taking in our present daily fare, and to add or subtract as may be necessary to make the $2\frac{1}{2}$ ounces of proteid. To those who prefer a minimum of animal food, at least a fifth of the $2\frac{1}{2}$ ounces of protein should consist of milk (about 15 ounces a day) or of eggs (about four in number.) Any diet without some animal protein is bound to be defective until Science can so alter the vegetable proteins as to make them readily assimilable—thus paving the way for the realization of our *dharma* of '*Ahimsa*'. The proteins from vegetables such as the peas, the pulses, ragi and rice are more difficult of assimilation than the animal proteins, especially by the feeble, the aged, and the invalided, who easily recover their health under the animal foods. The poor who depend upon rice chiefly for their sustenance, would have to consume as much as $2\frac{1}{2}$ lbs. of milled rice daily to ensure the daily protein supply. By taking home-pounded rice that retains more protein in it, instead of milled rice, they can satisfy their proteid demand with less than 2 lbs. of rice in the place of $2\frac{1}{2}$ lbs. By adding dhal or beans or peas, say, two handfuls of dry dhal curried, the quantity of rice can be reduced to $1\frac{3}{4}$ lbs. a day. The addition of curds (*not buttermilk*) could reduce the rice further. Fresh vegetable curries could supply small quantities of protein. Eggs, fish and meat would

enable us to cut down the rice very markedly. The somewhat despised duck's egg is a cheap source of animal protein for the poor. Two duck-eggs for a chuckram would give a man about an eighth of the protein he needs. With the proteins from fish or dhal or gram, the poor labourer manages to keep down his carbohydrate (rice) consumption to about a pound a day. 'Iddalies' or 'Dosais' weighing about a pound would also supply another eighth of our protein for the day, the protein from the pulses in the 'Iddali' being the next best thing to animal proteins. In short, remember that we shall unbalance or upset our nutrition if we fail to supply the 2½ ounces of protein through some combination of foods agreeable to our palate.

After the protein that is the creator of new tissue, the next essential element of the dietetic trinity is the fat. We require about two ounces of fat in a day, either from milk, butter or ghee, or the oils used in cooking, such as cocoanut, gingely and the fat in nuts and other foods. We may call this the protecting element of the trinity, as most tissues in the body have fat as their covering or other constituent. Here again, the animal fats are superior to the vegetable oils that we rely on almost exclusively. The fish oils like those of the shark or cod, are a good source of a fat that holds certain vitamins that would protect us from many a disease. The fats are an indispensable protection in Travancore, with its damp climate and its 'rheumatism' that call for a fatty coating for our nerve cells. If our diets failed to supply the necessary animal fats for years, our nerves become subject to exposure to atmos-

pheric damp, and the *Vydyan* has to step in with his refreshing animal oils for our skin and his by-no-means-agreeable monster-doses of medicated ghee as almost our sole food for weeks. The *Vydyan* has to 'rub it in' internally and externally, often every year, when we cannot or would not consume our required daily quota of fat, including a proportion of animal fat.

The third essential factor of the dietetic triad is the carbohydrate, such as forms the major part of the food grains and the roots and fruits and the sugars. In the form of starch this food bulks largely in the South Indian dietary. In whatever shape we take it, all carbohydrates are in the body converted into a kind of sugar, and stored away in different organs for use as fuel for energy for physical work. These sugar stores in our organs may be likened to the 'petrol-pumps' from which the required amounts of petrol are drawn for the work of the motor engine. We know that each motor car needs ordinarily a definite quantity of petrol for a definite distance. Similarly, every man has his capacity for work for which a definite quantity of the energy-producing carbohydrate is needed. An average labourer in India would require roughly as much carbohydrate as is represented by a pound of rice for a day. Of course hard labour by persons of heavier build would call for more carbohydrate, as also more proteid as well as of fat. But even where the total quantity of food has to be so increased, the proportion between the three principal elements must remain the same in order to balance his diet. The evil with us is to eat more rice than is

good for us. People with sedentary habits and with little physical exercise are doing harm to themselves by this. It is a wrong notion to think that our curries and butter-milk are mere tempters employed in smuggling in more and more rice. The curries and the milk should be taken also for the salts and vitamins they hold. The pickles and preserves are mere relishes as they have very little food value.

Let us sum up clearly what we should do to provide nourishment for our body. It is imperative that we balance our diet so as to include in it all the elements in the proportion that we need, to keep us and our children free from the diseases caused by their prolonged absence or deficiency. These essential elements are to be found in abundance in the fresh foods that we have about us in Travancore. Those who can take animal foods like milk, meat, eggs and butter or ghee have the best chance of balancing their diet, provided they do not neglect the salts and vitamins contained in fresh vegetables and fruits. For the strict vegetarians who cannot afford even milk and ghee, and sugar, the following articles of food are available, as a minimum, to choose from and prepare in the shape of dishes they like best.

For a day's consumption, an average man must take, roughly:

Of Rice:—One pound (preferably home-pounded twice a week).

Of Dhal:—One ounce or a handful of the dry grain (cooked.) (One pound—16 ounces.)

Of Black-gram or Green-gram:—Two ounces of the dry grain (cooked).

Of Non-leafy Vegetables:—

like Brinjal	about 6 ounces.
Ladies finger	Do.
Snake-gourd	Do.
Drumstick	Do.

Of the Leafy Vegetables:—

like Amaranth	
Drumstick leaves	
and similar leaves	about two ounces.

Of Fats or Oils:—Gingely or Coconut oil about two ounces.

These are of course to be used in the cooking.

Of the Fruits:—The ripe Mango, the Plantains, the Tomato, Dates, Jack-fruit, and the Pine-apple about two to four ounces.

The above articles should be so used as to give us an attractive and appetising menu in some shape or other. The black-gram and some of the rice may be best appreciated in the shape of *Iddaly* or *Dosai* for one of the meals. Or, the morning kanji with peas or gram may take their place. Or again, part of the rice may be made up into '*pittu*' eaten with plantains or molasses or jaggery. Other possible combinations for variety are *Vadai*s and *Murukkus*.

Such a diet would be balanced if we take care not to damage the good that is in them through bad cooking. The vitamins and the salts like calcium would come in, in this list; and need not be hunted for from chemists' shops and other unnatural sources.

In a word, remember the three essentials of the dietetic trinity—the proteid, the fat and the carbo-hydrate; and do not despise the vegetables as cheap fodder for cattle. Our healths and our children's healths are mainly in our own hands. We are ourselves to blame if our posterity suffer for want of care on our part. Let us try and prevent such suffering.

What is Consumption

And What We should do to Prevent it?

TUBERCULOSIS is the most widespread of all the infectious diseases. It is still the Public Health Enemy Number One, in the most productive period of life *viz.* (20—40 years). One death out of every eight is due to Tuberculosis. Unlike Plague, Cholera, Small-pox and Malaria which have a periodical incidence depending upon the climate and weather and affect only a localised territory, Tuberculosis is present at all times, in all places and in all climes.

It has been calculated on a very modest estimate that about 6½ lakhs of people die every year in India from Tuberculosis, a real white plague, indeed. Of this, our share of the mortality would probably be about seven to nine thousand every year, for the wholestate. The worst feature of the disease is the high morbidity rate, the extent of suffering and incapacity which it causes in its victims, rendering them incapable of earning a livelihood. To calculate roughly the total number of consumptives, the usual proportion is 10 cases to one death

March 1938]

By

R. Sundaram, M.B., B.S.,

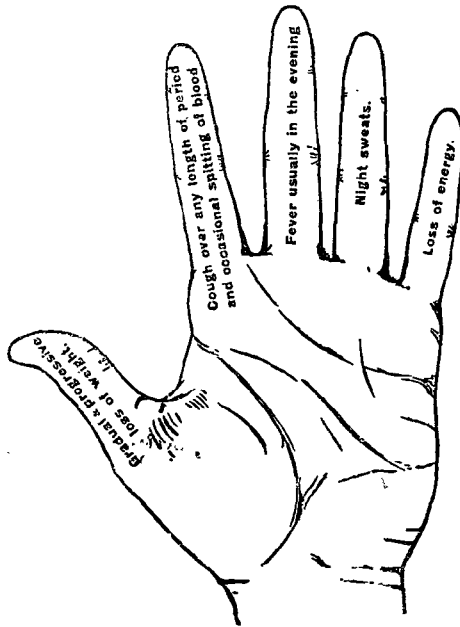
Asst. Surgeon, Public Health,
Travancore State.

and on such a basis one may say that there are at least seventy to ninety thousand tuberculous patients in Travancore.

There is no country in the world today that is free from Tuberculosis. The disease has existed from the dawn of civilisation and has a tendency to increase with the march of civilisation and the crowding of human beings in towns and cities.

In western countries, statistics show that Tuberculosis is rapidly on the decline whereas in India,

it is stated that it is increasing rather alarmingly. It is essential to find out exactly why the disease is increasing in India. A possible explanation is that more than 90 per cent of the population in India live in the villages which have hitherto escaped from exposure to infection



Prevention of Tuberculosis.
On appearance of any of the above signs or symptoms, consult a doctor,

and are therefore virgin soil. It is clear that the soil is prepared, the seed is being sown broadcast and we must expect a rich harvest of death.

Tuberculosis affects almost all organs and tissues. No organ in the body is free from its depredations. The lungs are however the most frequently attacked probably because of the ease with which the germs can gain entrance into the human body via the respiratory route. When it affects the lungs, the disease is known as Consumption. The sufferer is subject to low fever. He is harassed by a chronic cough. He spits blood. He consistently loses weight. Night sweats occur. He becomes lazy. Such is the clinical picture of a case of consumption.

As early as 400 B. C. Hippocrates, the father of medicine, taught that 'Consumption comes from the consumptive'. But it was only in 1882 that Robert Koch, a German scientist, discovered the tubercle bacilli, the causative germ of the disease. The bacilli are present in millions in the spit of the consumptive and in lesser numbers in other bodily discharges. The greatest danger of infection is therefore, obviously from the spitting of the consumptive which teems with millions of the living germs that can remain alive for weeks and months in the dark and dingy ill-ventilated rooms where consumptives have lived. The disease

is therefore more prevalent amongst people living in dark ill-ventilated houses than among those living in airy, well-ventilated houses. The germs do not survive long in the open air, they die when exposed to the open sun in a few minutes or hours, but survive for weeks or months in dark and dingy rooms.

It is high time that we wake up to the ravages of the disease that has eaten into our society. There is an urgent need for a detailed survey of the situation and for concerted action by every section of the people. Despite the admirable progress made in the field of Tuberculosis treatment, it does not appear that treatment alone can stamp out Tuberculosis or for that matter much reduce its incidence. Tuberculosis will yield only to preventive medicine and medical care of the community as a whole. The general line of advance must be towards improved nutrition, housing, education and social hygiene. The agency through which preventive medicine operates, is the dispensary or clinic which, unlike our hospitals doling out medicine, will function as a detective to search out cases of disease, treat such as are suitable for out-patient department, to visit the homes, supervise those who have been in contact with the patient, advise the patient and his family how to arrange their methods of living and to transfer suitable cases to the hospitals.

Our Mouth and Teeth Again

(With Special Reference to Pyorrhoea.)

THE subject of this article is not a novel one nor is it written with any extraordinary skill about thrilling events of the day to arrest the attention of the reader. Indeed, so much has already been said and written about the care of our mouth and teeth so often; but still, one finds that a large number of people are suffering from one affection or another of mouth and teeth and therefore the theme is repeated again so that it may attract greater attention and benefit those that need some help.

When advice is given on simple laws of health, be he a Philosopher or Politician, Physician or Pleader, Priest or Peasant, that person cannot appreciate its importance when he is apparently in good health. Besides the old adage "Prevention is better than cure," is more remembered in books and talks than observed in practice.

A clean and healthy mouth and a clean and hard set of teeth are a great asset to a healthy body; our mouth contains the tongue with which we utter sweet expressions and taste and enjoy all the delicacies which nature has provided us, and with the teeth the first great function in the process of digestion is performed by masticating all hard particles of food. If these are not kept clean and healthy we are apt to suffer from many affections due to various germs. The mouth of healthy persons also

— By Dr. M. Royan, M.D., —

Bangalore City.

contains innumerable germs of various types but, given certain conditions such as, not attending to proper cleaning of the mouth and general run-down of health due to various causes, they produce various diseases.



Deformities of Teeth.

Swelling as a result of Tooth Ache.

The most common affections are swelling, cracks and ulcers of the tongue, painful small ulcers inside the lips and cheeks, and swelling of the gums which often bleeds readily; besides the pain, they cause great discomfort to the sufferers while eating their food particularly with hot curries.

Ill-nourished and ill-fed children often suffer from ulcers of the mouth. Among adults those who suffer from certain intestinal disorders like dyspepsia and constipation, have ulcers in the mouth and among young mothers many of whom are actually child-mothers, due to improper

nourishment, strain on the system by early child-bearing, diarrhoea and anaemia, ulcers are common in the mouth. Recent investigations show that some forms of sore mouth are due to vitamin B₂ deficiencies. For all simple ulcers of the mouth a most common and effective local remedy is Borax and Glycerine which should be applied either with the finger or with swab to the parts affected 3 or 4 times a day. The ulcers heal up in a few days. Borax and Glycerine could be obtained at any Chemist's shop and it costs only annas 6 an ounce. If by this simple remedy ulcers do not heal up, you must consult a Physician or go to the nearest hospital, for several factors have to be investigated before a cure is effected.

My main object in writing this article is to point out a certain affection of the teeth which is so common and widely prevalent in all classes and communities, rich or poor, educated or illiterate. The technical name of the disease is Pyorrhoea Alveolaris, but the name is familiarly known as Pyorrhoea to the lay public. A great many people suffer from it and unfortunately very little care is taken to prevent it or get it cured by the majority of sufferers.

Lawyers, teachers, preachers, speakers, singers, business men and even doctors and nurses are not free from it. Those who transact business sitting closely to each other such as in Assemblies and Councils, Committees and Sub-Committees, lawyers and clients, doctors and patients, teachers and students, husband and wife, have, I am sure, seen many suffering from this affection and you have often felt a repulsion towards the bad smell coming out of their

mouth. The breath coming out from the mouth of those having clean teeth is pleasant and agreeable.

Bad odour from the mouth is not due to Pyorrhoea only but may also be due to some long-standing foul ulcers in the mouth, some form of dyspepsia, sluggish liver or constipation, but the most common and familiar cause is Pyorrhoea.

From several types of germs—those invisible foes to human system—to endocrine disturbances, various theories have been described as to the cause of Pyorrhoea and that is an academic discussion about which we need not trouble ourselves in this paper.

It will serve our purpose well, if you know the following few facts about it.

The discharge of pus from the gum margins is the most common feature of this affection. It is a progressive inflammation and ulceration commencing at the gum margin and as the disease advances, the supporting tissue of the teeth becomes destroyed, the teeth become gradually loose and the quantity of pus discharged from the pockets of the gum is in proportion to the degree of affection. Cement, dentine and pulp of the teeth also become affected. There is a good deal of tartar on the teeth. This is a hard substance formed by various phosphates and carbonates derived from the blood serum and deposited around the necks of the teeth, at first and later on spreads to the deeper parts and roots of the teeth. The tartar is the exciting cause for tenderness, ulceration, ready bleeding and formation of more pus to set up a vicious circle.

Inefficient mastication whether due

to pre-existing disease of the teeth or food being too refined and soft is a powerful causative factor. Our 'Badami Halwa', 'Kesari Bhath', 'Vungti Bhath', 'Baccala Bhath', 'Buttani Bhath', 'Potato Bhath' and so many other Bhaths, 'Uppu Mav', 'Dosais', 'Vadais', 'Iddalies' and other Indian delicacies, whether taken at home or at attractive restaurants, leave a certain amount of residue between the teeth and gum and which if not at once cleaned and properly flushed out by gargling, decompose and serve as food to the growth of Bacteria. Similarly, the case with meat when the fibres get in between the teeth and when they are not duly removed. Sometimes, there may be some rare affection of the gum resembling Pyorrhoea which requires a specially qualified man to diagnose it, otherwise, the common one you so often come in contact with daily, does not require a reputed and talented Physician to give his verdict about it.

There is the peculiar foul disagreeable and repelling odour coming from the mouth. The gum is swollen, tender and it readily bleeds. When pressure is applied on the gum with a piece of cotton or with the end of a handkerchief you will see pus swelling up between the gum and teeth and the cotton or cloth is stained with blood and pus according to the intensity of infection, and the patient himself will shrug his shoulders if you allow him to smell it. There is the accumulation of tartar also adhering to the teeth like small creamy plates from above the gum margins and below them. Dear reader, you may be suffering from it unknowingly yourself. To make sure and be on

the safe side, just take a mirror and see if you have any tartar, take a clean piece of cotton or cloth, press against the gum and test for pus, blood stain, and smell as already suggested above.

Sometimes, when you bite a guava, an apple, a piece of sugarcane or even a plantain you will find stains of pus and blood left on them which must put you on the alert to examine your teeth.

Pyorrhoea is found in both men and women and usually commences after middle age *i.e.*, 30 years and upwards but not invariably so. There are many who suffer at earlier ages also. Among women who have given birth to children in early life and not well off in circumstances, due to strain, defective metabolism, bad nutrition and lowered resistance, it is found much earlier. Although Pyorrhoea is found in all classes of women, in passing, I may make a particular reference here about our Brahmin widows with due apologies and without any offence to them. I have noticed in my routine practice that a very large number of them are suffering from it after middle age due to the causes I have mentioned above. It must not be understood that widows in other communities are free from these troubles.

Apart from the local disturbance, the various kinds of bacteria thriving on the pus are constantly taken into the mouth and supply toxins which by their absorption lead to several systemic ailments such as anæmia, rheumatism, vague pains all over the body, tired feeling, head ache, nervous weakness, fever, affection of certain parts of the heart and other conditions of ill-health due to auto-intoxication.

There are particular types of Pyorrhœa due to associated diseases namely Diabetic Pyorrhœa, Tubercular Pyorrhœa, etc.

Before I proceed with the treatment of Pyorrhœa, let me say a few words which might be useful to those who suffer from fetid odour of the mouth due to causes other than Pyorrhœa such as dyspepsia, sluggish liver, constipation.

For Dyspepsia, regulate your diet and exercise, avoid your family and business worries and get it properly treated by your family doctor. For sluggish liver request your doctor to give you a good calomel purge occasionally and if it is due to hard drinking, together with calomel purge, try to sober down your drinks and gradually become a tea-totler; for, prohibition is dawning all over the country.

Constipation.—There are several causes and unless your doctor advises you, do not go on taking all sorts of medicines you read in advertisements and make matters worse.

Learn some abdominal exercises, practise them every morning. Buy a bottle of liquid paraffin, a good brand which costs only Re. 1/8 per lb. and take four tea-spoonfuls at bed time. Just try these two following simple remedies and you will feel benefited where other remedies fail. Three ladies fingers, *Bendekai*, to be boiled in full, a little salt and pepper sprinkled and eaten as a dessert every night after meals and the number gradually reduced after improvement. Buy a tin of preserved prunes, eat two after your night meal, keep two prunes soaked in a tumblerful of cold water overnight. Early in the morning after your usual breakfast, eat the two

prunes and drink all the water in the tumbler.

There are some persons who suffer from a very bad odour in their mouth although they are perfectly healthy:

One grain of Potassium Permanganate taken in a glass of soda water for a few days will work like a magic for them.

Now coming to Pyorrhœa, it is a common disease which is always waiting to attack you and therefore you must adopt measures to prevent it as effectively as possible by keeping your mouth and teeth scrupulously clean always. There are several things with which our teeth are cleaned in the morning. There are many pastes and powders, local and foreign, with which the market is flooded now-a-days and let me mention a few among them—Forehans, Kolynos, Euthymol, Pepsodent, Kopran, Alembic, Mysore Ivory, Colgate, Calverts, Neem, Encryl. Forehan's cost about Rs. 1/3 and the others range from annas 6 to annas 8.

There are our time-honoured sticks of Utharani, Babool and Neem. The powders used by the majority of people are common charcoal powder or ash of cowdung cakes either alone or mixed with a little common salt. Some use tooth brush; cheap tooth brushes must be condemned. The popular ones in the market are prophylactic, costing from annas 12 to annas 15.

You must know the right way of using them and cleaning them well after using them. After all, the sticks of Babool, Neem and Utharani are the best provided they are used regularly. If the teeth are well set without any crevices between, they could be cleaned well with our fingers.

Whatever powder, stick or paste

you use, using it only once in the morning before your breakfast is not at all enough. The most important thing is to clean your mouth and teeth well every time after you eat something and not to allow any soft or hard food particles to stagnate between your teeth and between your gum and teeth. If particles of food enter between spaces in the teeth, remove them by a tooth pick. Do not use as a tooth pick a pin or any small stick that is easily procurable at home. You must have a stock of wooden tooth picks always ready prepared at home. If you have no time to have them prepared at home, get ready-made ones sold in the grocers' shop. There is a brand known as "Gilt edge" tooth picks sold in Spencer's and other grocers in boxes containing 500 sticks and above costing Re. 1 for 3 Boxes. They are the best I could recommend to suit all pockets. After removing the particles in the teeth, if you have a tooth paste to your taste apply a little with your finger outside and inside your teeth, rub well and press your gums also and finally gargle your mouth well with water. In these days of hurry and bustle, due to sheer negligence and indifference, I have often heard some saying that it is not possible to clean one's teeth after every meal or tiffin. I repeat again that cleaning only once in the morning is not at all enough to preserve your teeth, if you cannot do it often, at least attend to your teeth well leisurely every night after your food. Good habit is easy to cultivate where there is a will.

It is very unfortunate that among us although we see so many suffering from Pyorrhœa and feel the bad

odour when they speak to us at close quarters we feel it so delicate to bring it to their notice. A husband may be suffering unknowingly from a bad type of Pyorrhœa emitting most disagreeable breath while speaking, yet the poor wife in her modesty, shyness and utmost delicacy and submissiveness would not like to point it out to him. If we meet persons suffering from Pyorrhœa whether they are our friends or relatives we must make it a point to draw their attention to it. You may do it delicately, gracefully or artfully as you like. If any body deserves chastisement for neglect, I must honestly say it is the doctor who suffers from it.

The treatment I have suggested in the following few lines to be carried out by your ownself is common and simple and is not the be-all and end-all of it. If you are not progressing satisfactorily you must consult your family doctor to improve your general system and then the Dental Surgeon and all the three must work in hearty co-operation. In early cases when the teeth are firm and the gum is slightly swollen and tender and there is slight discharge of pus and blood with a fetid odour, besides the usual cleaning of the mouth, the gum must be massaged twice a day regularly by the patient with his forefingers. A useful adjuvant is glycerine and Tannic acid. The procedure is to wrap a piece of muslin round the forefingers and dip it in the solution. The gum should be vigorously rubbed transversely and vertically and on both surfaces. This should be done twice a day for a few minutes. After about three weeks, you will find the improvement. Massage and solution act by inducing circulation of blood in the

tissues and promote hardening of the gums. After this, it is better to keep your mouth clean by gargling your mouth with plain water as many times as possible or better still, if you gargle with salt water a tea spoonful of salt with a tumblerful of water two to three times a day.

Tannic acid and glycerine solution in proper strength can be obtained at any chemist's for annas 6 per ounce. You can get a pound of table salt for only annas 2.

Buy a nice teaspoon and a glass tumbler and keep them separately for this purpose. If the affection has progressed further when much tartar has formed on the teeth, there is much pus, bleeding and tenderness of the gums and the odour is strong and smelling of pus, the first thing to do is to get the tartar removed by a competent Dental surgeon and then apply Tannic acid and glycerine for some days and when the gums improve to replace it by salt solution gargling which should become the permanent part of the hygiene of the mouth, as practised by the patient. To avoid bad smelling of the mouth he may resort to antiseptic gargling like Odol, Dettol or Listerine which costs from annas 8 to annas 12 and is easily procured in the market or he can get Hydrogen peroxide from his chemist and use it for gargling three times a day 4 teaspoonfuls in 4 ounces of water. It costs Re. $\frac{1}{4}$ per pound. The main purpose of these antiseptic lotions is to remove the smell, flush out the mouth and remove debris. Hydrogen peroxide is useful as the mechanical flushing action is increased by the effervescence of the nascent oxygen. At this stage of the disease although you cannot effect a thorough and permanent cure yet by adopting

the above mentioned treatment by yourself you can arrest the progress of the disease considerably and preserve a sound set of teeth for a long time to come. Do not take the advice of an impatient doctor or of a young, enthusiastic and eager Dental Surgeon and yield to extraction of teeth at once. When simple measures fail there are other measures such as surgical treatment, Electro-therapy, Auto and stock vaccine therapy. Try them under experts if your means permit and you will still have a chance to preserve your God-given teeth. When all these measures fail, when it has definitely led to disease of the other parts of the body, when there is marked oral sepsis and large amount of destruction of supporting tissue of teeth and the teeth are all loose, it is only then extraction becomes inevitable and you must submit to it and have a set of artificial teeth.

Considering the fact that a large number of people are suffering from one stage of pyorrhœa or another, it is high time that we focussed the attention of the public by carrying on propaganda work in this direction. Lady health visitors, ladies who take active part in different *Samaja* works and ladies who demand on platforms social and political emancipation for their sex, must speak about such health matters to their sisters.

A circular issued by the heads of various departments to all the officials regarding this affection will not go in vain and it will be a useful measure indeed. If proper preventive measures are not adopted, Pyorrhœa will become a source of annoyance to Society and I am afraid that in the things to come, one day we will have to put up placards in public places stating,

"Beware of Pyorrhœa !"

Care of The Hair

By Dr. B. M. Kothary, M.B., B.S.,

Skin Specialist, Windham Hospital, Jodhpur.

In this age of modernism, hair-toilet forms an integral part of the daily routine of a gentleman and practically all women. It is a sort of obsession with some of the collegiate youths and romantic girls, an important item in the make up of officers and a compulsory observance in the case of clerks and teachers. Unbrushed and untidy hair impair one's personality and speaks low of his general get-up. In short, there is a high premium on external cleanliness for people in every station of life.

There are various grades of the toilet—right from the elaborate shampoo and electric massage to the plain wash and comb at the other extreme. The cult of close shave of the scalp is slowly dying out. It is only practised for ceremonial purposes or the performance of certain religious rites. In Southern India one might come across such people more commonly, but here too the spirit of age is penetrating deep into the traditional orthodoxy to dispel the age-old conservatism. All educated people now spend a little time to arrange their 'waves' and make the 'coiffeur' look more elegant.

Washing the hair is a preliminary step to all toilet, but opinions vary as to whether daily wash is absolutely essential. In hot climates, mill-areas, dusty towns and occupations requiring use of grease and oils, it is advisable

to wash daily; otherwise, if the hair is well brushed and combed daily, frequent washing and shampooing is not so necessary as is usually supposed. Washing can be done with plain warm water and good soap. Soft water and a good superfatted soap producing fine lather give a fairly good effect, but if more cleansing is required, a shampoo is certainly indicated. There are various kinds of shampoos on the market, but if the cost is prohibitive a simple shampoo can thus be prepared :

R Soft Soap
Spirit (methylated
or rectified.) } Equal
parts.
Spt. Lavandulæ just enough
to impart fragrance.

To render hair glossy after a wash, people make use of various other substances, for example, yolk of eggs, 'Amla', 'Areta' earth like 'Mait' and so on. Massaging the scalp with oils before wash is also practised in case of dry lustreless hair. To eliminate the tiresome process of frequent washing, dusting 'powder' before brush has also been patented and advertised for use. But, for an average man nothing more need be done than a plain wash and occasional shampoo.

Massage of the scalp is of supreme importance for the health of the scalp. It improves the local circulation and stimulates the growth of hair. One should grip the head on both sides over the ears and move the

scalp vigorously with the fingers and thumbs. Pommelling, pinching, rubbing and kneading are all systemati-

vibration by means of electrically driven apparatus communicate a fine glow to the scalp.



A Healthy Lady with Glossy Hair. °
The result of Daily Toilet and Care.

cally employed by skilled hands. Beating the scalp with a hair brush and
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Comb is an article of universal use, while brush is more aristocratic.

[HEALTH

And a correct use of these tools assures a healthy scalp and a beautiful coiffeur. Both of them must be frequently washed in hot water and soap. A comb with jagged teeth and a brush with uneven bristles should be discarded lest tearing of the scalp and tangling of the hair result. One thing that must needs be emphasized is to restrict the use of these articles to the owner only. For it is not widely known that diseases of the scalp (*viz. dandruff, ringworm and sepsis*) can be conveyed very easily through lending your brush and comb to others. Though ridiculous it may sound, the safest plan is that all clients should take their own brush and comb when they visit the hairdresser. At least those with a diseased scalp must be enjoined upon to practise it compulsorily in the civic interest. Finally, a brush or comb which has been lent to any one should be thoroughly cleaned and disinfected if possible, before being used by the owner again.

Combing and brushing is an art by itself. When the hair is long, thick or tangled, force is the last thing to help out matters. Hair should be divided into strands and taking a tress two inches above the free end, gentle and careful action will set it right, without breaking, tearing or

forming knots of hair. 'French combing' is a popular term used for combing the hair upwards from the free end. Different sites of parting, artificial curling of the hair by means of metal pins, curved combs, curling tongs, setting lotions, electric cylinders and so on, are all too advanced problems. Bleaching hair to produce blonde and brunette effect are all delicate fads. 'Oil' waving preparations setting lotions and nets, invisible pins and other Hollywood make-up hints have romantic background involving fabulous wealth and aristocratic personalities. Masseurs and hair dressers have wonderful tales to tell apart from their story of drab monotonous existence.

Suggestions on the care of hair cannot be better summed up than in the words of Erasmus Wilson, who while speaking about brushes, says:—"There are two purposes to be obtained by brushing; firstly, to give health to the skin of the head, and strength and vigour to the hair; for which end you cannot brush too much or use brushes too penetrating or too hard, such as will produce friction of the skin; secondly to smooth the hair or perhaps to go the length of freeing it from dust, for which object your brushes may be as soft as you please and your hand as light as is agreeable".

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LIFE'S HAPPY SIDE

By Dr. T. P. Sundram, Adyar,

- I. Fight for health, for, that is your wealth ;
It is of life the happy side ;
Sickness dare not cower in stealth,
Where thought and daily care abide.
- II. Sickness is of your own making,
And you are its only Victor ;
Think and find the cause of aching ;
It will help you and your doctor.
- III. If wise, you early know you re' ill,
And if early it is n't bad ;
You can nip it if you but will,
And cheerful be instead of sad.
- IV. You have to know your body's build,
Its wondrous parts and functions ;
It is your horse on the battle-field ;
So treat it with due precautions.
- V. Why talk of ills and all that lore ?
Let them discuss alone their rife
Talk of health and your harvests store,
To help to feed a lovely life.

● Topics from Medical and Health Periodicals ●

Harm from Thumb Sucking.

IN the view of Dr. Earl Swinehart, of Baltimore, thumb sucking, indulged in by millions of American children, is a menace to health. He explained his ideas at the annual meeting of the American Dental Association at Atlantic City, as reported in the *New York Times*. Curing thirty-eight children of this habit also relieved them of nervous manifestations. Observation proved beyond a doubt that thumb sucking brought on definite and often serious nervous disturbances. In turn it might have its origin in such nervous and psychological causes as unsound sleep, deficient appetite, abnormal restlessness, excessive crying tantrums,

lack of power to concentrate and unfavourable social behaviour.

Dr. Swinehart believed that dentists, as guardians of the mouth and general health, should assume responsibility for preventing and curing this habit. He broke the tendency by means of a bar fixed across the palate, to which had been soldered spurs about an eighth of an inch long.—*Good Health*, (U. S. A.)

The Japanese Health Commandments.

ACCORDING to the *Fiji Shimpō*, a Nipponese publication, the ancient Japanese commandments as to health

and longevity may be summed up in the following manner :

1. Spend as much time as possible in the open air.

2. Never eat meat more than once a day.

3. Take a very hot bath daily.

4. Wear rough warm clothes.

5. Early to bed and early to rise.

6. Sleep at least six hours each night and at most seven and a half in a dark room with open windows.

7. Rest on the seventh day and during that day do not read or write.

8. Avoid every expression of anger : never exercise the brain too much or too long.

9. Marry early ; widows and widowers should remarry as soon as possible.

10. Drink coffee and tea in strictest moderation : do not smoke at all ; and never touch alcohol in any form.

11. Avoid hot rooms, and, indeed, all rooms heated artificially.

12. In order to strengthen such organs as may be weakened by age or use, nourish yourself on the corresponding organs of animals.

The reader can decide for himself whether these rules are equal or superior to those sanctified by age and usage in other countries, the latter, of course, being more familiar. If the energy and fitness to survive of the Japanese people are the result of the application of these rules, then the least we can say is that such rules have proved suitable for them.—*Medical Times*.

Eradicating Mosquitoes.

IN reply to complaints regarding the prevalence of mosquitoes at Southend-on-Sea, Dr. C. Grant Pugh, M.O.H., has notified the local ratepayers' association that it is the practice of the chief sanitary inspector to cause various ditches to be sprayed with paraffin each spring, on the request and at the expense of land owners. The thin film of oil on the surface of the water serves as an efficient larvicide by interfering with the process of respiration. Dr. Pugh's letter continues : "The eradication of mosquitoes involves :—(a) the elimination of all breeding-places, *e.g.*, the covering of water tanks and water butts to prevent access of the adult mosquito, the avoidance of collections of old tins, bottles, etc., in which rainwater may collect, attention to any sagging roof gutters in which rainwater may accumulate, etc.; (b) the oiling of all ponds, ditches, etc., in which the mosquitoes pass their larval stage; (c) the removal of any long grass and other coarse herbage in which mosquitoes take shelter. The problem of eradicating mosquitoes in this area is fraught with very great difficulties owing to the numerous ditches and the great extent of foreshore, salt marshes, etc., in the vicinity, the species which breed in the latter being capable of migration for long distances. Nevertheless, each householder can play some part in alleviating the trouble by taking steps to secure that there are on his premises no receptacles or other articles in which water may accumulate and thus form a "breeding-ground".—*The Medical Officer*.

Health Certificates for Bridegrooms.

No marriage will be possible in Argentina in future unless the bride-room is able to present a certificate to the civil authorities declaring that he is free from contagious disease transmissible in wedlock. A law containing this clause forms the climax to years of agitation by Argentine social reformers who regard it as an essential preliminary stage in their campaign for the eradication of diseases of this nature. The law is to be enforced immediately. It does not apply to women, who will, however, be provided with certificates on request. Other clauses in the law provide for the "compulsory hospitalisation of refractory cases of contagious infection," and for the closing of houses of ill-fame. Heavy fines will be imposed for non-compliance, with imprisonment for repeated offences.—*The Medical Officer.*

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How Gluttony Kills

OF all faulty habits, that of over-eating is, perhaps, the most common. Gluttony has always been the favourite vice of the well-to-do. According to Holy Writ, "the sin of Sodom was fullness of bread and abundance of idleness." An excess of fuel will smother the fire of a furnace. The clouds of black smoke that roll out of a chimney are visible evidence of incomplete combustion, which is filling the flues with soot and lessening efficiency. Food is body fuel. An habitual excessive intake of food produces similar effects in the body. The blood and tissue fluids are flooded with the toxic products of incomplete combustion quite analogous to the smoke from a choked furnace. A

portion of the surplus food may be deposited as fat, but other portions, especially the protein, must be carried off through the kidneys at once, as there is no provision made for the storage of protein.

So there is a physiologic foundation for the homily, "Many people dig their graves with their teeth", since the extra work required of the liver and kidneys only serves to wear out the machine prematurely without any compensating advantage whatever.—*Good Health (U. S. A.)*

* * *

The Village School.

DR. J. F. DAVIDSON, C.M.O., who is shortly leaving West Suffolk for Somerset, has pointed out that village schools in the former county rarely satisfy modern hygienic requirements. He writes: "The village school should be a model and an example for the teaching and practice of simple but vital hygiene, and, until this is accomplished, much of the drive and force of our present propaganda must be lost. All over the country in our towns and in our villages housing and sanitary matters are receiving attention; council houses with proper lighting, ventilation, and general soundness of fabric are being built, and in them is being set a standard of hygiene for the people. Can it be wise for the village school to fail to make similar progress? Even though expense is involved, I make a strong plea that village and other schools should be improved in their general environmental circumstances for there is much lasting good in the work and it is essential that environmental hygiene should keep pace with the accelerated present day progress of personal hygiene".—*The Medical Officer.*