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No. 3

TO PREVENT ADULTERATION

A NEW DELHI message says that the Government of India intend to introduce in Parliament a Bill to prevent adulteration, and that they are in correspondence with the Governments of the States in the matter. It is not the case of any body that there is no legislation at present to prevent adulteration. An Act to Prevent Adulteration is adorning the Statute Book of almost every State. If this Act had been rigorously enforced in the past and the criminals effectively and deterrently dealt with, much of the misery which the people are now suffering from could have been considerably minimised. But, unfortunately, that vigour which was so promising a feature at the time when this legislation was introduced has become absolutely lacking after the addition of this Act to the Statute Book in various States. That it has become almost

impossible now to come across many things which are unadulterated, as a result of the craze for money-grabbing that has become the be-all and end-all of existence of many people.

Devoted as we are to the improvement of public health, we shall confine ourselves entirely to foodstuffs which have a direct relation to public health. With regard to the uncertainties in the rationing system, the quick changes in the kinds of the cereals supplied to the consumers, and, above all, the absolute inadequacy of the quantity allowed per head, the less said the better. Even the little quantity that is given is unfit for consumption unless cleansed properly. And in the process nearly a sixth of the total quantity is lost, i.e., in the nine ounces ration supposed to be supplied now in the statutorily rationed areas, only

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7½ ounces remain. Do the Government believe that with this very small quantity of cereals and with the other auxiliary requirements beyond the reach of the average wage-earner or middle class man, it is possible for them to keep themselves well and fit to shoulder the great responsibilities of the new citizenship that have devolved on their shoulders. It is all very well to say that sacrifices must be made equally by all to tide over the present crisis. But whether the mere cut in ration alone to all equally really amounts to equal sacrifice by all is a matter which does not appear to have received at the hands of the Government, Central and States, that attention that its importance deserves.

Writing in the "*Journal of Obstetrics and Gynaecology*," Dr. S. CHAUDHURI, Professor of Medicine, Lady Hardinge Medical College, New Delhi, says:

"The seeds of many diseases in adults have been traced back to their childhood. This fact naturally demands that disease must be combated or eradicated early in life as far as possible. Modern medical men or women should, therefore, have a thorough knowledge of the diseases of children. The physical, psychological and intellectual development of a child depends to a great extent on the health of its mother, so that the care of the children should really be started with the care of the expectant mother.

"Pregnant and nursing mothers and children in India suffer badly from under- and mal-nutrition, particularly from protein and vitamin deficiencies. Milk which is a rich source of valuable proteins and other important body-building substances ought to be made available to every mother and child."

But what is the present position? Milk is in great shortage and what little is available is adulterated. Even that is beyond the reach of the average citizen, the price having soared to Himalayan heights. He therefore suggests that a National Milk Scheme be planned and put into practice as soon as possible and that Milk Kitchens and Milk Depots for pregnant and nursing mothers as well as for infants and children should be started, attached to hospitals or clinics for women and children. Even if such a plan is adopted and brought into force, it would not solve the larger problem of the needs of the population as a whole. But to the extent milk is available, it should be possible for the Governments, with the powers they now possess, to ensure their supply in an unadulterated condition. But it has not been done. And the letting off with small fines of those who indulge in such adulteration is certainly no deterrent to prevent them continuing it, or to make others become honest. The case of ghee and oils stands on the same footing. We can go on adding to the list, but what we have said is sufficient to convince every one that adulteration is being carried on on an extensive and unlimited scale to the serious detriment of the health of the people who are already groaning under high prices and are still asked to pay more for their essential requirements of foodstuffs for one reason or the other.

We neither know the reasons which have impelled the Central Government to bring forward an all-India legislation, nor are we aware of the new provisions which they

propose to add to make the existing law more stringent than it is now. Bills can easily be brought forward in Parliament and added to the Statute Book. But unless it is accompanied with a determination on the part of all those concerned in the administration of the Act to enforce it rigorously and vigorously, no beneficent results would accrue. It is not necessary that the enforcement machinery should be entirely official. Our experience in the past has not been satisfactory in this

respect. The co-operation of non-officials of standing, with a live interest in the matter and sufficient leisure at their disposal to devote themselves wholeheartedly to this great and noble task, would go a great way to minimise, if not to check, the evil. We trust this most important aspect of the matter would receive due consideration at the hands of the Central Government in framing the necessary legislation in this all-important matter.

Good Living Means Long Living

There is a tendency for some people to get away with the unfortunate idea that they can with impunity break every law of nature, and then neutralize the effect of what might be years of wrong living by a prick of the hypodermic needle. But there is a far more disturbing and dangerous thing, and that is the fact that God appears to be left out of our reckoning. It is not fashionable to suggest that sin is, and always was, the cause of some of the most terrible diseases which afflict humanity. And though as the poet rightly assures us, "more things are wrought by prayer than this world dreams of," such cures are said to be effected by prayer or by simple, natural remedies, are often discredited.

I cannot agree with the view which is held by a great many people, that modern longevity is mainly due to what modern scientists discovered in the way of new drugs. It is noticeable, on the contrary, that a majority of those who live long keep as far away from the chemist's shop as they can and seldom trouble the over-worked doctors—a good sound constitution, good living, and good, healthy blood being the main causes of length of years.

Without soaring to the realm of fantasy, let us rest well assured that if God's sun, good food, clean living, good housing, plenty of baths and fresh air won't keep you in health and promote long life, it is useless to expect it from drugs.—Extracted from the article by John Hobbins in *Good Health* (England).

BIRTHDAYS

Birthdays keep up their round
Of visitations as Time marches on
They mean a pilgrimage to shrine
Of memories most precious,
A pause to recount blessings
And reevaluate the things of life.

—Fannie Sprague Talbot in *Good Health* (U.S.A.)

SMALL-POX AND ITS PREVENTION

Some very interesting facts to know

ALEXANDER DUMAS in an epilogue to one of his historical novels gives a vivid account of the passing of King Louis XV of France. The year is 1774; the scene is laid in the Versailles palace at eight in the night. A storm is raging. An old man is seated on a bench and near him is a younger man walking to and fro restlessly. These two represent, in an allegorical manner, the progress of the country towards a Republic. The old man is Rousseau, the eminent philosopher of man's equality, and the younger man is Marat, the fire-brand of the French Revolution. These two sit intently watching the flickering light of a candle in the palace window where King Louis XV was on his death bed. The light suddenly goes out. It was the signal to report the death of the King. The two men in the courtyard witness the passing of the old and the dawning of a new reign. They are also the spectators of a tremendously more important event than the mere change of rulers. The death of Louis XV of France was an historical event of great medical significance. He died of small-pox; the last ruler of any civilized land (monarchy or democracy) to die of this dire disease. His death occurred 24 years before the time when mankind was emancipated from a dreadful scourge that struck prince and peasant alike. Small-pox was then a universal affliction and everyone expected to get it

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some time in his life; one in every ten, rich or poor, died of it, and those who escaped with their lives bore its marks in pitted and disfigured faces and blinded eyes.

Before the discovery of vaccination in 1798 by Edward Jenner, the prevalence of small-pox was not evidence of ignorance or neglect. It was inevitable and men were absolutely helpless and defenceless against its ravages. Louis XV was one of a long line of kings, queens, princes and nobles who died of the disease; thus for instance, William of Orange, Emperor Joseph of Germany, two children of Charles I of England, a son and a daughter of King James II, Queen Mary and her uncle the Duke of Gloucester, Emperor Peter II of Russia, Henry, Crown Prince of Prussia, two Empresses of Germany, a Queen of Sweden, hundreds of earls, dukes, and duchesses in Europe fell a prey to this disease. For every one who died of it, there were fifteen or more famous personages who survived, pitted and deformed like Charles IX of France. We have, in the historical records of those days, only fragmentary descriptions of the ravages of this horrible disease. The people of two hundred years ago did not leave vivid descriptions of their misfortunes, for they assumed that

small-pox was an inevitable misfortune, which every one was familiar with. It is only now, when conditions have greatly improved by the adoption of suitable preventive measures, that we are able to see the past in its true perspective.

Inoculation, the fore-runner of vaccination:—Long before the days of vaccination, our ancient Hindus practised inoculation, which was really inducing the infection in a mild form. Outbreaks of the real disease varied greatly in virulence, while infection in a mild form led to protection from a grave and dangerous one. This method of inoculation practised by the ancient Hindus consisted of taking a small speck of the purulent infective material from a small-pox sore of a person actually suffering from a mild attack of small-pox and rubbing it into the arm of the healthy person, to the point of abrading the skin. Real small-pox is thus acquired, but as the attack is mild, the chance of survival is very much greater than if the disease was acquired by chance from a virulent case. The dry scabs from the small-pox vesicles were collected, preserved in dried plantain leaves, and sent in charge of Hindu Missionaries to distant places, countries like China, Korea, and also England and the continent of Europe. Lady Mary Wortley Montagu, the wife of the English ambassador in Turkey, carried this inoculation material from India and introduced it into Europe and England. Drs. Increase and Cotton Mather, introduced it into America. Inoculation was a truly heroic method of prevention and many dreaded it; nevertheless, the prac-

tice spread far and wide between 1730 and 1800, chiefly amongst prominent noblemen. Louis XVI of France was inoculated the same year that his father Louis XV died of small-pox. Catherine the Great, Tsarina of Russia, set the example in Russia; she and her son were inoculated and they deliberately exposed themselves thereafter to small-pox in order to prove to the people that the measure gave adequate protection. George Washington, President of the United States, was an ardent advocate of inoculation, during the Revolutionary War of 1783. He ordered that all recruits to the Continental Army who had not already had small-pox should be compulsorily inoculated. The President's wife also protected herself in this way.

Jenner's pioneer work:—Inoculation prepared the way for vaccination which is quite a different procedure. It is in this connection that Edward Jenner, a country doctor of Gloucestershire, came upon the scene. Amongst the milkmen of his country there was a belief that those of the dairy farmers and milkmaids who scratched their hands while milking a cow that had cowpox, developed a pustule at the sites of the scratches. Those who were thus affected were believed to be immune to small-pox. In 1797, Dr. Jenner took the purulent matter from the vesicle of cowpox on the hand of a milkmaid named Sarah Nelmes and put it on the scratch he made in the arm of a young boy named James Phipps. A typical vaccination resulted, exactly similar to what we all get on our arms after the present-day vaccination. This was the initial

step in the great experiment. The boy must be exposed to an actual case of small-pox to see if the vaccination had really been productive of the requisite protection. Three months later, Jenner took matter from the pustule of a genuine severe case of small-pox and put it on a scratch in the arm of the same boy. The disease did not develop. Jenner repeated the experiment on several other subjects with the same successful results. In 1798 Jenner published his observations. Doctor Waterhouse of Boston carried out a more crucial test in 1802. He vaccinated nineteen boys. Twelve of these he later inoculated with small-pox matter and at the same time and with the same small-pox material he inoculated two boys who had not been vaccinated. The twelve remained free while the two unvaccinated boys developed the disease but fortunately recovered after three weeks. In the early days of the practice of vaccination the procedure was entirely different from what it is today. Bacterial infection was a thing quite unknown to people of Jenner's time. Much of the procedure was therefore, arm to arm vaccination. A man was vaccinated with cowpox, the matter was taken from his arm and put on that of another man, from him to a third and so on. No antiseptic precautions were used. Along with the cowpox went the germs of any disease present. It was not till the end of the 19th century that antiseptics came to be used even in surgery.

Vaccination in India:—The history of systematic vaccination in India dates from the beginning of the present century. Our own

State of Madras is the pioneer in vaccination, as it has been and continues to be in several other things. The King Institute of Preventive Medicine was started by Lt. Col. W. G. King, I.M.S., early in this century and vaccine lymph from cow calves was manufactured and supplied on a large scale to all towns and villages in the State. Prior to this the Madras Corporation and certain other big municipal cities in India, took vaccinated calves from door to door and carried out vaccination of children. This was, however, abandoned after 1906. The procedure adopted in the manufacture and supply of vaccine lymph has greatly changed during recent years. Lanoline was first used for mixing the lymph material derived from calves. Glycerine was used later from about 1921, instead of lanoline, as the former exerted a bactericidal action on the contaminating germs, present in the vaccine lymph. With the progress of further research, great improvements have been introduced not only in the manufacture of highly potent lymph, but also in its storage and efficient distribution. In olden days, prior to 1925, ordinary bleeding lancets were used for scarifying the hand and vaccine lymph was applied to the scarifications; the lanoline lymph had to be worked in laboriously into the arm. With the introduction of the Rotary lancet and glycerinated lymph the procedure has been greatly simplified and made painless.

Value of vaccination:—The effect of vaccination is to afford protection from attacks of small-pox. Every child should, therefore, be vaccinated, when it is three to six

months' old; if successful, this confers immunity for not more than five years at the end of which re-vaccination is essential. Every individual should get re-vaccinated every five or six years and by way of abundant caution whenever there is a severe epidemic of the disease in or around his residence or place of work. Vaccination is a really potent and specific method of preventing an attack of small-pox. It is a painless and simple operation and the State has employed vaccinators all over the country to vaccinate people free of all charges. Women vaccinators are also employed to vaccinate gosha ladies and others who object to men vaccinators. If, in spite of such an expensive and elaborate system of preventive measures adopted by the State, the disease is still in our midst levying a heavy toll of lives every year, it is

due entirely to the apathy, indifference and neglect of the people and the absence of co-operation from them with the well-meaning health authorities. It is a pathetic tragedy when a child gets small-pox; the child is not responsible. The inefficiencies of the law, parental neglect and indifference of unscrupulous vaccinators are all to blame. When an adult gets the disease, he alone is mainly responsible. His fault is indifference to his own well-being.

If everyone of us, therefore, makes it a point to get himself and all his children successfully vaccinated in due time and also get re-vaccinated every five years, the disease will completely disappear altogether from our land in fifty years as it did in Europe after the introduction of systematic Jennerian vaccination of the entire population.

Prickly Heat

The avoidance of soap and water, powders, and spirituous applications or any thing likely to deprive the skin of its sebaceous secretions is advised in the treatment of miliaria rubra (prickly heat) and tropical anhidrosis (deficiency or absence of sweat secretion). The use of oils is recommended. According to a leading dermatologist (Dr. O'Brien) it is degreasing of the skin by soap and water toilet powders, spirit lotions and the like which causes obstruction of the sweat orifices by the formation of a horny (keratin) ring. The use of oils prevents this. The work of Dr. O'Brien has been confirmed by many other investigators and the recent studies by Sulzberger and his colleagues in New York support O'Brien's findings. The essence of O'Brien's work, it must be repeated, is that keratinizing of the skin results from degreasing of the skin by toilet.—(*Br. Med. Jour.*, 6-5-1950, p. 1093).

[*Note:*—The above findings from special studies and researches by Western Scientists, are not new to us, for the salutary practice which was advised and followed by our old grand mothers, of daily oil baths and besmearing the body with oils and using soap-nut powder and turmeric paste every day, had this same purpose in view. The modern college girls who use soaps, snows and talcums and bring up their little children in the so-called fashionable style will do well to take note of the above findings.—T.N.S.B.]

"SCIENCE OUR SAVIOUR"

G. RAMAN PILLAI, M.B., Ch. B. (Mdin.),
Trivandrum.

"PLAN, or, perish!"—is the stern rebuke of Nature to erring mankind. Nature certainly intended the rational species to use her gifts, and seek the knowledge of science to plan a rational life, and save themselves from extinction. But, science is misused, and scandalised, even boycotted, by misguided enthusiasts of "Nature," who forget that science is but the knowledge of Nature systematized, the true state of things, to help us plan for an orderly and decent social life, in place of the gross and vulgar brute strife and anarchy into which civilization has sunk.

Megalomaniacs, posing as 'super-men' or 'Avatars' ravish Nature by brazen fury, hoping to short-circuit and hasten the process of "Natural Selection" in the most unnatural and outrageous way, presuming they are exempt from the fundamental moral laws. That way lies certain disaster, rather than orderly evolution. So far, however, their schemes for distinction have ended in their own extinction, and driven the multitude to an untold sub-human existence. The natural consequence or reaction follows. The common masses, like the proverbial worm, turn, and become alive and alert, and seek to vindicate Nature, by assuming control of affairs, through humane and non-violent measures, as the sole arbiters of their destiny, where authoritarian dictates ruled con-

trary to reason, morality and social justice. Coercion mars the work of humanity.

It is highly intriguing to witness mighty nations soliciting the moral sanction of humanity (including their victims) for their excesses, by dubious and devious ways, suggesting either political chicanery, or, (to be charitable) an awakening penitent conscience! Hitler never was guilty of humane feelings, towards weaker peoples born to be eaten up, as it were, as the lamb was by the wolf! Is violence going to help raising our 'standard of life', advertised so grandiloquently, but actually (alas!), proving a veritable 'Tantalus' Cup' of elusive torment, receding more and more from our ravenous grasp. Promises apart, the performances have been sadly heading towards more and more staggering austerity fares of almost ascetic abstinence, and 'tightening of belts' perilously towards the back-bone, and flinging one's life away in reckless defensive-offensive suicide fights, a scorched earth, and commandeering and stock-piling of all essential necessities of the world for a final show-down of total and annihilating war! The killing is laboriously brought up to scientific standards rather than the living requirements! What a culture! What a civilization!

Nature, surely, never wanted a bull-fight between her kindred creation. The profiteer is entirely a modern menace, a nuisance.

The moral rot had set in long before the birth of Modern Science that is not answerable when the 'god' in the machine is unceremoniously dismissed and the 'devil' drives! Gandhiji disliked the machine because the god in it was cavalierly cashiered, and mankind were ruthlessly exploited, and torn asunder unnaturally (and so unscientifically). But, the machine can be a blessing to the race. We do not ban all fire because it can burn up everything. It is *man* that has seduced science, that, in reality, is his best friend and furnisher, even his trusty philosopher and physician, if only she be honourably served and wooed. To censure modern science cannot cure our ills, nor can the 'shock-treatment' by total wars, where the disease is not quite so bad as the remedy sought! The natural, the humanising, and therefore the scientific, treatment must rest on the essential humanity that secular science, and nothing else seems to be able to accomplish, as the rallying point, or precondition for recovery. Liberty is not an indulgent permission to please oneself at others' cost. Freedom frees us to think of newer ideologies.

Science is selfless, frank, and altruistic, seeking the basic Truth for the general weal, and not for the private gains of sordid trade or power. And, the general welfare is now for the common man to shape and control, by learning to plan for himself actively, methodically and purposely, (rather than drift as we did under a *ma-bap* government, in a happy-go-lucky fashion), to achieve a safer, a cleaner, and a satisfying life, by harnessing and carrying to

every village the limitless resources of natural energy (electrical, atomic, etc.) for stocking his larder and his wardrobe for his daily needs. All scientific advance has to be made popular by a suitable basic and utilitarian education for the social ideal.

Knowledge is cramped by inhibitions and prohibitions perpetuating mass ignorance on vital matters of personal and social weal,—(marriage of infants and of the unfit, birth regulation, venereal plagues, etc.). Sickly sentiments and superstition have to give way to the realistic and imperative call of science for raising the quality, rather than the quantity, of human material. Science never lays down the law, unlike authoritarian dogma that lays down arbitrarily the numerous interdicting codes, different for different creeds, causing a welter of social turmoil, not easy to resolve. Science seeks no new or rival creed; but only stresses the rational common sense, for human good, in all the creeds. The ancients doomed the great Socrates to death for his sensible opinions. But, we, new-fledged democrats, are fondly indulgent, and would, amazingly, tolerate, endure, even encourage, venerable doctrines five thousand years old, even when they raise hurdles and road-blocks in the path of Modern Science!

Science is no bar to moral repair, her adherence to truth and justice qualifying her for that sacred duty. She could help materially to remove many of the root causes of our moral lapses, on the rational basis of human dignity and equality and natural social justice. She

would be 'par excellence' our true 'Saviour', our real 'Redeemer', if only we devoutly and diligently plan our future along the road of Nature. It is upto us to assemble and test all knowledge we gather as we go along, and try to perfect the one way, the scientific way, that Nature has indicated for social harmony in evolution.

Plan for peace and plenty, and push towards prosperity!

Persist in the primeval past, and pursue perishing perdition!

A Psalm of Life

Tell us not in doleful numbers
Life is but a 'Maya' dream;
For, the soul is dead that slumbers—
Stung awake by want, to scream.
Life is real! Live in earnest!
Hoarding pelf is not its goal;
Honest work its wage returnest;
Duty done best salves the soul.
Life is, mixed with joy and sorrow,
Blessed with gifts to shun our pains;
Learn to act that each to-morrow
Find us fit to take our gains.
Let us then be up and doing
With a heart with main and might
Still achieving, still pursuing
Paths of Truth and human right.
Viewing mankind sad and needy
Plunged in deep adversity,
Sluggard! Wouldst thou passive be?
Science and want appeal to thee.

—G. R. P.

The Conquest of Whooping Cough

Last year, for the first time, there were fewer than 1000 deaths from whooping cough in this country; the final figure, in fact, may be less than 800. The increasingly successful efforts against whooping cough take on added significance in the light of the high level of the recent birth rate.

These gains have been especially rapid in the last decade. The figures for 1948 and 1949 are even more impressive, and the total number of cases reported was less than 75,000. The increasing popularity of immunization against the disease, which has become available only within the past 15 or 20 years, by effective and potent materials, is the decisive factor, although it is scarcely a decade since these new vaccines have won acceptance.

Significant advances in the treatment of the disease have aided materially.—*Statistical Bulletin, Metropolitan Life Insurance Company, July, 31: 8, 1950.*

Laughter is a Tonic and Sedative

Said W. Chamberlain in one of his inspiring talks: "Laughter—free, wholesome, unrestrained—is the best, quickest acting and most invigorating tonic man has ever found. It picks him up. It keeps him young and active. It maintains him fit and lively. It prevents his getting mad in times of dire distress. Often it keeps him from war. The Eskimos deliberately employ laughter in peace negotiations. When alien chiefs meet comic scenes are staged. If hearty laughter results, friendly relations are immediately established.

"We work on the same principle when, on being introduced, we smile; then try to think of something amusing to say, in order to laugh.

"Laughter raises the blood pressure when it is too low; similarly speeds up circulation relieving congestion particularly in the brain, strengthens the lungs because of the deep breathing exercises we do automatically and without special conscious effort, when we laugh, thereby releasing pent up energies."

SEDENTARINESS

OF the various habits injurious to human health, that of sedentariness is to be found in numbers of people not inconsiderable in society, but its evil effects are not commonly known. My readers will find in this the prominent bad effects of sedentariness and the ways and means to avoid them.

Sedentariness has very bad effects on health. The human system requires exercise. There are various systems in the human body and the function of each system is specified. The circulatory system deals with blood circulation. The respiratory system deals with aeration and so on. Each system of the body does its duty peculiar to its function. It works on as long as there is vitalism. Yet each system requires some form of exercise, some form of disciplinary exertion to keep the body and the mind healthy. This exercisable habit is peculiar to the human system. The animals who have to procure their foods themselves, seldom require any exercise. But the animals who get their food without any effort require exercise. Men, similarly, who get their food without exertion, or without any work, require specially some form of exercise. The vocation of a man is different from that of an animal, and to keep up the animalism of the human body some form of disciplinary exertion is necessary. Man requires not only physical exercise but also mental exercise and this element is also peculiar to man.

Dr. T. D. MUKHERJEE, M.B., D.P.H.,
Burdwan (West Bengal).

Rest is as much required as exercise; but sedentariness is not rest but an impediment to the normal function of the body. The word is derived from *sedere*, to sit. Therefore to understand the bad effect of sedentariness the habit of sitting much, is to be remembered. A man may work on the whole day but if the occupation requires much sitting he is sedentary. Inactiveness also leads to sedentariness.

Now let us see how sedentariness affects the function of the different systems of the body. In the circulatory system though the heart is never idle, yet it requires some form of exercise. It needs stimulation to produce increased action. This exertion must be moderate. Strain on it is very injurious. The beneficial effects of physical exercise quicken the circulation and increase the force and the frequency of the heart. Sedentariness impedes the circulation. The blood moves on throughout the body and its impediment hinders the nutriment to reach all parts of the body and hinders the removal of the waste products from different parts of the body. The man loses his usual vigour. There is tendency of breathlessness and the pulse becomes rapid and irregular.

In the respiratory system the respiration becomes shallow. The exchange of carbonic acid for

oxygen is diminished. Depressed vitality, lowered tone, general debility, weakened constitution are the result. The digestion and the metabolism suffer. There is a predisposition to common cold and from this predisposition various diseases of the lungs gain good thriving ground.

In the alimentary system, the utilisation of food is diminished and the appetite fails. The regular action of the bowels is hampered. There is constipation. The man often gets hæmorrhoids. Lassitude, irritability, headache, anæmia are the results. The diseases of metabolism namely gout, diabetes, obesity occur. There is on the one hand inadequate oxidation of the foodstuff and on the other hand excessive absorption of food articles which are not utilised in the system.

In the muscular system, the power of the muscles weakens and the tone of the muscles decreases. In the cutaneous system, due to decrease in perspiration, waste products are not eliminated properly. The normal function of the skin decreases and generally there is pallor and puffiness. The regulation of temperature of the body becomes disturbed. In the urinary system the excretion of waste material of the body is lowered, and there is retention of uric acid and chlorides in the system and the action of the kidneys is interrupted. Of all the systems, the nervous system deteriorates. The brain does not function well. Sound sleep disappears. There may be insomnia. The recreation of the mind is missed; the delight of life passes away; and life becomes weary,

depressed and irritable. The active state of harmonious functioning of the body and the mind in relation to environments is disordered, and the person forgets the enjoyment of the vigour of life. He becomes cynic, misanthropic and pessimist.

Sedentariness is prevalent among the rich people. They live in prosperity and wealth. They are not required to earn their livelihood, and any form of manual labour is beyond their prestige. They may resort to some form of physical exercise but that often forms a vicious circle. Physical exercise increases appetite and they take excessive amount of rich food which, being not utilised adequately, leads to bad effects. The food must be balanced and caloric value should be proportional to the work done by the individual.

The prevention of sedentariness falls under three groups. The first, for those persons whose occupation is sedentary, the second, for those persons who live in abundance, and third, for those who have got no occupation. The main preventive measures are food restriction and physical exercises. Those who have got no occupation are generally ill-fed and they should take care for a balanced diet. They should avoid excessive amount of carbohydrate food, namely rice, which constitutes the bulk of their diet; and they should try to get proper amount of protein, salt, vitamin etc., in their diet. The persons of sedentary occupation should remember that due to lack of physical work done by them, they require less in amount of those foods, which yield much

energy, namely carbohydrate and fat, and they should eat less in amount; but the diet should be nutritious, easily digestible and appetising. They should try to take fruits and vegetables more to form the bulk of their diet. They must take some form of bodily

exercise in the form of walking, riding, swimming etc. The most difficult case is for idle opulent persons. Massage, joy-travelling, change of place etc., are the remedies. A person should eat to live and not live to eat.

Handicapped Children

"THE number of schools, homes, workshops and other institutions for handicapped children is next to nothing," observed the Hon'ble Rajkumari Amrit Kaur, inaugurating in December last the Conference of Experts on physically handicapped children, at Jamshedpur, under the auspices of the United Nations Organisation. Even in advanced countries in the West, like the U.S.A., where special and particular attention is devoted to the collection of statistics to enable the Government and the concerned departments to proceed on correct and up-to-date data, no correct figures are maintained to show the actual number of handicapped children, to help the Government to take suitable and effective measures not only to alleviate the sufferings of those already handicapped but also to prevent an increase in their number in course of time. They have, therefore, merely to proceed on guess work, and certain estimates recently made in that country placed the number in the neighbourhood of 20 per 1000 of the population. In India, with public health at the lowest level, provision for medical relief and pre-natal and ante-natal care very, very limited, chronic starvation

or under-nutrition, tropical fevers, anæmias and frequent childbirth in women being very common, the number of handicapped children must necessarily be very large, in spite of the high rate of infant mortality and the shorter span of life for the individual. But we have no reliable data to act upon. In view of the relatively higher incidence of disease in this country and of the close association between certain forms of infection and various types of physical and mental disabilities, the proportion of the handicapped in India should be considerably much higher than in the U.S.A. or other advanced countries in the West. The Hon'ble the Health Minister consoles herself in the fact that the relatively simple and unsophisticated form of life in this country might probably have tended to produce a lower rate of incidence of mental conditions than in the U.S.A. She estimates that the proportion of the handicapped in India would be equal to that of the U.S.A., that is about seven millions.

Public health activities in certain directions have a great bearing on the prevention of some forms of disability and on their amelioration, because a vigorous

campaign against general diseases and small-pox would be a valuable contribution towards the prevention of blindness and of the bringing into existence of deformed children. They have yet to be put in full swing, and they would become possible only if the State Governments, on which now rests the major responsibility for the promotion of public health, realise the importance and urgency of the matter in the larger interests of the country as a whole and give top priority to plans and schemes for the promotion of public health. It was roughly estimated five years ago that there were about 2,00,000 blind persons under 20 years of age. But for such a large number there were then only 28 schools in all. True it is that their number has increased to 40 in recent years, but they are wholly inadequate to meet the requirements. Even assuming the Hon'ble Minister's rough estimate that the proportion of mental patients in India is two per 1000 of the population, hospital accommodation should be available for at least 8,00,000 in this country. But there are only a little over 10,000 beds for such patients, and the administration reports of Mental Hospitals all over the country unfold the woeful tale of considerable overcrowding in these institutions. "The provision in India for the institutional care of insane persons," the Hon'ble Minister says, "is about 130 times less than that existing in England, even if we estimate the rate of incidence of such cases here as about 37.5% less (?) than the rate in that country." How can patients crowded in such institutions

receive that individual care and attention which are their due, conditions being what they are at the present time?

Life is hard enough for every one in the competitive world of to-day. How much harder must it be for the crippled, the blind, the deaf, the mute and the neurotic, whose disabilities render them far less capable of bearing the stress and strain of life or seeking to earn a living? Apart from their own difficulties, the loss to the nation and to the community is, to say the least, tremendous. So much of manpower which could well be utilised for the development of the nation in the many fields of activity open to it, is lost to it. Not only that. They are a great burden on their near and dear ones who find themselves in considerable difficulty even to keep their own body and soul together. The need, therefore, for awakened public interest and determination by Government and people alike to promote the development, over the whole of the South-East Asian region, of ameliorative measures for the physically handicapped was emphasised by the Hon'ble Minister.

It is true, as Dr. Jivaraj Mehta, Bombay's Public Health Minister, pointed out in his address at the fourth session of the Indian Conference of Social Work, also held at Jamshedpur in December last, that there was considerable danger in placing entire reliance on the State for everything. "When an impersonal machinery like the State", he said, "enters the field, there is a grave danger that it may assume a very paternalistic role in solving the problems

of individuals. By providing a number of services, the State usurps the loyalty of the individual to his family and creates a strong State and a weak family. Through generous assistance, it may make the individual thoroughly dependent on the State. Because it exercises such an important influence over the lives of individuals, there is also the danger of unscrupulous individuals or groups utilising social suffering as a fit ground for political exploitation." For many, many years to come there is no chance of such a danger overwhelming the country, as the Governments in the country would not be able to do all that they should. But that is no reason why the present most unsatisfactory state of things should be allowed to continue. True, it is that advanced countries in the West have done and are doing a lot to make the individual independent and to enable him to help others and himself. But their efforts are supplemented by public-spirited and charitably minded people to whom many great institutions owe their existence. It is the spirit of social service that has been inculcated in them that has very largely been respon-

sible for such noble efforts on their part. The Universities are the best training ground for social work, but, unfortunately, here in India, as pointed out by Dr. Jivraj Mehta, many Universities have taken the erroneous view that social work was "an unfamiliar hybrid occupation", and consider that "acceptance of unknown professions might affect their reputation adversely." He therefore wished that adequate stress was laid on the teaching of Indian social philosophy and the history of our social development in Indian schools. Social work is nothing more or nothing less than an earnest effort to bring the resources of the community together and help handicapped persons in order to rehabilitate them. In India, the national productivity is considerably low and malnutrition is on the increase. By ensuring positive health to the people, we can, with our enormous manpower, easily usher in a period of economic prosperity and independence. Let us, all of us, put our shoulders to the wheel, help the handicapped and thereby help ourselves and the nation on its onward march.

Mosquitoes and Coloured Clothes

From tests made in heavily mosquito-ridden areas of Oregon (U.S.A.) expert entomologists have found that black, blue and red are most attractive to mosquitoes. White and yellow are the colours which mosquitoes like the least. Men wearing shirts of seven different colours (of the spectrum) acted as bait in the Oregon experiments, for the mosquitoes, while entomologists checked for definite periods of time with suitable controls. During one minute test 2988 mosquitoes of one species were counted on a black shirt as compared with only 1040 on a white shirt.—(From P. H. E. Abst.)

The discovery that cocoanut milk contains a still-unidentified substance that is exceedingly potent in stimulating growth in certain plant tissues was announced recently by Dr. S. M. Caplin and Prof. F. C. Steward, of the University of Rochester.

Food Handling

MUCH disease is spread by the mishandling of food. The law in Britain is excellent in regard to the quality of our foodstuffs and is so well administered that consumers are safeguarded and suppliers not unreasonably restricted. Matters are different in regard to the way the foodstuffs are treated. Our chief concern is in persons who handle food, for it is chiefly through human handling that food becomes contaminated with micro-organisms which are pathogenic to man. All of us carry on our surfaces parasites and commensals which can be pathogenic to others; we cannot be sterilised and there is no feasible way of preventing the interchange of our parasites. So it would seem that the prevention of the spread of disease through handling food is impossible. But it is only perfection that is impossible; a great measure of success can be obtained and in fact is obtained when suitable measures are adopted. The measures which can be used to limit the spread of parasites from man to man, either directly or through some medium, are well-known and can be applied to obtain almost complete success; but to what extent it is feasible to apply them is contentious. Obviously it would be impossible to insist on food handlers employing the precautions essential to surgeons, or to those preparing material for intravenous injection. It is quite unnecessary to do so, but some precautions are necessary and our arguments are over which these may be and how they can be put into practice. Much depends upon the nature of the food handled.

Not all foods can act as pabulum for pathogens and most pathogens are harmless if ingested in minute quantities. The bulk of our food is cooked and so at least partially sterilised before we eat it. Some foods which are good pabulum for parasites are eaten as bought and these are the main agents which spread disease. So most of us plead for special powers to control handlers in these comestibles, the chief of which are cooked meats and preparations containing meat not requiring further cooking; confectionery to which ingredients are added after cooking; ice-cream and, above all, milk. Over 90 per cent. of all food-spread disease and poisoning is traceable to these eatables.

It is quite logical to be indifferent over the wrapping of bread and yet demand supervision of those engaged in making meat pies or filling pastry. But what control do we want? And how should we exercise it? In some States of America certain foodhandlers are required to be registered and subject to medical inspection. This has not been successful, for a medical inspection is of little value for the purpose unless it is thorough, and this is too long and expensive to be feasible; and moreover, it would have to be repeated at short intervals. More profitable is medical supervision of employees combined with a set of rules they must obey. Most purveyors on a big scale are willing, and indeed eager, to take such measures and accept any reasonable suggestions we can offer them, but the smaller shops are a different proposition. We

want to agree on a set of minimum requirements upon which we must insist; we want the legal power to insist, though in practice we should seldom need to use it. A democracy must be chary of granting compulsory powers which infringe the personal liberty of the subject, but in connection with food-spread disease we do need the power to insist upon the examination of suspected spreaders. We rarely find difficulty in obtaining consent to such examination as is necessary for our purpose, but occasionally we do. We admit that when we have compulsory powers they are hedged about with so many inhibitions and entail so much delay that they are of little value, but the fact that such powers exist is usually sufficient to obtain voluntary consent to what we require and it

relieves us of the risk of obtaining such consent by coercion. We want some control over the employees of eating houses. One would have thought that the British restaurants were a favourable opening for the establishment of a national policy of public health control of communal feeding places, which we have been urging for two generations; but here we missed the cue, though the restaurants gave us more evidence than was required to show the necessity of such a policy. Control over premises and equipment, such as we desire, could probably be obtained if we ask for it, but control over personnel will not be granted easily, though epidemiologically it is much more important.—*The Medical Officer*, 16th Dec., 1950.

Gastro-Enteritis (Diarrhoea etc.)

This is a disease of bottle-fed babies. The infectious disease most likely to cause a baby serious trouble is infant enteritis and diarrhoea. According to the Registrar General's (Great Britain) returns for the five years 1943 to 1947 this disease alone caused 17,000 deaths in infants under two years of age in the 132 great towns of England, Wales and Scotland. It is an infectious disease and therefore preventable and its prevention is largely a matter of hygiene in infant welfare. To-day every one is absolutely agreed that breast feeding is best for the baby and its mother. From the practical hygiene angle, breast feeding eliminates, some very important possible sources of infection, namely the baby feeding bottle, the teats, and, under some conditions, the feed. For, it is most significant that infant enteritis and diarrhoea is a disease of bottle-fed-babies. The valuable research work done by Dr. Wright, Dr. Powell and Dr. Taylor showed that out of 118 cases of infant enteritis and diarrhoea which they studied only one was a breast-fed baby, the remaining 117 being bottle-fed. All the 22 of the 118 who died were bottle-fed.—From *Mother and Child*, Nov. 1950.

Starting from sea level, the temperature of the atmosphere drops steadily up to an altitude of about twelve miles, then remains constant for several miles, rises at an altitude of thirty-six miles, and later drops again.

FILARIASIS—

A Public Health Problem

[N a report on Medicinal Treatment of Bancroftian Filariasis by the National Research Council, Washington (1945), it was stated: "The symptoms of early filariasis are partly allergic and partly due to inflammatory reactions caused by the adult worm. It is not yet possible to say accurately, whether dead or living worms are preponderantly responsible for the pathological changes. But the role of the living adult parasite can hardly be excluded. Any drug that would kill the worm would, therefore, carry promise of at least shortening the course of the disease. Incidentally, it would also lead to elimination of the microfilariae as a possible contributing morbid factor. However, it is not certain that a drug that would kill the filariae will also cure the disease, since the process of eliminating the dead parasites may itself be responsible for some manifestations of filariasis."

There is little doubt today that the infections with the filaria worm in a large number of cases lead to symptoms of the disease filariasis. The anatomy of the lymphatic system with its numerous collateral channels of drainage would render a slight focal infection, due to one or two worms, unnoticeable. For well-marked pathological effects, a high filariation is essential, since multiple blockage seems necessary to show up the lymph stasis.

Further, most of the signs and symptoms associated with filariasis, except when obstructive and hypertrophic lesions are evident, are of a transient nature with a recurrent tendency, hence the personal history of the patient plays a very important part in the correct diagnosis. In these circumstances, even the assessment of the number of cases of filariasis in an area, an elementary requirement, to determine whether the disease is a public health problem or not, is an extremely difficult matter.

Hitherto, we depended on what is called the filariasis endemicity rate to determine the intensity of infection. This rate is obtained by combining the micro-

filaria rate and the elephantiasis rate. Now we know that these rates can only indicate a very meagre portion of the filarial infection in a locality.

Stoll recently, in a presidential address to the American Society of Parasitologists stated that "there would not appear to be any reasonable probability that any one of long residence in endemic areas will fail to experience infestation. Obviously the simplest assumption is that all the population in the endemic region is infested with filariae, and the responsibility for any one disputing this figure is to prove how many are not. The estimated highest infection is in Asia with 157 millions; 22 millions in Africa, 9 millions in Middle and Southern America and 1 million in Oceania; making a world total of 189 millions.

In the usual conventional methods of formulating Public Health Measures against communicable diseases there are three essential requirements:

1. The detection and the correct diagnosis of the clinical cases.
2. Freeing the patient of the pathogenic infection.
3. Protecting the contacts and the community from infection.

The difficulties connected with item No. 1 have already been mentioned by me. The second item, freeing the patient of pathogenic infection is still more difficult. There is no known method by which the filaria worm can be removed from the body, without causing damage to the body tissue, except perhaps in the very early stages before lymphatic damage. The best treatment so far known is to prevent the entry of further worms into the body. When we examine the pathological lesions connected with filariasis, we can see that a better treatment is not likely to be found.

Naturally the problem of protecting the community from a disease complex of this nature is bound to be very complicated. In theory, in a mosquito-borne disease, Public Health problems appear to be very easy as the problem could be

made to disappear automatically if the vector mosquitoes could be eradicated. Several species of anopheles and culicines can transmit filarial infection efficiently according to the species of the filaria worm concerned.

Two types of filarial infection are prevalent in a Ceylon—Wuchereria Bancrofti and Wuchereria Malayi. The latter type, which is the most predominant, is entirely restricted to areas which offer facilities for heavy breeding of mansonias mosquitoes. The removal of Pistia plants and other water plants which could breed these mosquitoes would be the correct solution and there are no insuperable difficulties in attaining this end in a reasonable time, specially in view of the fact, that almost all the pistia infestations occur in association with neglected or abandoned tanks and water collections.

In the case of the Bancroftian filariasis there is less hope. The vector culex fatigans is a household mosquito that breeds throughout the year in collections of polluted water near human habitations. This mosquito has followed man from the lowest hut to the most modern building, and more architecturally complicated a house is, the more places are provided, unintentionally, for its breeding and shelter. The usual mosquito control measures adopted so successfully in recent years in the control of anopheles mosquitoes in relation to malaria have not given the same results in the case of culex fatigans, as this mosquito is more resistant to all the insecticides so far known. The total eradication of culex fatigans is not likely to be an economic problem in a tropical country. The only remedy lies

in weakening some of the links in the transmission cycle.

It is a common belief that when a pipe-borne water supply is introduced into an area urban filariasis will disappear. This is not correct, unless the pipe-borne water supply is associated with an efficient sewage scheme, which is free from mosquito breeding, as the conditions will tend to become worse. Pipe-borne water supplies have to be very well maintained to prevent breeding culex fatigans. You find them breeding in gullies, traps and small water collections even in the most modern bath room.

Even a partial reduction of culex fatigans to a degree sufficient to weaken the links in the transmission cycle is not at all an easy problem. Total and persistent war against the mosquito is required. In any such scheme the house-holder should take the leading part. Being a household mosquito closely associated with him, no control scheme can be successfully carried out unless the house-holder develops a keen interest, to know the dangers of the mosquito, to look for them inside the house, to seek protection from them, to study their breeding places and to see that they do not breed within his premises. Personal mosquito prophylaxis such as the use of mosquito curtains and regular attention to the hiding places of the mosquito such as curtains and dark places of the house play a very important part. Health education and health propaganda to a very intensive degree are necessary to get the full co-operation of the public.—Extracted from the article in the *Ceylon Medical Journal* by W. L. P. Dassanayake, L.M.S., L.B.C.P., L.B.O.S., D.T.M. & H., D.P.H., Superintendent, Anti-Filariasis Campaign, Ceylon.

Chemical Fertilizers and Human Health

In order to increase the productivity of the soil, the increased use of artificial chemical fertilizers was proposed. But objections were raised to this practice, on the ground that such fertilizers are injurious to human health. An investigation was made to see if there was any real basis for such objections. Dr. Gericke studied statistically the existence of 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 concluded that plans to increase the use of chemical fertilizers should be furthered as much as possible and that the increased production of food would, in fact, aid immeasurably in improving health.—(*Am. Jour. Public Health*).

of Mentally Afflicted Children

There is a crying need in India for organisations to work for the care, education, and welfare of mentally afflicted children.

If sent to school these children may be unknowingly taken in, but are kept for years in the primary classes without care or attention from the teachers and are bullied and ill-treated by the normal school children. Eventually they are turned out and either continue to live a drab and lonely life at home, or wander out, and are exposed to the cruelties and temptations of the street and the neighbourhood. All too often to escape a sense of inferiority, inadequacy and blameworthiness, later years may find them truants and delinquents. In ancient times the mentally deficient were considered as "possessed by devils." They were persecuted or killed, left to die on the hills, or thrown in the rivers. Christian people following the teachings of St. Paul grew more considerate of their needs.

As early as in 1800, Itard, a French Professor, tried to train a child found living with the wolves, "The Savage Boy of Aveyron," and after that Itard's pupil Seguin started the very first school for Mentally Deficient Children at Orange, New Jersey. Ever since then the American Association on Mental Deficiency has made huge strides in the field. Today there are in the United States 275 schools for mentally deficient children.

In England, institutions for the mentally deficient were very few until 1895, when Dr. Shuttleworth, another disciple of Dr. Seguin, introduced and organised schemes for the raising of homes and schools. In England today there are roughly 63 Certified Institutions and 13 Private Homes of varying sizes and for various types of defective children.

Is it not amazing that in India these children are today neglected, ridiculed and treated as cruelly as they used to be in Greece and Sparta. In this vast country there are hardly any clinics where during the early years of suffering such children may be taken for care and treatment and where, as they grow, doctors and psychiatrists may interest them-

selves, watch and help in their physical and mental development.

The basic philosophy underlying the education of mentally deficient children is to teach each child, according to his capacities, limitations and interests, to teach him self-control whilst allowing him every liberty for self-expression; to teach him to live better and become a useful member of the social group in which he lives. It has been found that these children can learn more successfully with objects and materials than with symbols and abstract ideas. It is waste of effort to force a child to master what is beyond his mental reach. The teacher should discover what his capacities are and with unstinted help encourage him to utilise them. Emphasis should be laid on sensory-training, personal hygiene and habit training, emotional control, regular exercise for muscular co-ordination and the performance of simple duties in school and in the homes. Last of all but perhaps the most important is that the teacher should appreciate and applaud the slightest effort and the smallest achievement so that the child finds new hope, new meaning in every day of its life.

In India, so far there are no such schools. Let us hope that in the programme of the reconstruction of Free India, we shall not suffer our less fortunate fellow members to lag behind as they have done so far, but that we shall give them the place they deserve in "Homes" and in "Special Schools" where, amongst children of their own level, they may find happiness, play and companionship, the heritage of every human being.—(Extracted from the article by Mrs. Jai H. Vakil, School for Education, Care and Training of Children in Need of Special Care, Bombay).

[Public interest has been roused by the Conference held recently at Jamshedpur of Experts on Physically Handicapped Children, under the auspices of the United Nations Organisation. Let us hope that this equally important problem will receive adequate attention in the very near future.—Eds.]

That Tobacco Habit

By A DOCTOR

In a recent issue of the *British Medical Journal* is a report of an investigation, by two eminent research workers, Dr. Richard Doll and Professor A. Bradford Hill, into the relationship of tobacco smoking and cancer of the lung. In addition to their own findings, which are based on work in twenty leading metropolitan hospitals and involving the questioning of nearly 2,500 people, they quote also similar findings presented by American and other investigators.

Deaths from cancer of the lung have increased fifteenfold in the quarter of a century from 1922 to 1947. Let it be stated that this terrible increase is probably to be attributed to several causes, and is not all to be ascribed to the increase of smoking. Let it also be stated, though, that "after a meticulously conducted inquiry, the results of which have very serious implications," the investigators conclude that "smoking is a factor, and an important factor, in the production of carcinoma [cancer] of the lung."

We do not propose to marshal masses of technical details, but are content to quote, as we have done above, an expert summary of the evidence.

Let us consider as briefly as possible what is involved in the tobacco habit. Plumbers tell us they smoke to mask the smell of the drains they have to work on; poets assure us that it helps them to think better; and so on. The simple fact is that it is a silly habit, without anything to commend it, and which is now arraigned as being hideously dangerous, as well as being appallingly wasteful.

For consider the cost. The annual expenditure in this country on tobacco is over six hundred million pounds, equal to about five shillings a week for every man, woman, child, and infant in arms, in the nation. What a volume of self commendation there was when the five shilling family allowance was introduced; yet

millions of parents drawing that allowance, more than "blow it up in smoke."

Of course, it will be said that the national revenue urgently needs the excise from this source. Surely, though, it is folly to condone such a harmful habit, merely to gather in money to pay out in doles what is thought necessary to mitigate the poverty which, in many cases, derives largely from the wasteful habit itself.

Let us reflect that the three contemporary follies: baccy, beer, and betting waste a total almost equal to half the national budget, and certainly consume that proportion of many a working man's wages.

Millions of smokers are smoking because they started it as youths. Possibly they thought it was a sign of being grown up; a pitiful example of "keeping up to Pa."

Why can it not be made illegal to smoke before the age of, say, eighteen, or to give or sell tobacco to any such young person? Of course, there would be an outcry as there was when a minimum age was set for liquor sales. "What's the good of having kids if they can't fetch the beer?" was a music-hall ditty of those days; but that reform survived the outcry because it was right. And so would a similar onslaught on tobacco.

Is there nobody of a moral stature and courage equal to the facing of this hideous menace? Are the vested interests to have it all their own way? Some years ago the Radio Doctor phrased it as follows: "Non-smokers belong to one of two groups: either they have weak stomachs, or they have strong wills."

What is needed to-day are grown-ups who, instead of weeping crocodile tears over the poverty of the masses, will, themselves setting an example of self-control, lead the poor away from this harmful, wasteful indulgence.—*Good Health (England)*.

Seismologists say that the earth shakes itself about eighty-five times a day. Most of the shakes are little ones, but not too small to be picked up by sensitive seismographs.

A Time to be Silent

D. A. DELAFIELD

THERE is a time to speak and a time to be silent. Most of us accept this as a rule of life, but few of us have mastered the rule. Too often we speak when we should be silent. It is not often that we are silent when we should speak. Silence is a virtue that comes by practice, and the man who has learned to master his tongue is a perfect man.

We don't really learn to talk. We come by it naturally when we are one year old or less. But we must learn to be silent. The control of the tongue is a different matter altogether. It reaches down deep into the conduct and character of a man. Not to speak under provocation requires supreme self-control. Not to "let go" with the right answer because it may be inopportune, or give offence takes Spartan courage. To be mum when you are inclined to flatter, or to condemn; to be silent when your words would be misunderstood; to check the torrent of wrath or praise upon your lips when nothing constructive would result, gives evidence that you possess a degree of self-mastery that will get you some place in life.

Sir Samuel Ferguson, the nineteenth-century Irish poet, once dined with Von Moltke, the German general who was distinguished as a linguist. Describing the dinner in a letter to a friend, Ferguson said, "During the dinner Von Moltke was silent in seven languages."

Remember that sound speech is worthy of commendation, but speech that is merely sound is reprehensible in anybody. You know as well as I do that most people talk too much. Observe for yourself, and see that successful people know how to make every word count. They think before they speak, not afterward. So should we.

Your speech will give you away if you don't watch out. A rushing stream collects mud. The fountain pen that flows too freely warns that the barrel is almost empty and needs to be filled. Learn to practice silence in your speech. It will do you as much good, perhaps a whole lot more, than the too-free use of words.

—Good Health (England).

The Action of Copper (Metal) Vessels on Cholera Germs

THE bactericidal action of copper on germs producing cholera and typhoid was investigated in 1930 at the King Institute, Guindy, by Bacteriologist Raghavachari who reported that storing contaminated water, from rivers and ponds, in metallic copper pots, for from 1½ to 5 hours, cleared the water of these harmful germs.

Bose and Chakraborty from Calcutta (in 1949) have tested the action of metallic copper by placing strips of copper foil in suspensions of cholera germs in water and subsequently noting their fate. In distilled water, the germ could not be recovered (by suitable culture methods) later than ½ hour in the presence of copper while it survived for 48 hours in plain distilled water in which there was no copper foil. In filtered tank water with organic matter it could not be

recovered later than 1½ hours but survived for 15 days in the absence of copper. Other intestinal organisms survived for longer periods. When the copper foil was allowed to remain for 2 hours in the water and was then removed before adding the cholera germ suspension, the germ could not be recovered later than 30 minutes—showing that a trace of copper going into solution is sufficient to kill the germs. When contact was for 4 instead of 2 hours, the germs were killed in ½ hour. Other tests showed that the surface of the area of the copper foil in relation to the volume of the water appeared to affect the rapidity of the death of the cholera germ.

Tests carried out on highly polished copper vessels instead by adding copper foils to glass bowls containing water showed that filtered tank water (with cholera

germs added to it) stored in such vessels was sterilized and freed from cholera germs in 1½ hours. The authors suggest that drinking water may be stored in clean copper vessels for 4 to 6 hours during periods of cholera epidemics, so as to make it quite safe for drinking purposes!! This was indeed the standard routine practice in the Tamil Districts of the Madras State till about 50 years ago. Women-folk going with bright copper pots on their hips, early in the morning before sunrise, in a regular procession to the sacred rivers to bathe and fetch

drinking water, was quite a familiar sight. The copper pots with the muddy (perhaps polluted also) water were brought home before 6 in the morning and the water became safe and available for use by 10 or 11 A.M. when the midday meal was served.

Dictates of fashion borrowed from the occident, discarded copper pots and drinking vessels in favour of silver, glass, steel and porcelain ware—resulting in all the ills of the present day!!—(From the *Tropical Diseases Bulletin* for September 1949).

The Parents' Influence for Good or Bad

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I WANT, first, to say that, for good or bad, parents are indispensable! It is sometimes forgotten that they are as necessary a part of a child's environments as fresh air and good food. There has been a tendency to criticise parents: they are always being told that they are at fault for all the failings of their children. That may be true, but I do not think criticism does much good. To suggest, as some have gone so far as to do, that a child will be better off without parents is much like saying that because food sometimes does harm children will be better off without it. I believe that the overwhelming majority of parents have a beneficial effect on their children and that it is, relatively, only a small minority who are not adequate in the discharge of their functions.

Good parents

On the assumption that parents are indispensable, it is our task to help them to do their job properly. In this regard we have much to learn. Good parents can be helped by being given information on what to expect of their children. Especially in regard to the second and third years of a child's life there has grown up a great myth as to what children at these ages should be like. It is a myth which does not stand the test of scientific observation. Children aged 18 months or 2 or 2½ years are not as the books say they are. I much welcome Professor Illingworth's remarks in regard to the diversity of child-

ren: that they are different shapes and different sizes and that they mature at different rates. For this reason we should expunge from all books the averages: averages are a menace. It does not help a mother to be told that the average at which her child should walk is fifteen months; it may be at any time from 9 months to 2 years and, moreover, anything between those limits is normal. The same is true of weaning, talking and independence; in all these functions the variation in small children is enormous.

Also we must be much more honest in what we tell parents to expect in regard to toilet training. Most young mothers today live in the illusion that children of 18 months are dry. It is not true. We ought to tell them that at this age almost every child is wetting his bed. These are the facts. We ought to tell mothers that even at the age of 3 one child in five will still be wetting his bed. That may be inconvenient but there is nothing abnormal about it.

From experience with a Mother's Discussion Group I believe there is nothing we can do more to help mothers than to enable them to realize that their child is running according to plan. I learn from the Mother's Discussion Group that there is hardly a child in the second year who does not come into his mother's bed in the middle of the night. When we discovered that we were all very relieved!

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If we can give mothers really accurate and honest information as to what to expect in a child's early years, they will be much less worried and will enjoy their children more. Professor Illingworth said we must not sacrifice happiness to so-called physical wellbeing. There is a great danger of sacrificing a mother's enjoyment of the early years of her child's life by nagging her to do this or that because her child is not running according to some average curve. If good parents can be helped by being better informed as to what really happens in the second and third years of a child's life, about which much too little is known, those parents will do the right thing. I have been inclined to call those years about which so little is known the "dark ages of childhood" because of the ignorance still prevalent among parents and professional workers. The good parents do not need advice so much as reliable information.

Bad parents

What of the bad parents? It would be sentimental to suppose that all parents are adequate. Unfortunately, many are not. Indeed, I belong to the school of thought that holds that a large fraction of mental illhealth is due to mismanagement of children in their first, second or third years of life. What should we do about parents who are making mistakes? Criticism does no good; incidentally, it seems to me that the most criticised profession in the world at present is motherhood. We need to understand the bad parent in order to help her. That calls for knowledge on our part. There are bad parents who are anxious, worrying, over protecting their children and making them equally anxious. There are other parents who are grossly neglecting their children; indeed, criminally doing so. What are we to do with them?

There is one secret to bear in mind in approaching these cases: that behind most bad parents there lies an unhappy childhood. That certainly has been my experience. If we seek to unravel the real experience of bad parents we find that they had a very unhappy childhood, full of difficulties, from which they are still suffering. We need to approach these mothers with respect and humility, for they are doing the best they can. We

have to understand *why* they are making mistakes if we are going to give them any real aid. The same is true of my experience with mothers, anxious and over-protective, who make all the other mistakes we observe.

To respect what is good in such parents and to be able to offer them help is often time-consuming and needs psychological insight into personality development. It needs also skill in handling unconscious factors, because so often these parents are not aware of what they are doing nor of the reasons leading them to do it.

Finally, it is indispensable that we should help these parents because if there is one thing we have learned in recent years it is the extraordinary difficulty of providing substitute parents. I was interested to note that in the Ministry of Health summary of the lessons of evacuation during the war they came to the conclusion that it is enormously difficult to provide for children out of their own homes. Therefore, my point today is that even if parents are sometimes bad we must seek to discover why they are bad and how best we can help them to do better in the future.—*Mother and Child.*

A Pattern

Leaves have their time to fall
And men their time to die.
Accomplishments they leave behind
For us to pattern by.
As we survey the life-charts
Of men, courageous, free,
We call to mind those mariners
Who sailed the uncharted sea.
Their efforts were efficient
And wisdom served them well.
May we, as future helmsmen,
Heed what their records tell.

—*Fannie Sprague Talbot.*

A helping of potato has about as much iron as two slices of enriched bread or about as much as half an egg. One medium-sized boiled potato has as much vitamin C as a small glass of tomato juice.

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Topics from Medical and Health Periodicals

Guide to Health

"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."

—*Swami Sivanandha.*

Greek peasant remedies: The use of cow dung.—T. Stephanides, reporting in *The Lancet* on some of the native remedies used by the Greek peasants, cites two remarkable cases in which the application of cow dung to deep abdominal wounds with protrusion of the intestines was followed by complete and uneventful recovery. In both cases, one a soldier suffering from a shell wound, the other a farmer who had been gored by a bull, bystanders had placed sacks of fresh cow dung on the abdomen to hold back the intestines and on the physician's arrival, the peritoneal cavity was filled with liquid manure. The cure resulting in these seemingly hopeless cases recalls the fact that in India cow dung is regarded as a potent remedy against many diseases and the author concludes that "this subject might repay further investigation. Antibiotics have been extracted from the soil and from various moulds; it is not impossible that they could be isolated also from cow dung with its vast and little-known micro-organic fauna and flora."—*The American Practitioner.*

Food and fecundity.—Sir Richard Livingstone defines a technician as "a man who understands everything about his job except its ultimate purpose and its place in the order of the universe." To some extent most people connected with medical science have in this sense been technicians. Following Hippocrates their great aim has been to save life and they have given little thought to the consequences. It is only during the last hundred years that their efforts have had much effect, and the results are becoming evident. In many parts of the world populations have been helped to increase beyond their food supply, and the process continues. But fortunately if it is now within our power to reduce death-rates it is also within our power to limit birth-rates. The United States should lead in making available to all peoples of the world the most modern information on contraception, and the services of its health and educational experts in organizing birth control campaigns. We must stop blaming economic systems, the weather, bad luck, or callous saints.

The problem is to find some means of striking a judicious balance between population and resources; for so long as overpopulation continues to exert an intolerable pressure on food no political system will be stable.—*The Lancet* October 1, 1949.—*The American Practitioner.*

Recreation health programme for housewives.—Thousands of American women participate in a recreation and health programme

sponsored by the City of Los Angeles in the State of California. In more than 90 Municipal Centres, the City's Department of Recreation and Parks conducts free daily classes for women in physical problems, rhythmic, games, nutrition and other fields.

Designed especially for housewives, most of the classes are held in the morning when their children are in school. Some include instruction in ways to avoid fatigue while performing regular household duties. Others are devoted to rhythmic, relaxing and corrective physical exercises.

There are special exercises for reducing or gaining weight. The women are taught the proper way to walk, sit and stand. They also are taught good health habits and proper diets. Classes are conducted by trained women playground directors. The programme also includes supervised games, such as basket-ball and volley-ball, folk dancing and square dancing.

—*U.S.I.S. (Extract).*

Research on the common cold.—Harvard Medical School, Boston, Massachusetts, U.S.A., has been endowed with 500,000 dollars for use in seeking a cure for the common cold through a bequest by the late Paul V. Bacon of Wellesley, a textbook publisher. The fund is placed at the disposal of the medical school until such time as a definite cure for the common cold is found, at which time the rest and residue of the fund shall be paid over to Harvard.—*Jour. Amer. Med. Assoc.*, 4-3-'50.

Scorpion sting.—Application of saturated solution of alum powder relieves pain.—*People's Health.*

Wasp-sting.—Dip a piece of ordinary clean 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.—*People's Health.*

The prime rule of medicine.—McCarrison the renowned nutrition expert says that the right kind of food is the most important single factor in the promotion of health and the wrong kind of food is the most important single factor in the promotion of disease.

Restaurant sanitation.—Dr. Robinson says that 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 customer who pays cash down.

Rich but no Wealth

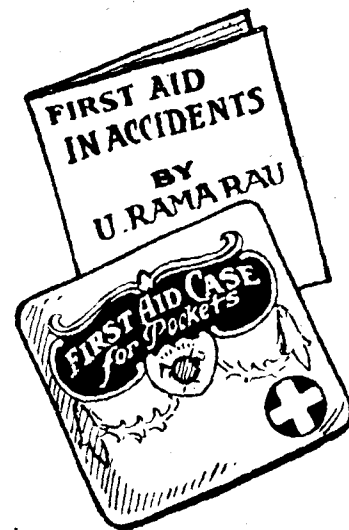
"Rich from the very want of wealth.
In Heaven's best treasures,
Peace and health."—*Old English Poet.*

Help! help!!- can YOU answer the call



Many a man to his utter despair failed to answer the agonising call for help when a dear one was either bitten by a snake, run over by a motor car or enveloped by a fire simply because he did not know what to do. Perhaps his inability to answer the call meant the loss of life.

Every man and every woman should learn to render first aid and learning to render first aid is not at all difficult as it is made easy by Dr. U. Rama. Rau's book on First Aid. In simple clear English, Tamil, Telugu, Canarese or Malayalam it explains what to do. Equally useful is the First Aid Case which contains all the necessary appliances. Get these two to-day and learn to be a life saver.



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