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EDITORIAL

Diabetes and its Prevention

Introduction.—Diabetes is one of the scourges of humanity. It is prevalent throughout the world and carries heavy tolls year after year. There are about 200,000 diabetics in the United Kingdom; in Germany, the number is estimated at 150,000 and in the States of Southern Europe 250,000. In India, the figure must certainly be higher than in those countries, as many people suffer silently and die without proper treatment, due to lack of facilities—medical and economic—but a large percentage of them belong to the mild type. Diabetes is a Greek word meaning 'I go through' and may be interpreted as "increased perfusion" *i.e.* "increased pouring through or into". The name "Diabetes" was given to this disease because of the habitual discharge of an excessive quantity of urine. The Indians, the Greeks, and the Romans knew of this disease only as such and it was only

about 250 years ago that it was discovered that the urine of diabetics is sweet and that it contains sugar. Since then, the true 'sugar-disease' has been termed 'Diabetes Mellitus' (Mellitus=honeyed). Diabetes affects certain races more than others. The races that are worst affected are the Jews, Slavs, the peoples of Southern Spain, Persians and *Brahmins*. "The reason for this is believed to be that as diabetes chiefly selects persons of advanced age, so does it, with preference, fasten on the older races, which in the course of time, have become more susceptible".

Diabetes affects persons mostly between the ages of 40 and 60. Its occurrence in early life and at a later period of life is rare. Men are attacked twice or thrice as often as women. It generally afflicts the rich and middle classes such as bankers and capitalists with no heavy physical

work to perform, persons with sedentary habits, literary men, heavy drunkards, the glutton and the indolent.

Causation.—Now, what are the causes of Diabetes Mellitus? Before dealing with this question, we have to say a few words about food and digestion. Every living being eats or absorbs food from which it extracts what is needed for vigour and development; the materials incapable of utilization are excreted in the form of faeces, urine and sweat. This process *viz.*, ingestion and digestion of food and elimination of waste is called metabolism. The foodstuffs we take can be classified under three major heads, carbohydrates, fats and proteins. We consume also water, salts, vitamins and minerals which are indispensable for the growth and health of the body and for repair and replacement of waste.

Carbohydrate Metabolism.—The chief organs connected with the carbohydrate metabolism are the mouth, the stomach, the liver, the pancreas, and the intestines. The saliva that flows from the salivary glands into the mouth converts the starch into malt-sugar. This is only a partial digestion. The more thoroughly the starchy foods are masticated in the mouth and mixed up with saliva, the more digestion is aided. The digestion of carbohydrates is completed in the stomach and intestines under the influence of the gastric juice, the bile, the pancreatic and intestinal juices and the malt-sugar is converted finally into glucose. The glucose enters the circulation, which transports it to the muscles where combustion takes place under oxidation. The muscle uses the sugar as fuel and is thus enabled to do work. When the body is at rest, the muscle naturally requires no fuel or rather very little fuel and the available glucose is stored in the liver in the form of glycogen. If that store-house becomes

full, further amounts of superfluous glucose change not into glycogen but as fat and deposited in the tissues. When the muscle is once more called upon to perform work and fresh sugar from ingested food is not available, the muscle draws upon the reserves in the liver which, in the form of glycogen, exists for such emergencies or else on the depots of fat. Now glycogen can only be formed with the co-operation of the pancreatic hormone *i.e.* insulin. Suppose pancreas does not produce sufficient insulin, what will happen? The carbohydrates ingested with the food undergo the usual decomposition and enter the blood stream in the form of glucose. A part of this glucose is used up by the muscles as fuel. What of the remainder? The muscle declines it because it has all the fuel it requires. The liver cannot receive it without being changed into glycogen first. In this case, no insulin is available. So, the glucose continues to circulate in the blood where it has no business to be. The blood-sugar picture of people in normal health is one of exceptional constancy with sugar amounting to 0.1%. If it falls below that, spasms occur; if it rises above the normal, the blood rids itself of the excess, using the kidneys for that purpose. If the blood-sugar increases to over 0.12% the excess is excreted in the urine and diabetes stands revealed. Thus defective carbohydrate metabolism is responsible for the causation of this disease.

What are the characteristic signs and symptoms of diabetes? They are :

- (1) Frequent and excessive micturition ;
- (2) Increased thirst ;
- (3) Debility ;
- (4) Fatigue ;
- (5) Nervous manifestations such as head-ache and depression.

There are also certain complications of diabetes of which the earliest are skin affections.

1. *Itching* in the arm-pits, on breasts and genitals and in the bend of the knee, is suggestive of diabetes. This also applies to furuncles (boils) and suppurative (pus-forming) skin eruptions. Bacteria seem to thrive particularly well in saccharine tissue.

2. *Infections* have an aggravating effect on diabetes and a particularly dangerous vicious circle is created in this manner, best illustrated in tuberculosis of the lung, for which diabetes is as bad a complication as tuberculosis is for diabetes.

3. *Gangrene (mortification of tissues)* is one of the most dreaded of diabetic manifestations. It occurs generally after the 50th year of life. Diabetic gangrene develops as a sequel to accidental injuries mostly at the toes and heels (wrongly treated corns, too tight footwear). The condition is called dry or moist gangrene according to whether the necrotic (dead) tissue dries up and is cast off or whether it secretes pus.

4. *Eye complications* such as loss of transparency of the lens of the eye, a condition called grey cataract. The retina may alter, the iris become inflamed and the muscles of the eye paralysed.

5. *Loosening of the teeth and dryness in the mouth*, which later emits a disagreeable odour.

6. *Diarrhœa*.

7. *Jaundice*, which fortunately is of a benign type.

8. *Impotence* in men and cessation of menses in women. Pregnancy occurs but rarely in diabetic women; where it does, it generally ends in abortion.

9. *Extra-ordinary sensation of hunger*:—These individuals eat well enough and yet experience progressive emaciation. The explanation of

this curious phenomenon is incomplete utilization of carbohydrates.

10. *Coma*:—Due to acidosis *i.e.*, excess of acids in the blood called ketone bodies. This singular condition is looked upon as a poisoning of the brain and nervous system. Albumen and fat refuse to oxidise properly and their reluctance causes smouldering of the tissues which poison the system. Diabetic coma, once definitely established, very often ends in death.

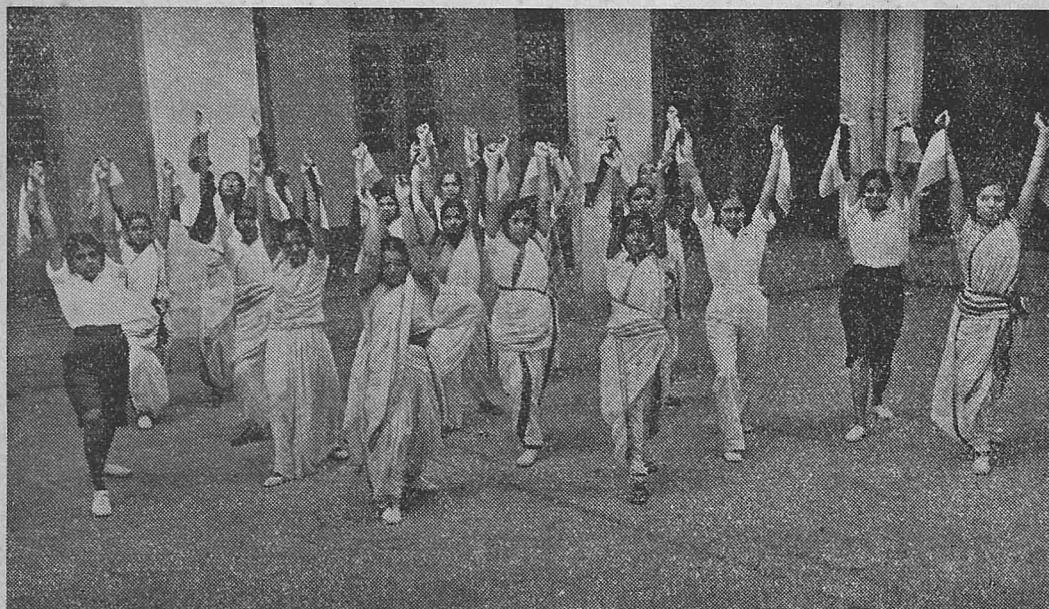
Prevention.—1. *Sterilisation of diabetic mothers*:—Heredity plays its part in the causation of diabetes, but only 25% are thus afflicted and they are mostly children. In India, diabetes among children is very rare. It is suggested that diabetic mothers should be sterilized in extreme cases but ordinarily, though marriages cannot be forbidden, pregnancy is inadvisable. Even after the advent of Insulin in 1922, only 10% conceive and even this percentage have to undergo a great ordeal before they bring forth live children into the world. The descendent of a family whose history records cases of diabetes, gout or obesity runs the risk of acquiring diabetes.

2. *Regulation and restriction of diet*:—Over-eating, especially of carbohydrate foods, will certainly go to produce and promote diabetes. The cause of diabetes is generally believed to be excessive sugar consumption; too much sugar is ingested; the pancreatic cells are overtaxed and fail. "The facts, however, are otherwise. In England, the consumption of sugar per head of the population is about 53 lbs. In Australia, Cuba and the Argentine, it is about 127 lbs. and yet diabetes is not more common in those countries than where the consumption is much less. Matters are different with generally over-fed persons. Diabetes used to be looked upon as a rich man's disease, but it is not excessive sugar consumption but

general overfeeding that is to blame. Why that should be has not been discovered; all we know is that fat people incline to morbid sugar generation more than lean people." Overloading of the stomach, with hasty, too bulky, excessively hot or cold meals, should therefore be avoided. The overloaded stomach exerts a pressure on the pancreas, which lies immediately behind the stomach and the pancreas is consequently put to a good deal of strain and this strain causes damage to the cells, which

to degrees of heat, which as bath temperatures, for example, would be dangerous to life (heat apoplexy)."

3. *Fasting*:—Before Insulin was discovered as a remedy for Diabetes, patients were put on starvation diet and their lives were thus saved. There is great virtue in fasting in health and disease as it would prevent over-taxing of the alimentary system, give it complete rest and eliminate all poisons from the body. Fasting was practised and enjoined by all the great religious leaders of the world for health of body



It is the rich women who eat much and do no work that are liable to Diabetes. Exercise is therefore as indispensable for women as for men. Picture shows-- Ladies performing a flag-drill at the Chikistak Samuha School in Bombay.

cease to produce the normal quantity of insulin. This deficiency in the quantity of insulin is the root-cause of diabetes. There is a popular saying among Indians that too much coffee-drinking brings on diabetes. In a sense, it is true and is scientifically explained thus in the words of a famous author and authority on Diabetes:—"If we remember further that soups, potatoes, tea or coffee &c. arrive in the stomach at temperatures of 60°—70° C (140—159° F), it becomes obvious that the pancreas, apart from pressure, is exposed also

and mind, Christ and Muhammad for example. The Hindu religion made it incumbent on every individual to fast once in a fortnight *i.e.* on "Ekadasi" days and observe semi-fasts on ceremonial and other occasions. The idea behind this fasting was to give a chance to the body to rid itself of all its impurities. Over-eaters, if they only fast once a fortnight, would never develop over-weight, in other words, would never suffer from diabetes. This sound principle of fasting for health on Ekadasi days has, alas! now degenerated into sumptuous

feasting, if not the routine rice-food but a different variety of carbohydrate, protein and fat, richer than ordinary meal and probably more acid-producing. Fasting will surely prevent diabetes, if only it is religiously observed and not made an occasion to eat more. Vegetables and fruits should be taken in plenty by people who have reason to feel themselves in danger of diabetes. They should also make it an invariable rule to sweeten their tea, coffee or other drinks with saccharine.

4. *Exercise*:—Persons with a sedentary occupation run greater risks than those whose work keeps them well exercised in the open air. "Exercise should therefore be uppermost in the minds of people who may be endangered—games and walks, walks and games". Unfortunately, in these days of cheap and quick transports, people have forgotten how to walk

and how to carry loads, so much so, they never sweat, on the other hand, they allow their muscles to grow fatter and fatter. As for games, there are now-a-days more spectators than participators and consequently, there is no relief even from that source for great many people, especially the rich and the middle classes. No wonder therefore, that they easily fall victims to diabetes.

5. *A knowledge of the philosophy of diabetic life*:—The diabetic must be calm and un-emotional. He must possess a philosophic frame of mind. "Equipped with practical information which he uses each day, free from fear of diabetes or his future, with no resentment over his lot, the diabetic is in the best possible condition for the realization of the diabetic ideal. Such a person cannot then be classified as a chronic patient".

Acknowledgements :

1. *Dr. Levy-Lenz and Dr. Heinz Schmeidler—“Diabetes”—The Malady of Our Time. Publisher—A. K. Verlag (A. Kirchner) Berlin So 36.*
2. *Blair Holcomb M D.,—American Journal of Digestive Diseases, April 1938.*

Dietary Treatment of Diabetes

Diets prescribed for diabetic patients in different centres still vary widely. Some physicians choose to give a large amount of carbohydrate food and employ insulin almost all cases. Others prefer to give a small amount of carbohydrate, since in the majority of cases the disease can then be controlled without insulin and, if insulin is required, a relatively small dosage is likely to be adequate. A middle-of-the-road policy is most common. Our own plan is to begin as a rule with an allowance of 120 Gm. of carbohydrate, increasing this amount later on, depending on the progress of the case, to 160 Gm. or a little more. This permits inclusion in the diet of a satisfying quantity of carbohydrate foods. Ordinary articles of diet are used except for sweets and rich desserts. With such diets the amount of insulin needed is seldom more than 35 or 40 units a day, and the risk of severe insulin reactions is minimized.

Success can be obtained with any scheme of diet, providing that insulin is used as needed in conjunction with it to control glycosuria, but attempts to use insulin without any regard for any regulation of the diet are hazardous. The patient who eats anything, or diets in the hit-or-miss fashion, is headed for trouble. There is risk of the complications of inadequately controlled diabetes on the one hand, and risk of severe insulin reactions on the other.

—*Frank N. Allen, M.D., in N. Y. State Jour. Med.*

Infant Welfare and DISEASES OF CHILDREN*

By DR. G. GHOSH, M.B., B.S., D.T.M.,

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I. Diseases of Children.—1. *The new-born babe: First care:*—For the sake of convenience, I would take up the diseases of children first. I propose to devote a part of the lecture to a very brief consideration of the commonest of these diseases. Let us assume that a child is born without any accident. The essential points demanding immediate attention are: care of the cord, care of the eyes and proper feeding. Any infection may appear in the early days of the infant through carelessness of some attending dai or nurse.

Tetanus Neonatorum—is caused by careless handling of the cord. This disease is unfortunately very common in India and is one of the many causes of the terrible infant mortality. It occurs between the third and tenth day of life.

Ophthalmia Neonatorum—is an inflammation of the eyes of the new-born infant due to gonococcal infection of the mother. Both these diseases are preventable.

2. *The diseases of early infancy:*—include premature births, congenital defects (Syphilis), atrophy, marasmus, etc. The incidence of these is higher among the poor than among the well-to-do, and it is lower in the country than in the cities. These diseases are responsible for about half of the infant mortality.

3. *Diseases due to faults in diet:*—

(a) Diarrhoea and enteritis.

(b) Rickets—a chronic nutritional or metabolic disease which creates a particular disturbance in the bones and indirectly affects every organ of the body.

Treatment:—diet, hygiene and sun-light.

(c) Tetany—a condition in which there is tendency to develop convulsions.

(d) Eczema—is a skin condition often congenital in nature. Increased by wrong dietary and unhygienic conditions.

(e) Scurvy—a constitutional disease characterised by a tendency to bleed. Due to lack of vitamin C in the diet.

All these diseases are preventable to a considerable extent through proper control of milk supply, food and hygiene.

It will not be out of place here to say a few words about the ideal food for infants. Nature has provided a most satisfactory way of feeding the infants, but civilization has recently begun to substitute other methods. So far these substitutes have not been generally successful. The mother's milk is the ideal food for the baby. Infant mortality statistics have demonstrated definitely that infants fed on breast milk have a distinctly better chance of living than artificially fed infants. The breast-fed infant is not only healthier and more robust, but he also has a better resistance to disease. It is estimated that between 80 to 90% of infant deaths between the second week and the first year from all causes, occur in bottle-fed babies. Hence, remember that breast-feeding is nature's provision and yields the lowest infant mortality,

* An abstract of a lecture delivered by him to the Social Service and Village Uplift Class of the Allahabad University, on the 30th Jan. '40.

that the use of animal milk causes a larger death rate and that the milk substitutes are responsible for the highest death-rate. To take any infant off the breast is a grave error and responsibility.

4. Respiratory diseases— Croup (acute catarrhal laryngitis), Bronchitis and Pneumonia claim about one sixth of the child mortality, much of which can be prevented by providing children with pure air. Ignorance,

in each case. By vaccination, smallpox can be controlled and almost exterminated.

II. **Infant Welfare.**—It is said that a nation walks on the feet of its little children ; it rises or falls according as its children are strong or weak. They are our greatest national asset ; it follows then that if we want to avoid a national bankruptcy, which would be a great calamity, we should devise means to make them strong



A mother swimming with her child on her back—
both products of strong, fearless and healthy parentage.

bad housing and poverty are prime factors in the problem.

5. All other diseases, including contagious and infectious diseases, produce about one fourth of the infant mortality. They include Diphtheria, Measles, Smallpox, Scarlet fever, Whooping Cough, Meningitis, Rheumatism, etc. The causes of all of these diseases must be understood thoroughly and proper methods of prevention and treatments instituted

and healthy. Infant mortality is a sensitive index of health conditions of a country. In India, the infant mortality rate is appallingly high. In 1926 and 1927, it was 24.6 and 23.7 per cent respectively among infants under one year. The corresponding figures for England and Wales were 10.7 and 9.5 respectively. This heavy rate of infant mortality in India is due to many causes, the chief of which are as follows :—

1. Ignorance of our people about the laws of health.—The general mass of the people of India—particularly the womenfolk, are hopelessly ignorant about the laws of health and sanitation. Sometimes it is hard to convince even the educated Indians of the importance of fresh air and sun. Even amongst the better class Indians, cleanliness at the time of child birth is too often considered superfluous. The least sanitary room is allotted to the expectant mother for labour, and the attendant dais are ignorant, dirty and uncouth. The dingy dark room provided for confinements with its every inlet for ventilation and sunlight stopped by gunny bags, the dirtiest and the of-no-further-use rags used in the room, the glowing charcoal fires continuously kept under the bed of the woman and her infant even during the hottest months of the year, all these have become bye-words just as much as the sickle and bamboo chips used by the dais for cutting the naval cord. The picture of the confinement rooms and the dais is as true to-day as it was a thousand years ago, as common in the cities as in the villages even among a good portion of the educated and the well-to-do. Curiously it is a common factor among all the communities, a common bond of degradation, one might call it.

As long as diseases and disabilities directly due to ignorance, dirt and germs are ascribed to evil spirits, angry and jealous gods and goddesses and means are only employed to pacify the spirit instead of combating the real cause, conditions cannot improve. A campaign of enlightenment is essential to dispel prejudices and superstitions from the minds of our people. Our educational system needs revision, and the school curriculum must be made to conform more nearly to the actual requirements of our complex life of to-day. Our young men and women must learn more

about the requirements and needs of the home and of home-life. Domestic science, the art of house-keeping, proper uses of food, the importance of cleanliness, hygiene, sanitation, infant care and management, and other items of value should become part of the instruction of every young woman. Such instruction is so fundamental that it should rank as a most important preventive measure. Boys, likewise, need additional training in home hygiene and sanitation. The value of nature's curative forces and regenerative agencies must be taught in order to give the boy a proper appreciation of the danger and injury incident to insanitary housing conditions. The uses of fresh air, the germ-destroying power of sunlight, the effects of contamination of air, the influence of gases, standards in regard to sufficient air space, and other necessary knowledge relating to proper housing conditions must be effectually taught to young boys. The knowledge which makes for better homes and more sanitary houses, and which will accordingly save the lives of thousands of babies must be acquired before the homes are formed and before babies are born. If this is not done, children will always be the victims of ignorance and neglect.

2. Certain curious habits and customs and adherence to outworn prejudices connected with parturition play an important role in increasing the death rate of infants. Under this heading may be mentioned the purdah system and early marriage. We know that in our country, post-puberty marriages are few and far between. Immature mothers produce weaklings which, under the enervating rigours of insanitary conditions, fade away before they can blossom forth. These 'little mothers' are usually ignorant of the principles of baby care and are therefore quite precarious care-takers.

3. Poverty, Starvation and Concomitant diseases—In spite of the

mythical wealth of India one reads of in story books and in records of western travellers, India is a poor country. The general mass of the people of India are at present sunk in frightful poverty. A few facts may be mentioned here to bring this home clearly to your mind. England's average annual income has been estimated at about 42 pounds per head while India's only a little more than one pound per head! "Forty millions of people" according to Sir William Hunter, "pass through life with only one meal a day. According to another authority, Sir Charles Elliot, "Seventy millions of people in India do not know what it is to have their hunger fully satisfied even once in the whole course of the year." Poverty has an ultimate relation to infant mortality. Many underfed and emaciated children can be daily seen in the streets of our cities and villages, and many withered mothers are the victims of mal-nutritions; soon their suckling babes are stricken also. Poverty keeps the nurse and physician out of the home; it houses the poor in dirty, delapidated mud houses; it prevents education; it makes people helpless and causes them to abandon home.

If poverty is self-inflicted and due to the laziness of the people, nothing can be done. If poverty is due to circumstances over which individuals have no control, then the burden rests flatly on the whole community. I personally believe that apart from political reasons poverty in India is largely caused by ignorance and ignorance is caused by poverty. This is a vicious circle. If poverty is to be abolished this vicious circle must be broken. It must be done for the sake of saving our children. But it must also be done to promote a better civilization.

The influence of concomitant diseases like Malaria, Kala-azar, Tuberculosis in raising the infant mortality rate among the half-starved people of

India can better be imagined than described.

Remedy.—I have mentioned to you some of the root causes of the higher incidence of infant mortality in India. But is there any remedy for it? Can we do anything to avoid this national bankruptcy? The problem is indeed a very difficult one and requires great expenditure, effort, and organisation on the part of the public as well as the Government. But let us not look on the difficulties and be disheartened by the apparant impossibilities. In the British Isles and other advanced countries public health measures and proper town and village planning have reduced the infant mortality considerably. Much has been done in these countries by maternity and child welfare crusade which has resulted in the formation of many active societies and child-welfare centres. In India, similar societies should be formed to carry on this holy crusade and in this matter lady missionaries and teachers of girls' schools and colleges may, with profit, be invited to co-operate and thus the propaganda can be brought home to the heart of our people. As nothing succeeds in this age without an active, persistent propaganda, we must also enlist the sympathies of officials and non-officials, men and women, and launch a wide-spread propaganda to educate our people in this direction. It must be remembered that in a grave matter like this, spasmodic efforts will not do; we must carry on sustained efforts until we drive away ignorance and dispel the prejudices from the minds of our people, and improve the sanitation of our villages and cities.

I admit that it is a big scheme and will involve a large expenditure, but no expenditure can be called too great that is likely to promote the health of our inarticulate little ones. I would call it a sound and safe investment, in which the Municipal Boards, Local Governments and the Government of India may all join to promote the happiness and well-being of the nation.

THE EVILS OF AUTO-PRESCRIPTION

OF late, the pernicious practice of auto-prescription and auto-medication has been on the increase, especially among the educated middle class of people.

AND AUTO-MEDICATION

BY P. V. ACHAR, M.B., B.S.,

MADRAS.

When their health or that of their family suffers, they try to take upon themselves the duties of their medical attendant. They decide in their own way the nature of the disease, run to the chemist and ask him for some 'stuff' which has been well advertised in the local papers as a sure cure for the malady in question. The chemist, whose chief aim is to sell his goods, willingly obliges his customers, who walk off with the supreme satisfaction that by this 'wise' step they have saved the money which would otherwise have gone to the pockets of the medical man by way of consulting fees.

But unfortunately, it is not always that these people are really wise. Medical science is so very complicated that unless a person has a thorough understanding of it, it would be dangerous in practice. One and the same disease can exhibit different symptoms in different persons, and at different times in the same person. So also, the same symptoms can be due to different diseases in different persons, and at different times in the same person. As such, any attempt at auto-medication on the part of non-medical men will undoubtedly result in disaster. Take for example, the commonest of complaints, indigestion. A person suffering from indigestion complains of stomach-ache, vomiting and/or diarrhoea. But indigestion is not the only condition which exhibits one or more of the above three symptoms and as such it is unsafe to come to the conclusion that every person who has stomach-

ache, vomiting and/or diarrhoea is suffering from indigestion. There are other dangerous conditions which show one or more of these three symptoms, calling for prompt operative measures at the hands of a skilled surgeon. In the latter conditions all medicines given by mouth are not only useless but are definite harbingers of death.

Again there is a peculiarity in the action of all the drugs in general. A drug might control a particular malady in a particular person but might fail to do so in the case of another person suffering from the same condition. In his case it might even increase his suffering and bring about his death. Besides there is a condition known as hypersensitiveness to drugs wherein a drug that can be administered with safety to some people acts as a deadly poison in others.

Auto-prescription and auto-medication is thus a dangerous pursuit to be followed by non-medical men. Time and again people have paid heavily for trespassing into the bounds of the medical field. The blind application of the so-called balms and balsams often advertised in the papers as a panacea for all external evils in cases of shoe-bites has been responsible for the development of that intractable skin condition commonly known as eczema. Again, the administration of a dose of castor oil to a child suffering from stomach-ache has made many a mother the unconscious murderer of her child. So also many

persons, not knowing that the cause for their constant headache lay in their defective eyes, have dug their own graves by the ingestion of daily doses of the drug Aspirin.

When your health or that of your family members is upset, make it a point to consult your medical attend-

ant even though you feel that there is no cause for anxiety. Dangerous diseases often make their appearance in a simple garb and unless they are detected and treated early, you will be made to pay heavily for your folly sometimes with your own life or that of some one who is dear to you.

WE are all aiming at that one glorious object in life *viz.*, the attainment of happiness. Where does this happiness come from? It is the ultimate result of a harmonious blend-

ing of our physical and mental characteristics. But for this harmony, life's pleasures will be meaningless and elusive.

The nervous system is the supreme master that controls the different parts of the body with its widely varied functions to perform. For all practical purposes, this complicated machinery of the human body acts as a simple mechanism which lives and moves at the command of its master. This master system consisting of the brain and the various nerves which are in constant relation with it, is one of the marvels of creations unfathomed by man. Do we ever imagine that it is this master system that keeps going this complicated machinery of a body? From birth and even before, the very development of a being depends on the vibrations set up on this nervous system by various environmental stimuli. According as these stimuli are favourable or unfavourable, the physical and psychical qualities are developed. So, the problem in front of us is far deeper than we think it to be—it is the problem of harmonizing the physical and psychical faculties, poten-

THE GLORY OF MANKIND

By T. P. SUNDARAM, *Adyar.*

Ease of Body
Peace of Mind:
Earn these Guerdons
O! Mankind.

tially equipped with which a child is ushered into this world.

The picture of perfect health, physical, mental, and moral, that has to show itself in the adult, should have its colours properly mixed in the cradle.

Psychologists and psycho-analysts trace back many diseases in adults to childhood and call them the manifestations of repressions in early childhood. Their elaborate psycho-therapeutic appliances and systems are of little avail except in a few cases and are impossible of universal application. The closing down of old avenues and opening up of new ones in the nervous mechanism of the adult is an intellectual feat. The seed of health can only be sown with great difficulty in the adult field. The most fertile field is childhood whence only radiant health can germinate, flower and fructify in all its glory.

Let us then look to the health of our children. The adults will take care of themselves. Let us give them the best training we can in order to bring about that wonderful "Ease of body and peace of mind that is the glory of all mankind."

MEDICAL PROGRESS

In its Preventive and Public Health Aspects

THE diseases to which human flesh is heir may be divided roughly into :—

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small-pox. That vaccination prevents small-pox is now an accepted fact. Vaccination was the first prophylactic measure

I. Diseases having spe-

cific or special preventive measures: small-pox, rabies, tetanus, venereal diseases, etc.

II. Diseases that spread largely through bowel discharges, such as, Typhoid and Para-typhoid fevers, Cholera, Dysentery, Hook-worm disease, etc.

III. Diseases which spread largely through discharges from the mouth and the nose, such as, Tuberculosis, Diphtheria, Pneumonia, Influenza, Measles, Common Colds, etc.

IV. Insect-borne diseases (a) mosquito-borne, like malaria, dengue fever, filariasis (b) fly-borne such as, sleeping sickness (c) flea-borne, such as, plague (d) rat-borne, such as, plague, rat-bite fever, infectious jaundice, etc. (e) tick-borne, such as, relapsing fever (f) lice-borne such as, typhus fever, and miscellaneous diseases, such as, anthrax, leprosy, cancer, etc.

Many of the above diseases have been brought under control by the progress made in Preventive Medicine. I propose to deal very briefly with some of the important diseases under each category.

I. Diseases having specific or special preventive measures.—

1. The most well-known disease is

discovered in the science of medicine. It has been proved beyond the shadow of doubt that vaccination produces an active immunity to smallpox. Here is an example of a disease, which was once the most prevalent and the most dreaded in all parts of the world, whereas now it has disappeared in all the progressive Western countries by the compulsory enforcement of vaccination. Before the days of vaccination, it is said that scarcely 5 persons out of a 100 escaped small-pox, and about a quarter of those, who took it, died. The credit of the discovery of vaccination goes to JENNER, who proved through very carefully planned experiments that cow-pox protects against small-pox.

The only way to prevent small-pox is through vaccination. "The method is logical, specific, sensible and satisfactory. Isolation and disinfection are only secondary. In a well vaccinated population, small-pox would disappear, instead of being a national sanitary disgrace, as it now is."

2. *Rabies*:—Compared to the major plagues of men, rabies is a comparatively rare disease. Man contracts the disease ordinarily through the bite of a rabid dog. Contact with the saliva of a rabid animal may produce the disease, if there be even a superficial abrasion in the skin. Rabies is,

therefore, a wound infection. The disease exists in most parts of the world. But, it has never appeared in Australia; no case of the disease has occurred for over 50 years in Denmark, Norway and Sweden.

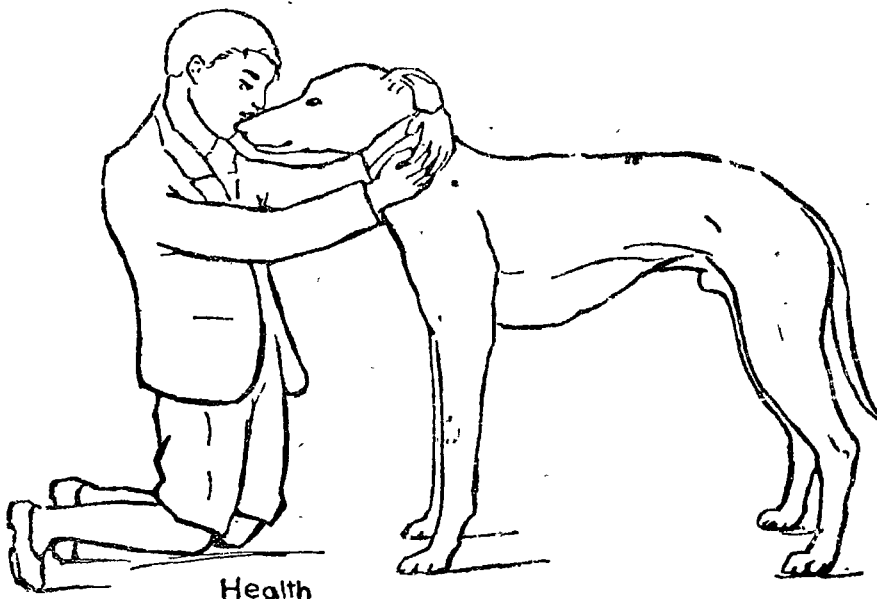
By the quarantining of dogs, the disease has been controlled in insular or peninsular countries, *e.g.*, rabies has been eradicated from England. It has been possible not only to prevent rabies by the proper control of the disease in dogs, but also to prevent

the disease developing in man by the Pasteur prophylactic treatment. This method was announced in the years 1883 and 1884, by Pasteur at the International Congress at Copenhagen and the French Academy at Paris. The principle of the treatment consists in producing an active

immunity by means of a modified virus which is attenuated by drying. This is known as the fixed virus and is obtained from the spinal cord of rabbits, killed by hydrophobia. An emulsion of the spinal cord is prepared and injected sub-cutaneously. Nowadays it is no longer necessary even to go to a Pasteur Institute for treatment, because the vaccine is sent by mail and preventive treatment is given in most of the important hospitals in different parts of the country.

As rabies is primarily a disease of dogs, the disease is kept alive in nature mainly by the dog and the dog family. The disease can be controlled,

even exterminated by legal measures regulating the importation of dogs, compulsory impounding of stray animals and the proper supervision of licensed dogs by muzzling, imposing legal responsibility on the owners, quarantine, immunisation, etc. It has been stated that consistent muzzling of all dogs would practically exterminate rabies. Misplaced sympathy for the dog prevents enforcement of preventive measures. The lay public do not realise that the



Kissing a dog or other domestic animal is dangerous to health and should be avoided.

muzzling order is for the good of the dogs themselves. Rabies disappeared from England within 2 years by the enforcement of the muzzling law.

3. *Venereal Diseases.* — Venereal diseases are justly regarded as the greatest of modern plagues. Not only the health of the individual but also the health of the family and the vitality and health of the race deteriorate owing to the unchecked prevalence of venereal diseases. The prophylaxis of venereal diseases is the most pressing social problem in preventive medicine to-day. That venereal diseases should be treated as any other highly communicable

and preventable infection from a public health stand-point is being slowly realised. But, progress in the prevention of venereal diseases is necessarily very slow, because the difficulties in this case are very much greater than in any other group of diseases.

They have not yet been classed under notifiable diseases. It has been stated that in certain cities, the number of new infections occurring each year probably exceeds that of all other notifiable diseases combined. The two most important venereal diseases are SYPHILIS and GONORRHOEA.

“Gonorrhœa is the great preventer, Syphilis the great destroyer of life.” Fortunately, these are preventable diseases. “The history of preventive medicine can present no greater tragedy than the house invaded by Syphilis or Gonorrhœa.”

1. *Syphilis* causes more mental and physical suffering than any other disease. No other disease equals it in the extent and intensity of its ravages. It is the great canker of humanity. Yet, it is preventable, even curable.

Syphilis is an example of a disease, which illustrates the fact that it is much more difficult to control a disease transmitted directly from man to man than a disease transmitted by an intermediary host, or a disease in which contagion is transferred through the environment. To a certain extent, we can control our surroundings or the animals, which carry disease. But, it is difficult for governments set-up by man to have control over man, because it requires the consent of the governed for the enforcement of preventive sanitary measures.

Syphilis affects all classes of society. It has been estimated that it is the cause of from 10 to 35% of all insanity. It is an important cause of mental and physical deficiency in

children. In the later stages, it leads to some incurable diseases of the nervous system and is responsible for a large proportion of the diseases of the blood vessels and the heart. 50% of abortions and miscarriages are due to it. “Syphilis decreases the length of life one-third; it greatly decreases earning capacity; it is a serious cause of disruption of home and happiness and causes untold suffering and misery. Withal, it is largely preventable and occasionally curable.” The public health control of syphilis depends upon early diagnosis and facilities for prompt treatment. Considerable headway has been made in progressive Western countries in this direction.

2. From an economic and public health stand-point, GONORRHOEA is as important as Syphilis. It has been stated that it is the most constantly prevalent of all serious diseases except measles.—It affects all classes of society. It is responsible for a large amount of blindness. It has been estimated that 60% of blindness in the new-born and 10% of all blindness are attributable to Gonorrhœal infection. 60 to 70% of gynæcological operations are necessitated by it. 50% of sterility is due to it. Gonorrhœa is the underlying cause of untold suffering and misery, because it affects practically all prostitutes—public and clandestine. Notwithstanding all its horrors, Gonorrhœa is a preventable disease. Attempts have been made in other countries to regulate prostitution by means of medical inspection and the systematic treatment of all infected persons by the provision of adequate and easily accessible and inviting facilities for treatment. The above measures have done much in those countries towards diminishing the prevalence of venereal disease.

3. *Tetanus* :—Though Tetanus is a rare disease as compared to the major plagues, it early attracted attention on account of its characteristic and fatal spasms. It is also

known as 'Lock-jaw.' It was only in 1884 that its infectious nature was recognised. In the year 1819, Von-Behring and Kitasato laid the foundation of 'Serum Therapy' for Tetanus and Diphtheria. The tetanus spores gain entrance into wounds not only from manure, garden soil, street dust, but also from the unclean hands, instruments, bandages, etc., used in operations and dressings in the Surgical wards of the hospital.

It is now known that the tetanus antitoxin is a specific and trustworthy preventive for the disease. The experience gained in the last Great War has confirmed the protective power of this specific serum. The anti-toxin should be administered before the advent of symptoms. By such specific prophylaxis, the disease has been brought under control, mainly by preventive measures.

(To be continued.)

Publicity and Health Promotion

By Lieut. T. P. Rajan, B.A., B. COM. (EDIN.), A.I.R.O.,
Andhrā University, Waltair.

(Contd. from p. 125 of June '40 issue of Health.)

THE next great vehicle, which can be used to carry on the health message and a phase which has been sadly neglected, is the Poster. Posters are seen at exhibitions but what I would like to see is a realization of the great possibilities of the "exclamatory form of advertisement." For instance, in our town I have yet to see a poster relating to health and this is the very place one would devote for such things. Out-door publicity is "as big as all out-doors" and the possibilities of health publicity through this are immense. The message must be kept before the public eye—a headline must be seized and strengthened by the large size and colour of the poster. The "poster impulse to mass action" is a recognized fact and the rules to be observed are simple. The messages must be shorn of all non-essentials, then alone will they be successful. For example, posters like the following must be displayed in every city and town at vantage points like street crossings, schools, shopping centres etc:—

- I. Why is there so much enteric fever in...? *Because* our people, our servants, our privies and our streets are not clean. *Because* our sewage is not being taken away quickly and many people have to live amongst sewage. Our water supply is pure. But it may get contaminated from dirty soil and leaky pipes and by being collected by dirty people and stored in dirty houses. Get rid of dirt and the Enteric Fever will also go.*
- II. Health is worth whatever expenditure is efficiently incurred in its maintenance or to secure its return.*
- III. Don't rob the child's bank of health—use pure milk.

It will thus be seen that posters can foster health only if they have punch with brevity as bill-boards cannot convince; they merely receive a passing glance. Again, it must be remembered that there are great possibilities for improving health by an

* All-India Institute of Hygiene and Public Health, Calcutta.

extended use of pictorial publicity in India. Pictures appeal to all but the more intelligent the class of people appealed to, the less the need for some strong attention-getting factor. In poster publicity, the artist must be allowed the greater amount of space. The pictures aid in giving ideas a concrete form and a single picture will mean more than any amount of text. The following pictures reproduced from "*Foundations of Health by Rathbone-Bacon-Keene*" serve as examples of the boundless possibilities of pictorial publicity.

Leaflets constitute an important medium and this is evidenced by the fact that most Health Departments in the country concentrate on this type of educative effort. But, as the Public Health Commissioner observes, "...leaflets fail to excite any general interest. This may perhaps be due to the frequently un-attractive form in which these are prepared and health propaganda officers should always be prepared to adopt fresh

ideas and new methods of their work to be effective." Two methods are generally adopted in the distribution of leaflets—they are sent on request or they are distributed to schools and other institutions. At fairs and festivals a rich crop of leaflets is distributed but one doubts the efficacy of distributing these at a time when people are looking to heaven for salvation! Even otherwise, leaflets suffer from the defect that they are very rarely read and this can be seen by the litter gathered in fairs, festivals or in streets. Leaflets must be written in the language of the class of people appealed to—the agriculturist's requirements and his habits and thoughts are different from those of the city dweller. Acquaintance, sympathy, and co-operation can only be obtained by speaking the language of the prospective beneficiary. All the art of appealing to popular imagination must be brought to bear upon the preparation of such material.

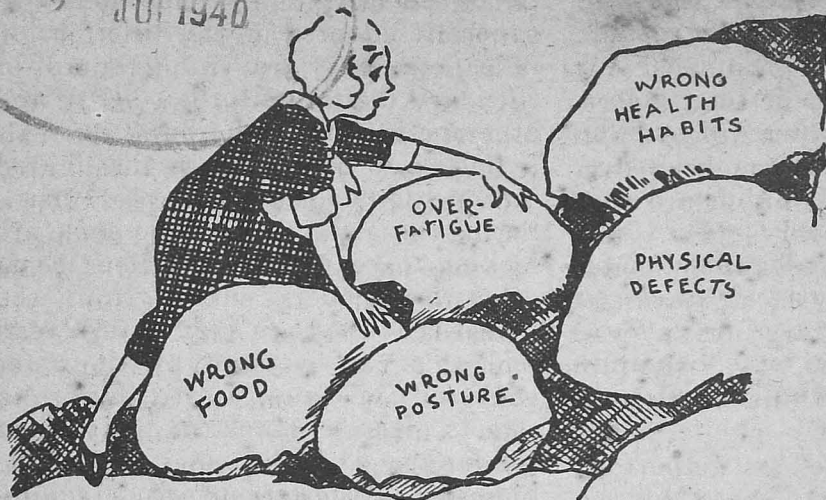
Booklets and pamphlets offer wide range of appeal and as these are more robust: they furnish more room for illustrations and text and allow for better press work. The titles of the booklets and pamphlets must be attractive and should excite the public curiosity. For instance, booklets entitled "The Child", "A War on Consumption", "Don't die of Diabetes", "Diphtheria—unnecessary Death", "Dysentery, one of the Dangers of living from Hand to Mouth" etc. will not fail to attract attention and this is the first step to action. Public Health departments boast in their reports about so many posters and leaflets which were



Spreading a Cold,

—Drawn from Hygeia, A. M. A.

9 JUL 1940



The Boulders in the path of the undernourished pupil.
—Drawn from Hygeia, Amer. Medical Assn.

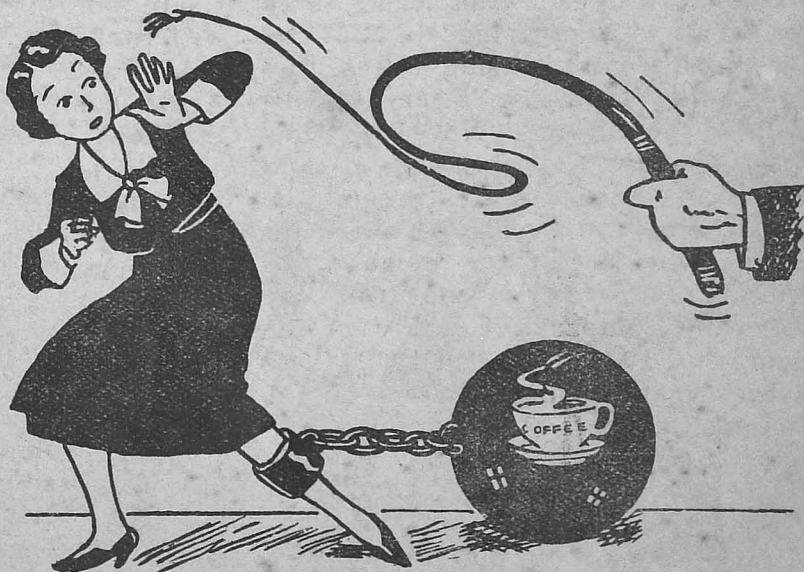
lectures and 144,672 short talks were given during the year 1938. It is estimated that a total audience of about 95 lakhs of people attended these lectures, Health dramas, Health Exhibitions and demonstrations by ballad singers.

published and sold. It is not enough that we merely spend money—even in England there is mixed opinion regarding the value of public health work and that is a country where portentous sums are spent by the State—but we must see that a more intensive propaganda is undertaken. Further, these must be backed up by a conscientious staff highly trained and sympathetic.

Lectures on health subjects are useful in health propaganda. But in order to create the necessary interest they must be accompanied by magic lantern demonstrations—and health exhibits. The Madras Health Department has been doing very valuable work in this direction and there can be no doubt that it will be productive of results. For instance, 29,115 lectures with magic lantern demonstrations, 26,462

most effective ways of promoting health is to get health authorities to devote stalls at exhibitions. Health Weeks afford a splendid opportunity for such appeals. Efforts are made to run them on all occasions where a large number of people congregate—sports gatherings, fairs and festivals, industrial and agricultural exhibitions etc. Rural welfare stalls should always occupy an important place in such exhibitions

One of the



Whips that drive, yet chains that hold back health and strength.
—Drawn from Hygeia Amer. Medical Assn.

and there should be a large supply of exhibits, There is much to be said in favour of a permanent health exhibition on the lines of the one prepared at Glasgow. It is interesting to note that a health museum has been established in Patna. Additions are made to the exhibits every year. For example, during the year 1936, models of a rat-proof godown, an insanitary house, and a sanitary privy were added. The museum was visited by 133,000 persons and this clearly indicates the "growth of a public health conscience."

An even wider range of public health education in the words of the Public Health Commissioner, is provided by the cinema and radio. Health can be built by means of the silver screen especially in rural areas. People are eye-minded and they must see things to be interested. Portable projectors can be used for instructing and training people regarding the value of health and personal hygiene. "The most illiterate can understand the universal knowledge of the motion-picture screen and the portable projector makes it possible to speak this universal language anywhere". Examples of such films available in India are "Two ways of living" (a two reel film dealing with housing, released by the Indian Red Cross Society), "Self-help in the village", "Never say Die" (dealing with leprosy) "Food and Health," "Fairies of Health and the Food we eat" etc. Though there has been an increase in the demand for Library Films as is seen from the following comparative study of the figures for 1934, 1935 and 1936 (these figures relate to the activities of the Indian Red Cross Society) :—

Year.	35 mm.	16 mm.	Total.
1934	105	55	160
1935	163	90	253
1936	202	106	308

Yet "Health films are still few and far between and it is to be hoped that

Directors of Public Health will do all in their power to extend the use of this attractive form of health propaganda*." The Radio is a medium of entertainment, recreation and public education. By means of the radio not only can talks on health subjects be given but a number of health dramas may also be enacted. Examples of talks are "Monsoon health hazards", "First aid for broken bones," "Your weight," "Tuberculosis—down but not out," "The cow that had Tuberculosis," "Tuberculosis—yesterday it was a dictator, to-day it sees a revolution and to-morrow the forces of Science triumph." There is large publicity value but the limitations are great. The man who reads a health advertisement or an article on health in a newspaper or a magazine can get away from it and can come back again. "A listener however has to be caught first crack—otherwise he switches off and damns the show for ever."

In conclusion, the work done by private organizations and agencies cannot be over-estimated. In our country, notable examples of such institutions doing publicity work are the Indian Red Cross Society, together with its educational service, Junior Red Cross, St. John Ambulance Association (Indian Council) and the St. John Ambulance Brigade Overseas, The British Leprosy Relief Association, International Health Division of the Rockefeller Foundation in India, The Bombay Presidency Baby and Health Week Association, and The Health Propaganda Board, Madras. Individual advice may be addressed for printed material published by them. In certain cases, they provide speakers for Public Health meetings. Therefore, if one stops to think about the matter it seems that the whole world is interested in health problems

* Report of the Public Health Commissioner with the Government of India, 1936.

and the least we can do is to co-operate with the health authorities by taking care of ourselves.

“If the vital truths of health were advertised in the fields of public interest, some of the mist and fog that

covers us will be permeated with sunshine and understanding, and what a harvest would there be of longevity and happiness for mankind at large.”—Robert Lynn Cox, Metropolitan Insurance Co., New York.

MEASLES, like Smallpox and Influenza, is one of the most easily communicable diseases. Children up to 6 or 7 years are mostly susceptible to this disease. Its incidence

in higher age groups is comparatively low. The disease is liable to assume a more virulent course when it attacks children of tender years.

Though by itself Measles is not a serious disease, it is fraught with possibilities of dangerous complications. It lowers resistance to other infections such as Pneumonia and Tuberculosis. Adequate care is seldom exercised to avoid infection from Measles. Due precautions have to be taken to protect children from this disease, especially during the first five years.

One attack usually confers lasting immunity.

Cause and Mode of Infection.—The causative agent of the disease grows and thrives in the upper respiratory tract of the patient and is discharged through the secretions from the mouth and nose. Its exact nature has however not been fully ascertained.

Droplet infection is quite possible during the patient's coughing or sneezing. The infection probably occurs by inhalation.

Direct infection is the rule though it may sometimes occur indirectly through infected articles. Infectivity may be present even during the early stages of the attack, *i.e.* four or five days before the appearance of eruptions. This is an insidious factor that

MEASLES

BY

The Public Health Department, Travancore.

contributes much to the easy spread of the disease.

The infection largely spreads from children, having a common cold symptomatic of the onset of measles, moving about and mingling with others.

From exposure to infection, it takes about 11 or 12 days for the appearance of the initial symptoms of the disease, and about 14 days for the manifestation of the skin eruptions.

Symptoms.—Measles is a specific infectious fever characterised by mild eruptions on the skin and inflammation in the respiratory passages, ears, eyes and mucous membrane of the cheek. The disease shows a special liability for complications involving the lungs. The common complications are Pneumonia, Bronchitis, Earache and inflammation of the eyes.

Relapse may also occur.

The infected individual remains to all appearances quite well for about 10 days. Then the initial symptoms appear. The disease starts with an attack of cold. The throat and lining of the nose get inflamed. Coughing, sneezing and sometimes vomiting occur. Eyes become red and watery and light causes irritation. The back pain characteristic of Smallpox is absent. Fever supervenes within a few hours. On the second or third day since the onset of cold, an

eruption appears on the inner surface of the cheeks. This is a peculiar feature of this disease, and carries considerable diagnostic importance. This stage lasts for about 4 or 5 days.

Regular spot-like eruptions appear on the skin on the fifth or sixth day of attack. These first appear on the forehead and behind the ears. They then spread over the face, trunk, limbs and palms of hand and soles of feet. Individual eruptions soon coalesce into blotchy areas. This skin eruption lasts from 4 to 6 days and then fades away. Temperature rises with the development of the eruptions and falls with their subsidence.

The disease may assume mild or severe forms.

Treatment—The patient should be isolated and removed to a separate room that should be clean and well-ventilated. He should be in bed from the very onset of the attack. He should have abundance of fresh air.

Only light diet is permissible till fever subsides. Careful nursing and avoidance of complications are very essential. The patient should be kept warm and protected against draughts and chills. Hygiene of the mouth, nose and eyes is of great importance.

The discharges from the patient's mouth and nose should be burned, as they are infectious materials. The vessels and clothing used by the patient should be duly disinfected. After the patient is released from isolation,

a general cleaning up of the room and disinfection of his articles of personal use should be carried out.

Prevention.—The prevention and control of Measles require particular attention. The difficulties that are encountered in this matter are the highly communicable nature of the disease, the length of the incubation period, and the unrecognised but infectious pre-eruptive stage characteristic of the attack.

Every case of Measles requires segregation. Anyone who is known to have the disease should be promptly isolated. Every child that has signs of an acute cold and rise of temperature should be kept in observational isolation. Early recognition of suspicious symptoms in contacts is important.

Whenever a child develops Measles while attending school, all the children in the school room should be considered to have been exposed. Every morning at the opening of the school, every child should be examined for signs that might indicate the beginning of Measles. Children showing any of these indications should be immediately excluded from school.

Persons exposed to infection should be quarantined for about a fortnight. The patient has to be regarded as infectious from the appearance of the earliest symptoms till the manifestations of the disease have completely vanished.

A Patient's Thoughts on Developing Measles.

M—stands for measles and misery too,

They both go together, that's certainly true.

E—stands for eye trouble which comes in the wake

If extra precautions you're careless to take.

A—stands for aches so lavishly spread

From the tips of your toes to the crown of your head.

S—stands for the stomach which turns inside out

If with real measles you're having a bout.

L—stands for leopard; you look like him so

With spots on your skin from head to the toe.

E—stands for earache which often comes too,

So you won't feel slighted when they're finally thru.

S—stands for some day, a long, long way off

When we will be over, measles, headache and cough.

—(From Jamaica Public Health.)

Hindu Manicure

THE ancient Hindus were very particular about their nails. Vatsyayana, in his book *Kamasutra*, wrote that nails should be cut on every fourth day. According to him, nails should be clean, well and uniformly cut, polished and beautiful. Long and dirty nails were considered to be the cause of various diseases.

* * *

In India practically all kinds of anjarag (cosmetics) from head to foot were in vogue, but they began losing their ground on the introduction of modern, attractively-packed cosmetics and also because the old prescriptions necessitated elaborate and sometimes tiresome processes. Nevertheless, though the foreigners have captured much of the Indian cosmetic market, out of the total Indian consumption of cosmetics, only 5 per cent is being met by imported modern cosmetic, whereas 95 per cent of this demand is still confined to the use of the traditional cosmetics.— *Indian and Eastern Chemist*, Feb., '40

Milk for Malnutrition

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

General Hygiene and Diet in Gonorrhœa

REST in bed if attainable is better than partial rest particularly in woman. If rest is not possible, avoid all physical strains at work and if not at work, patient should avoid active exercises as cycling, motor-cycling, riding, football etc. Dancing is particularly harmful and everything that tends to stimulate the sex is injurious. A well fitting suspensory bandage should be worn to support the parts. A T bandage beginning from behind and ending in front will serve the purpose. A brisk purgative at the commencement and then keep the bowels free. Drink freely of plain water, barley water or conjee water. A light bland diet for the first ten to fifteen days; by the end of the third week a generous diet may be allowed. During the whole course of treatment all condiments, rich sauces, highly spiced foods, all pickles and chillies and articles of diet with high protein content should be forbidden. Meat should be avoided, alcohol in all forms is contra-indicated.

Local cleanliness.—Hot hip-baths. Besides cleaning the parts they are helpful in soothing the pain. Warn the patient about the danger of contaminating his own eyes and infecting others. Keep the cloths clean. This can be done by wearing a roomy bag or a T bandage in which pieces of cotton are placed. They should be replaced when soiled. The soiled cotton should be turned. Plugging the meatus with a piece of cloth or a pledget of cotton wool must be condemned.—*Medico Surgical Suggestions*.

THE best way to keep good acts in memory is to refresh them with new.—*Cato*.

How to Purify Water Bengal Government's Advice

OWING to the present international situation in Europe, certain local bodies have experienced difficulties in obtaining perchloron or bleaching powder in the market for purification of the public water supplies. About ten tons of perchloron are required annually for the purpose in this province excluding the requirements of the Calcutta Corporation who mainly use chlorine gas for purification of their water supply. With a view to mitigate the difficulties the local bodies possessing the pipe water-supply are advised to adopt the following methods for purification of their water supplies:—

(1) *By Using*:—(a) Bleaching powder; (b) Perchloron; (c) Chlorine gas; (d) Unslaked lime; (e) Electrolytic chlorine; (f) Potassium permanganate.

Unslaked lime is not produced in Bengal but is imported from Bihar, United Provinces and Central Provinces.

If arrangements cannot be made for purification of water supplies with other chemicals, the situation may be tackled by the use of large quantities of unslaked lime.

(2) *By sinking tube wells.*

(3) *By using only boiled water for drinking purposes.*

The local bodies are warned that if there is a breakdown in the matter of supply of the chemicals and gas, etc., the other methods of pipe water-supply such as tube-wells should be adopted and that in all cases water should be boiled before use.—*The Bengal Public Health Journal.*

Life

Life is like a journey or trip, taken on a train; With a pair of travellers at each window pane I may sit beside you all the journey through, Or I may sit elsewhere, never knowing you. But if fate should mark me to sit by your side. Let's be pleasant travellers; it's so short a ride.

—*Davis' Nursing Survey.*

House-Fly Carries Leprosy

THE common house-fly is claimed by a French scientist of the Pasteur Institute in Paris to be a carrier of leprosy. It is the only insect that carries the micro-organism causing the dread disease, Dr. E. Marchoux declared before the Sixth Pacific Science Congress, meeting at the University of California. However, conditions must be generally favourable for the disease to develop before the fly can transmit it, Dr. Marchoux said. Matters of environment, lack of cleanliness, climate, and other factors enter into the picture.—*O. W.*

Leprosy

THE finding of the Committee (Indian Leprosy Commission of 1880) were: (1) That leprosy is neither syphilis nor tuberculosis, but has analogies with latter; (2) That leprosy is not transmitted hereditarily, and the disease tends to die out because the majority of lepers are sterile; (3) That it is contagious and inoculable but is not spread widely in these ways; (4) That leprosy is not peculiar to any race or caste, nor does it arise from the use of any particular food, not by reason of any climatic or telluric conditions; (5) That predisposing causes are poverty, bad food and insanitation; and (6) That it arises *denovo* under a combination of circumstances and conditions whose interrelation is not known.

Consequently, the Commission did not recommend segregation either absolute or partial, but advocated voluntary isolation. Their recommendations included: (1) Prohibition of lepers as sellers of food or drink or their engaging in such occupations as barbers and washermen; (2) Discouragement of concentration of lepers, forbidden vagrant leper to beg, to use public conveyance or to frequent places of public resort;

(3) Lepers infringing these regulations were to enter into asylums to be built near towns.

Thus we have the peculiar state of things that the disease is contagious to an "exceedingly small" degree but voluntary isolation, prohibition of certain trades and occupations, control of movement and establishment of asylums are recommended for dealing with it. The government of India adopted the report and on it was based the Leper Act of 1897 which was clearly framed with the view of deferring to public opinion (that leprosy is contagious) and mitigation of a public nuisance. It was a permissive act enforceable by local governments by notification.—*H. H. S. in Leprosy Review.*

Too Much Cooling may be a Menace

THE practice of cooling public buildings to 80° F. or less in hot weather appears to be a distinct menace to the health of susceptible persons who expose themselves to contrasts in temperature, *The Journal of the American Medical Association* for April 29 asserts.

"In warm summer weather," *The Journal* says, "an indoor temperature of 80° F.; or even 85° F., with low humidity is comfortable and desirable, from the standpoint of health, because the human organism becomes adapted to heat and cannot stand sudden drops in temperature, especially when the body surfaces are wet with perspiration."

Thermometers for recording room temperatures usually should be placed 36 inches above the floor and at least 3 feet away from the exposed walls. In rooms for the aged it is preferable to record the temperature at knee-height level, 18 inches above the floor.—*T. S. J. M.*

Tea Drinking

THE increased consumption of tea has given rise to a problem which requires careful consideration. Tea drinking has rapidly spread over the country and has replaced milk as a normal accompaniment of meals. With many people tea drinking has become a chronic habit. If indulged in excess, tea produces over-excitement and palpitation of heart. Tea also affects the stomach giving rise to loss of appetite and indigestion and finally leading to dyspepsia and other sequences. Tea is contra-indicated in children; in adults, excess of tea hastened old age by disturbing metabolism.—*Medical Bulletin.*

Liquor in America

MORE than 4,000 communities have voted "dry" since prohibition was repealed five and one-half years ago, a prominent research organization estimates. The majority of these have been in rural areas. Counting the districts that remained dry in the face of repeal, there are to-day at least 10,000 communities in which all liquors, including beer, are outlawed. This represents about one-fourth of all townships, rural precincts, counties, and villages in the United States.—*Good Health. (U. S. A.)*

Nocturne

Now I lay me down. To sleep?
Oh, no! To count a lot of sheep.
I know I'll never get a wink,
I have so many thoughts to think.
Last night I tried composing verse
But my insomnia got worse;
I tried hot milk and tea and gin,
A shot or two of aspirin.
I took a walk around the yard,
I tried that trick of breathing hard;
As noises of the night grew louder,
I even thought about a powder:
And
... ..
My gosh, is that the breakfast call?
And I have hardly slept at all!

By SPRAGUE O. SMITH.—*Hygeia*

Health Tit-Bits

The Wealthiest Nation

THAT nation is wealthiest that has the greatest number of happy useful human beings.—*Ruskin.*

* * *

No Two Individuals are Similar

ONE'S physical make-up and daily habits do not entirely correspond with those of any other person in the world.—*Hygeia.*

* * *

Walking

VARIOUS things affect walking: the type of shoes worn, the type of muscular co-ordination, the kind of clothing, the health of the body and the mental attitude.—*Arogya Margam.*

* * *

Quackery

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

* * *

Smoking in India

INDIANS smoke 7,600,000,000 cigarettes a year. However, there are other forms of smoking to which Indians are even more addicted—bidis, for instance. The bidi is made of a special kind of dried leaf, which is rolled into conical shape with extraordinary rapidity by the average Indian and filled with tobacco waste. This is perhaps the cheapest form of smoking material in the world. One can buy a hundred bidis for about four annas.—*O. W.*

Pregnancy

WOMEN who have not had a pregnancy for ten years or more should receive the best prenatal care and should be delivered in a hospital under expert obstetric supervision, *The Journal* of the American Medical Association declared in an editorial recently.—*Hygeia.*

* * *

Opium Deafness

ADMINISTRATION of morphine may cause auditory hallucinations, ringing in the ears and loss of hearing. One authority found that the newborn baby of a mother who was addicted to this drug, or opium, was as much an addict as the mother, for the child's blood and tissues were as fully saturated with the narcotic as were hers. Such an infant needed treatment for narcotism.—*J. H. K.—Good Health (U. S. A.)*

* * *

New Smallpox Vaccine

THERE now comes an announcement to scientists of a new smallpox vaccine that eliminates the severe scars and other inconvenient features of ordinary vaccination. It is made by growing vaccine virus on a special medium consisting of minced virus, but will obtain a solid and lasting immunity to smallpox.

No scar forms after the primary vaccination with the new vaccine virus, it is reported, if the inoculation is properly made. Nor is there any fever and discomfort. Following revaccination later with calf lymph virus, very few have fever or other symptoms, and what scars occur are only "small, superficial ones." —*Oriental Watchman.*