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Health

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EDITORIAL

HEALTH EDUCATION IN SCHOOLS.

THE importance of health education to school children cannot be over-estimated. Side by side with the improvement of the brain, the school-child will have to develop its body and mind and maintain them always in a healthy condition, otherwise, it will be futile to expect 'a sound mind in a sound body', which is the *sine qua non* of human existence. Since the passing of the Compulsory Education Act in all the civilized countries of the world, the children are subject to hazards of infection in schools, which are not open-air institutions but are kept in buildings where overcrowding is the rule rather than the exception. So it has become an imperative and added duty of the State to look after the health and welfare of the school-children; for, on the health of the citizens, as much on their education and intelligence, depends the progress of the State. The awakening to a realization of the importance of health to school children first originated in France in 1833 when the school authorities were made responsible for the sanitation of schools and supervision of the health of school children. No really great advances were made, however, until the last quarter of the 19th century when a further impetus was given to this movement. It is only during the last twenty years, that great strides have been made in this direction in England, United States and other foremost countries of the globe. In India, it was during Lord Chelmsford's administration that health education came to be recognized by the Government but the activities here are confined more to the health education of the masses than to the children in the schools and even with regard to the former they are directed in such

a haphazard manner, without any definite programme and without co-ordination among the various agencies entrusted with this task, that so far they have borne no fruit, brought no real benefit to those concerned. The masses at present view some of the exhibitions, baby-weeks and the like held once a year generally on festive occasions as part of the 'tamashas', which they forget the moment they turn their backs from the scenes. In schools, no doubt, hygiene is taught, but only by those who are ill qualified to teach them. The one great drawback in the kind of health education that is now imparted is that the pupils are not enforced to put the theoretical knowledge they have obtained into practice. Neither the school authorities themselves observe the sanitary and hygienic rules which they preach to the pupils nor the pupils observe the tenets of hygiene which they learn in their schools.

In this connection it may be interesting to recall the observations made by Dr. G. W. N. Joseph, Medical Officer of Health, to the Warrington Education Committee in his Annual report, which clearly lays down the correct lines on which health education in schools should proceed. He states:—

"On questioning the children, even in the infant classes, one is struck at once by the fact that they all appear to be well grounded in the simple laws of healthy living. For instance, there is an immediate correct reply from each child as to the necessity for washing the hands before meals, general cleanliness and tidiness of person, the use of the pocket handkerchief, the value of fresh air, the placing of litter in proper receptacles and so forth. In fact, it is probable that the children possess more knowledge of these subjects than many of the parents. It is not the possession of knowledge, but the application of that knowledge and the cultivation of habits of healthy living that is important and one wonders to what extent facilities are provided for these children in their own homes, or to what extent they receive encouragement from their parents in practising what they have learnt in school. It is the formation of correct habits and not the mere knowledge that is so essential, otherwise the children of the present generation may grow up to be almost as careless in these matters as their forefathers". Dr. Joseph is preparing a special leaflet to be issued to parents, detailing some of the hygienic rules children have learnt in schools and requiring the co-operation of the parents to see that they are put into practice. Dr. W. M. Fraser, Medical Officer of Health in his report to the Hull Education Committee also speaks in a similar vein. He quotes Dr. Morrison who says 'that there is a tendency in many schools to neglect the teaching of hygiene by practice and to concentrate on the much less satisfactory method of teaching by theory.'

In the United States, the programme for health work in schools includes:—(1) Medical service and supervision, (2) Health education and (3) Physical education. The principal features of the school medical service are (1) health inspection (2) medical consultation (3) weighing and measuring (4) physical examination (5) correction of defects and follow up work (6) immunization (7) sanitary inspection (8) education (9) special health plans to meet special local needs. In the matter of Health Education, the school physician has the greatest share there. He organises special campaigns. He has got also to supervise the sanitary condition of the school building and environment, look to the water-supply and sewage disposal, sanitary equipment and the like. The School Physician, again, plays a prominent role in physical education programme. All individual corrective exercises should be given only at the suggestion and advice of a physician. The advice of the trained medical man should be followed absolutely in all such cases. He is the only man competent to pass judgment on the physical fitness of candidates for the various athletic teams sponsored by the schools.

India cuts a sorry figure when compared to U. S. A., in the matter of imparting health and physical education to school children and providing efficient and full-timed medical service for the preservation of their health and comforts. But India is not United States of America. It is only when India becomes autonomous, can she hope to launch such ambitious programmes and produce a manly and virile race.

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THE MEDICINAL VALUE OF ONIONS.

BY

DR. EDWARD PODOLSKY, M.D., *Brooklyn, New York.*

GARLIC and onions are two of the most flavorsome vegetables in possession of the human race to-day. When one thinks of one, the other somehow also comes to mind. It is also a well known fact that the people who like onions are also devotees of garlic, and quite often use them together in imparting flavor to the food they eat. Obversely, most generally, people to whom onions are repugnant can't stomach garlic. As a matter of fact, these persons who are so delicate and fastidious in their choice of foods are also in delicate health. The man or woman who has the desire and appetite to eat any and all food is the one whose health is in perfect condition.

Some peculiar prejudices have been connected with onions. The ancient Egyptians were forbidden to eat onions, garlic and leeks. Why, no one seems to know. As a matter of fact, the Egyptians didn't like quite a few things which are incomprehensible to us today. They were in the habit of sacrificing red-haired people to their gods. Such strange idiosyncracies usually go together.

While the Egyptians did'nt like onions, most of the other peoples of antiquity did. They enjoyed them both as a food and for their medicinal

virtues, particularly for affections of the kidneys and dropsies due to various causes. With the passing of the centuries serious attention was given to onions as a medicinal agent. As early as 1853, onions and a milk diet were believed by many physicians to be the best remedy for dropsy.

In 1863 a physician by the name of Trastown used to treat his patients who suffered from kidney disease on a milk and onion diet as the principal remedy. He reported quite a few cases in which the dropsy and albumin in the urine and even the fluid in the chest had cleared up under the onion-milk regimen.

In 1910 another physician, Mangour, saw a still more remarkable case of cirrhosis of the liver and dropsy clear up after three days of persistent onion-eating. Another doctor reported seeing a case of dropsy clear up after he had counselled his patient to concentrate on eating onions, as much as 15 to 20 each day. In order to get any appreciable results, onions must be taken in rather big doses.

In 1912 a French physician, Dalche, published a long and comprehensive article on the "onion cure." He reported many cases of patients who were benefitted in ridding them of their dropsy whom he had put on a strictly onion diet. Other French physicians followed Dalche's advice and began to give onions to their patients who suffered with kidney disease and noticed remarkable results. During the War, Leclerc had occasion to witness the remarkable effect of onions on soldiers who suffered from dropsical conditions associated with nephritis. He reported astonishingly good results in a Sengalese soldier in a rather advanced condition who benefitted very much from an onion diet.

The impression must not be gotten however that onions are good only in dropsical conditions. Onion juice has been known for many years to possess distinctly germicidal powers. Recently this was confirmed scientifically by two Italian physicians, E. Cuboni and C. Moriondi who used onion juice intravenously in guinea pigs. They injected the onion juice in doses of '1 of a cubic centimeter every three days, after the animals had been inoculated with the tubercle bacillus. It was found that the injections hindered the development of this dread disease in these experimental animals.

Onions have been used for many years as a recuperative in France. The famous onion soup is distinctly gratifying to all-night celebrators who have been indulging somewhat unwisely in alcoholic drinks. It seems to dispel mental foginess and bodily weariness, and is a very popular dish in the very early hours of the morning. There is scarcely a restaurant in France which does not serve it.

The onion is one of our most valuable vegetables. It contains 1·6% protein, ·3% fat, and 9·9% carbohydrates. Its fuel value per pound calories is very high, being 220. It is rich in essential minerals, containing calcium, magnesium, potassium, sodium, sulphur and iron in abundance. The onion, which has had a prominent place in the human dietary since the dawn of history, always was, and still is one of our most valuable of articles of food.

THE REAL CAUSES OF TUBERCULOSIS.

BY

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THE bacterial causation of tuberculosis is now common knowledge. Even before Robert Koch discovered the tubercle bacillus in 1882, both the doctor and the layman firmly believed that consumption was infectious and there was always the dread of 'catching' the infection from the consumptive. Till about 50 years ago it was not realised how highly prevalent tuberculous infection was in human society. The advanced conditions alone were diagnosed as consumption, and the disease was considered to be one of the most highly fatal of known diseases. Whenever a patient diagnosed as a consumptive recovered from his complaint, the conclusion drawn was that the original diagnosis must have been incorrect. Soon it became apparent to the doctors and to the pathologists that a number of patients suffering from definite signs and symptoms of tuberculosis made an apparent recovery and in persons dying from other causes than tuberculosis, it was very frequently seen during the postmortem examination that there were typical tuberculous lesions in the lung and other organs. It is now definitely known that the vast majority of human beings get infected in early life but recover from the infection before it becomes sufficiently advanced into active disease, making the patient feel ill. This means that tuberculosis is the most generally prevalent of infections in which recovery is the rule, because it is only a few that show the active signs of the disease necessitating systematic treatment. In India, for instance, probably 3 to 4 deaths per 1000 are from tuberculosis and 30 to 40 persons per 1000 living show the active signs and symptoms of some type of tuberculosis,though by bacteriological and postmortem evidence, it is now definitely known that perhaps over 900 persons per 1000 have been infected, and most of them show some mild lesions or other in the body due to tuberculous infection. In a few words, of 100 persons living, 90 are infected with tuberculosis, but only 3 or 4 show the actual and active disease, less than ½ per cent. dying of the disease. Put into other words, tuberculosis is now known to be one of the most curable of diseases, in which recovery is the rule and death the exception.

If tuberculous infection was the sole factor in the causation of consumption, most human beings would have suffered from and succumbed to the disease. It is evident that there are other factors which play a very important part in the causation of the disease.

The most important of these factors is poverty with its concomitant conditions leading to malnutrition and loss of resistance to tuberculosis. Tuberculosis is predominantly a nutritional disease. The better the protein and vitamine content of the diet, the greater the resistance of the body to the disease. The poorer the food in protein and vitamines, the greater the vulner-

ability to tuberculosis. The richer a country and the better the food supply, the less the incidence and mortality from tuberculosis. England, America and Australia with their rich natural and other resources have a low mortality from tuberculosis, whilst countries like India, and China,where the population is too poor to afford a nourishing and well-balanced diet have a high mortality from tuberculosis. The struggle for existence under present condition in India is great and both the quality and quantity of food of the general population are deficient. The population is quite out of proportion to the resources of the country, the general vitality is low and the prevalence of and mortality from consumption is consequently high.

The second important cause of the high and increasing prevalence of tuberculosis is the urbanization and industrial development in the country, especially in the cities and towns, with the resultant overcrowding and strain of life. A much larger number of the youth of the country, bereft of a living in the rural areas are emmigrating into towns for their livelihood by working in the mills, factories and other institutions in the urban areas. These have necessarily to live amidst uncongenial housing conditions, and deprived of the comforts and conveniences and of the nourishing food which they could command more easily in their rural homes. Housing conditions in the towns are not at present suitable and healthy and fresh. Vitaminous food material like vegetables, pasture-fed milk and its products are more difficult to get. House rent takes up a good portion of the monthly earnings and the physical strain involved in travelling distances to go to the place of work, with untimely and hurried meals adds to the fall in the general vitality.

In a country like India, there are various other disabilities, social, economic and otherwise, which sap the vitality of the masses rendering them an easy prey to tuberculosis, such for instance as the various debilitating diseases like malaria & dysentery which weaken the system; the joint family system which burdens the bread-winner with the responsibility of providing for large unwieldy families in the small, confined space of the family-house; early marriage, early motherhood and repeated pregnancies at an early age with the resultant strain on the body of the mother and on the family resources, and the insufficient attention to the health and welfare of the children; the purdah system which deprives the women of the benefits of sunlight, fresh air and bodily exercise; the defective hygienic conditions in the schools and factories with their deleterious effect on the health of the children and the workers; and above all, the illiteracy and ignorance of the masses which is the direct cause of the insanitary and unhygienic living that constitutes the basis of the spread of tuberculosis.

The true and direct cause of tuberculosis can therefore be said to be low bodily vitality, the factor of infection playing quite a minor part. Poverty and ignorance constitute the main causes of the low vitality and of the high degree of prevalence of the disease in the country. The remedy therefore lies in mass education and the improvement of the economic conditions of the country by the development of its resources, agricultural, industrial, and otherwise: enabling the individual by better nourishment to raise the level of his vitality which is now very low as a result of poverty and semi-starvation, not to mention the depressing effect of the host of tropical diseases that constantly tend to enervate the system and lower its resistance to tuberculosis.

"SOME HEALTH LESSONS FROM AN ANCIENT HINDU SCRIPTURE".

PART II.

BY

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IT was pointed out in the first part of this article (vide "Health" Jan. 1932) that very valuable health lessons particularly adapted to rural conditions, could be learnt from an ancient Hindu Scripture; and an attempt was also made to show that some lessons concerning the time of rising from bed and the answering of calls of Nature etc., contained in that Scripture had a substantial basis of our modern Science of "Hygiene". Let us now continue our studies further, and see what more we can learn from the same scripture.

After answering the calls of Nature, it is necessary that one should carry out a thorough ablution, for the sake of cleanliness, and for avoiding auto-infection. Mere washing with water is not considered enough. The smells of Indol, Hydrogen sulphide and other foul emanations from one's bowels, are rather difficult to get rid of, by mere washing with water; and as the hand (left) has to be used for ablution purposes, after answering calls of Nature, it is essential, that some substance which will act as a cleanser and a deodoriser, should be used. And this cleansing agent, should be within easy reach. Obviously, soap and other costly cleansers are out of the question, as every one cannot afford to purchase them. "Mother Earth" can be had everywhere and not a pie need be spent to secure this cleansing agent. Hence, mud or clay has been advised to be used for cleansing one's hands and the excretory orifices. That mud or clay is an efficient deodoriser, is beyond question. Were it not so, then, we would not be able to ward off foul emanations from putrefying organic matter, by burying it under the ground.

Clay is utilised by our modern Bacteriologists to absorb (to hold in its interstices), poisons secreted or excreted by germs; and in the F. M. S. Medical Research Institute at Kuala-lumpur, clay has been utilised in the manufacture of Vitamine B, as it (clay) has this property of adsorption.

It is a matter of common knowledge that we are daily excreting millions of germs and eggs of worms in our stools, some of which may be harm-

ful to us, if they can re-enter our system through the mouth or through the skin, or through any other route. If we fail to clean our hands effectively, after ablution, we will ourselves be carrying on our finger-tips and underneath our finger nails, numerous germs and eggs of worms, which can re-enter our system through the mouth when we take food with such hands. And this process of re-infection is called " Auto-infection ", (self-infection).

Ultra-modern young men, votaries of toilet soaps and powder puffs may laugh at the idea of using clay for cleansing purposes. But, let them remember that in " Modern " Sweden and " Forward " Germany, clay is utilised by beauty-specialists, to beautify the skin and to remove off blemishes in the complexion. They apply mud-baths using a kind of clay for the purpose. And mud-baths are even reported to be used in some of the Hospitals of Sweden in the treatment of inflammations of the skin, and certain other inflammatory disorders of the internal organs etc.

Any kind of " Earth," it must be remembered, is *not* recommended in the scripture under study. Only clay or clean mud from properly maintained river banks, has to be used. If such clay or mud is not available, soft mud from an un-contaminated plot of ground can be used. Sand, fine gravel, alluivium or any gritty kind of earth, should not be used and is strictly forbidden. The word (మృల్లోష్టేన) used in the text means—" With a lump of clay," మృత్ always signifying something soft (*i. e.*,) of the nature of clay or clay itself. Then follow the rules which prescribe very precisely how many times each excretory orifice and the extremetics have to be cleaned with mud application and washing thereafter.

Even this mud application and washing have to be carried out at such a place, as is far removed from any water-source ; and the required water should be first brought and kept in some utensil. Contamination of the water-sources, is strictly prohibited by the following words in the text. "పాత్రస్థోదకేన మృల్లేపనం ప్రక్షాళనం కార్యం, నదీషు న" which, when translated mean—" With the water contained in an utensil,mud application and washing have to be effected ; not in any river or any other water-source ". Here in this connection, a word to my South Indian readers :—If, in spite of such clear injunctions, you go on contaminating all sources of water-supply by freely performing ablutions in such water-sources, it is no wonder that Hookworm and Cholera never leave you. They are " pleased " to remain with you always.

After passing urine, one is required to apply mud or clay once to the urethral orifice, thrice to the hands, once to each buttock, and once to each foot. As for the cleansing after defæcation " Yama " (God of death) lays down that mud or clay has to be applied twice to the urethral orifice, five times to the anal orifice, ten times to each hand, seven times to each buttock and nine times to each foot. The mud or clay mixed with water and made into a paste has to be applied right up to the ankle and up to the wrists. But while washing off with water, it is laid down that one has to wash right up to the knees and elbows.

After sexual intercourse one has to carry out this cleansing process applying mud twice as many times as has been laid down as after passing urine. For a householder, this much of cleansing is considered enough. But, for a bachelor (Brahmachari) twice the number of times stated before, this mud application has to be done ; for a hermit (Vana-Prastha), thrice, and for an ascetic (Sanyasi), four-times. At nights, half the number of times stated above is considered enough. All this mud-cleansing process has to be carried out in full, while one is at home. If in an adjoining village, half the number of times is enough. If in a town a fourth is all that is enjoined. (Presumably the seer that wrote this Sadachara Smrithi knew that people would congregate in towns where it would not be possible for any one to carry out in full all the Shastraic injunctions.) While one is travelling to a distant place, he or she is not expected to carry out this mud-cleansing process. A very wise exception indeed ! This last exception has been laid down with a view to prevent the acquirement of soil-borne infections such as Hookworm, Round-worm etc., from an unknown and probably contaminated plot of ground.

The utensils used for carrying out this mud-cleansing, whether of copper or of brass, have to be thoroughly cleaned with tamarind and ash, (wood ash), until they become clean and bright. Soon after finishing this mud-cleansing process, it is urged that one should wash his or her mouth by rinsing with clean water, at least 8 times. After passing urine or after returning home from outside, this rinsing the mouth with clean water should be done at least 4 times. After taking meals, the mouth should be rinsed, at least 12 times, and after sexual intercourse, at least 16 times.

These are meant for a house-holder (Grihastha). For a bachelor (Brahmachari) twice the number of times mentioned above, is prescribed ; for a hermit (Vana-prastha) thrice, for an ascetic (Sanyasi) four times the number stated above, are urged. Widows are considered as ascetics and are required to follow the injunctions laid down for the latter, in the matter of cleanliness.

Cleaning of teeth:—(With) కంటక thorny క్షీరవృక్ష milky trees (as for example) అపామార్గస్యకాష్ఠైః twigs of Apa-marga (ఉత్తరేణి in Telugu & Canarese), (అఘాడా Aghada in Mahrathi & Hindi) or like plants దంతధావనం కార్యం cleaning of the teeth should be done. It has to be noted here that only twigs of milky or thorny trees are recommended for use of tooth-brushes. This is because such trees are known to have astringent juices in their barks or leaves or even in their saps. Apa-marga is specially mentioned because the sticks cut from the stem of this small herb which grows all over the tropics, are found to exude an astringent & aromatic, antiseptic juice which deodorises and cleanses the teeth & strengthens the gums. Banian twigs (ஆலங் குச்சி) or the twigs cut from the ærials (ஆலம் விழுது), twigs of Babul (Acacia) (கருவேல் or வெள்வேல்) & twigs of Neem (வேம்பு) are also recommended. If twigs of these trees are not available,

atleast their leaves should be used. If the leaves are also not available, then, with the middle finger of the righthand, the gums and the teeth are to be thoroughly rubbed and massaged; and the mouth rinsed with clean water, atleast twelve times.

If, in spite of such clear advice, our S. Indian brethren use wood ash, burnt husk (உமிக்கரி), cow-dung ash (காய்ந்த மாட்டுச் சாம்பல்), brick powder, alluvium (வண்டல்) or tobacco powder and paste, and spoil their gums and thus pave the way for Pyorrhœa Alveolaris, and ultimately lose their teeth at a very early age, who is to blame? Certainly, not the ancient Hindu scriptures. Even the Vaidics who swear by such Shastras honour them (the Shastras) more by breach than by observance; and the result is a heavy bill of ill-health and disabilities. Scrupulous regard for water-sources has been enforced; but what do we find nowadays? Universal pollution of the water-sources is a common occurrence in South India. And it is no wonder therefore that the mortality from water-borne diseases and morbidity from water and soil-borne infections claim a heavy toll in South India.

Will the educated or atleast the English educated South Indians, rise to the occasion and lead the uninitiated into paths of health and strength? One wishes they had done so.

SOME THOUGHTS OF A MATERNITY AND CHILD WELFARE WORKER.

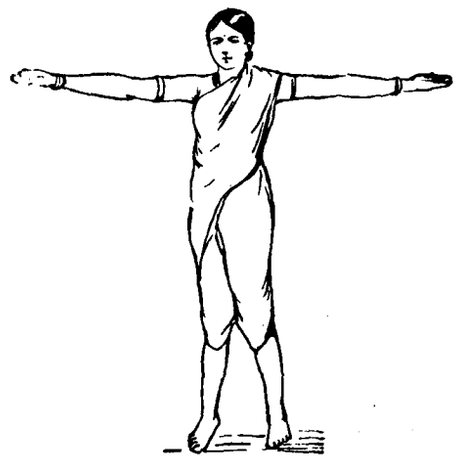
BY

Dr. (Mrs.) Anna Thomas. *Karachi.*

As one of the very humble workers in the cause of maternity and child-welfare, the following thoughts have occurred to me as a result of my intimate connection with the movement for the last 15 years. Thanks to the efforts of the All-India Chelmsford Maternity and Child-welfare League, maternity and child-welfare movement is spreading in India. It began with the cities at first and is now spreading in the mofussils also and the District Boards and other local bodies are working up the scheme in their respective areas. The importance and the need of this work have been sufficiently emphasised in the past and therefore we have to devote our attention to find out the best method of developing the scheme. It must be admitted that we copied this scheme from the west and the pioneers in organising this work were westerners. Therefore without properly understanding the local conditions, those western workers have transplanted in India a scheme of work which was found suitable to the western conditions. This mistake still continues.

Present method.

There are two different branches at present, namely the child-welfare scheme and the maternal welfare scheme. The child-welfare scheme is worked up by opening infant-welfare centres and the other scheme is worked up by either attaching a maternal welfare centre to it or opening a separate maternal welfare centre. In the infant-welfare centres, the children are bathed, clothed, treated, nursed and kept during the day in creches These day-creches are of great service in the industrial areas where the mothers go to work in factories leaving their infants to the charge of creche nurses. In places where there are no creches, the babies are bathed, treated for ordinary ills such as itches etc., and milk food is given and sent back home immediately. In some places a milk depot alone is maintained and from where the babies are given free milk. This work is done now either directly by the Municipal staff or by a Maternity and Child-welfare Association to which the Government and the local bodies give grants and the public subscribe. The maternal welfare centres deal with the ante-natal, neo-natal, and post-natal problems. In very few places only, this is being done completely. Generally, a midwife is attached to the centre, and she registers pregnant women and conducts their deliveries when required by the public. In few places, regular staff of a Lady Doctor and Lady Health Visitors are appointed, and the Lady Health visitors visit the pregnant women in their houses, educate them on ante-natal precautions and bring to the notice of the Lady Doctor the cases that require expert attention and advice. In some places the Lady Health Visitors keep in touch with the Dhais and supervise their cases and help them.



PELVIS TURNING.

Stand with feet straight about 9 inches apart, knees locked, arms extended stiffly from the shoulders, palms upward, as in illustration; shoulders pressed well back. Half-turn pelvis, so that the left hip comes forward and right hip goes backward; reverse this half-turning movement; then continue the half-turn movement left, right, left, right, etc., twenty to thirty times. Keep knees locked and legs well braced; head well up. Shoulders should not be moved; this is only a pelvis-turning movement. DON'T HOLD THE BREATH.

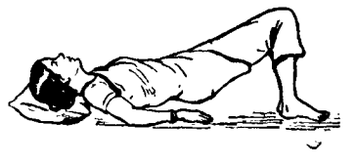
NOTE: *Omit this exercise during menstruation and during later part of pregnancy.*

Defects in the present system.

It is true that so long as India is poor and her grinding poverty is the root cause of all her social and economic ills, it is very difficult to solve her problem of health. But we cannot wait to tackle this problem till her economic problem is solved, and hence the welfare centres have been opened. Now, we have to see how far the problem has been successfully dealt with by these centres and what are the best methods of developing the same. If we could study the history of most of the centres in India, we have to admit that they, more or less, have been started as a sort of hobby by the wife of a Collector or other important local government official. When an official's wife starts and works for public

benefit, some of the non-officials who care for the patronage of her husband do a lot to help them in their hobbies. Till they get their patronage or till the particular lady remains in the locality, these gentlemen support the institution and when the lady leaves the station, the institution gradually dies out or leads a miserable existence, except in very rare cases. This is due to the fact that the public do not take any interest in such matters and the so-called leaders who take any interest do so to please some one and that they themselves have no sincere or personal interest in it. Therefore, a good deal remains to be done in creating a healthy public opinion in favour of the scheme. Municipal and other local bodies have to make this part of their civic duties in rousing public interest and organising maternity and child welfare work in their areas. The mothers and children are a great national asset. No civic administration can neglect them. In a council meeting of a certain Municipal Council, it is reported that between the two needs of that town, namely a Maternity Ward and a Municipal Office, the council decided by votes to spend the surplus cash of the year to build an office inspite of great public agitation to build a Maternity Ward which has been a long-felt need of that town. The councillors wanted a comfortable place for them to meet and deliberate, and they have left the poor pregnant women of their charge to their miserable fate. This is the specimen of civic responsibility in some places. I have already said that the creches are of great service to the poor working mothers. But I have noticed that in some places, the children are brought there in their dirty rags and though they are bathed, changed, fed and looked after well during the day time, in the evening they are sent back home in their dirty rags and the poor children have again to spend the night in their dirty ill-ventilated hovels amidst smoke and congestion. No effort is being done to educate the ignorant poor mothers of these unfortunate children on matters concerning the hygiene and health of their children and themselves. As a rule, the sanitation of the residential quarters of the poor is very dirty and neglected. Therefore the bathing of their children and looking after them during the day serve more for publishing a report or for the visit of the distinguished visitors who may enter a word of praise in the book regarding the work of Mrs. Collector or Mr. Municipal Chairman. I am not be-littling the work done, but I want to impress the inadequacy of what is being done. In a city of 2 or 3 lakhs of people and 50,000 babies, one or two or even three centres to look after 200 or 300 children are maintained, while the rest of the children are left to their fates in dirt, squalor and starvation. Since the work is now being done as a matter of fashion, sufficient efforts are not being made to reach a majority of the really poor and deserving infants. For the sake of reports or to please the whims and fancies of the wife of an official, some centres are opened and maintained. Unless and until the interest of the masses is properly roused, it is not possible to reach all the children of any locality. Every welfare centre should be used as a research station to study the

various aspects of the problem and the result of that study should be used to develop the work suitable to local needs and conditions. The American welfare socities are using their centres for research and study of the problem itself and their publication on every aspect of it has been found to be a good guide for other workers. I have attempted to get new informations and data from many centres without any success. This is due to the present strereo-typed method of work and the indifference of the workers. A real welfare centre ought to possess the life-history of the children and mothers who pass through their centres. The mothers give birth to the children, and children grow to manhood or womanhood and become the fathers or mothers of the nation. If a system of continued ante-natal, neo-natal, and post-natal work as far as the mothers are concerned, and a regular record of a child's history from the creches, pre-school nurseries, primary schools, high schools and colleges could be maintained, we can study the progress of the work, and can apply our knowledge to the best advantage. The maternal welfare centre is another important aspect of this work. As maternal mortality and morbidity are very high, the great need of this work is felt in every place. In villages, where there are no facilities for securing skilled help at the time of delivery or advice during pregnancy, the need is greater, because the poor pregnant women there, are at the mercy of the illiterate, ignorant and superstitious Dhai. At present in the cities, this work is done in two ways, namely by attracting the pregnant women to the centres and clinics and by taking the work itself to the women in their own homes, by the lady health visitors who visit them. To educate the pregnant women about the ante-natal precautions they have to observe during the period of pregnancy, is the most important work of a lady health visitor. Her work is more of preventive than curative.



HAMMOCK SWING.

This is Exercise 1 in 'THE CULTURE OF THE ABDOMEN', and is described as follows:

Place a folded blanket on the floor. Lie flat on back on the blanket. Bend both knees, soles of feet on the floor; feet about 12 inches apart. It is advisable for a stout person to put a small pillow under the head (not under shoulders) to prevent rush of blood to head. Place both hands flat on floor. Now raise the hips from floor about two inches. The body-weight will then rest on the head, shoulders and feet. Vigorously swing the body from side to side, keeping the shoulders flat on the floor, so as to tilt each hip upwards alternately.

Repeat twenty times—ten each side. Lower hips to floor. Rest for five seconds.

This constitutes one complete cycle.

Raise again, and continue six cycles of twenty beats each; that is 120 swings with six rests.

Nature had provided many danger signals during the period of pregnancy, and if simple advantage of such signals could be taken, many a danger could be avoided. Due to ignorance and indifference, many a poor woman neglects herself and when complications set in, it may be too late to save herself or her child or both. Even in cities where there are several scientific agencies at work, we find from the statistics that

four-fifths of the delivery cases are being conducted by un-skilled Dhais. In the villages of India, more than 99 per cent. are handled by Dhais. Surely the "Harvest is great and the labourers are few". It is not possible to find skilled workers for every part of this vast continent of villages.

The problem of the Dhai.

The Dhai is a very important factor to be considered in this work. She is the friend,philosopher and guide of the masses and her hold on the people in matters regarding child-birth and pregnancy is very great indeed. Therefore the best and practical method is to improve the Dhai and teach her to do her work with sufficient antiseptic precautions. An attempt is now being done in some places to train the Dhai, but it is still inadequate. I had the privilege of training two batches of 90 indigenous Dhais when I was the Superintendent of maternity and child-welfare work in Madura Municipality and I found it very encouraging. I wish every local body will take this scheme in hand at once and spread the villages with trained Dhais and prohibit the untrained Dhais from practising. Out of a sense of decency, I am unable to state here the very inhuman, and dirty practices of the Dhais and what misery they bring to ignorant, poor and innocent mothers even in cities. We cannot replace the Dhai, but we can improve her and this is a great problem which needs immediate attention of all concerned.

The need for propaganda.

So long as illiteracy is rampant in India and superstition reigns supreme, it is difficult to approach the masses. And yet it is not impossible to rouse them. Systematic propaganda is neccessary. In America there is a society which finds out every pregnant woman of their locality and sends them a monthly letter from the time of conception till the time of delivery and helps every pregnant woman to conduct herself scientifically during the period. If our pregnant women could be handled carefully from the early period of conception, they could be largely saved from the incidence of abortion, still-births, eclampsia, and other complications of pregnancy which are very common in our country.

A change of method is necessary.

I have said elsewhere that we have been blindly following the western method. India is a country with its peculiar social and economic problems and climatic conditions. We have to adopt a method suitable to our local conditions. A European wife of a District Collector cannot understand our local conditions and she perhaps judges the conditions from what she sees of the children of her low caste menial servants and their children. She concludes every Indian child is kept without bath and starts a bathing centre for children. We know that even the average poor mother of India bathes her children at least once in every day, but what she is unable to give her children is timely and proper food. She is ignorant of even ordinary laws of health herself and feeds the child whenever it cries, allows it to play in the gutter and inhale the foul air of the drains. The other day Dr. Lakshmanaswamy Mudaliar of

Madras in a lecture is reported to have said as follows: "In spite of the growth of the dimensions of the child-welfare work of the Madras city, the infant-mortality rate of the city had not decreased materially." Madras has been the pioneer of this work and yet this is the result and I would venture to remark that it is due to the transplanting of the western system of work. Nowhere in India, the welfare centres are being used as research stations and except the ordinary statistical information, no new information for the guidance of others can be obtained from any centre.

Another mistake committed in some place is, that the scheme is worked up for rich and poor alike. The result is the poor are neglected and the rich are benefitted. This is an injustice to the private medical practitioners who have to depend on the rich for patronage and the rich will not have them because they get services free from the welfare workers, and it is an injustice to the poor because the rich through their influence and position get the full advantage for them from the workers. Influence and position get the full advantage for them from the workers and allow the poor to be neglected. A clash between the private medical practitioner and the welfare worker should be avoided under all circumstances and all possible method of co-operation between both should be established.

General Remarks.

In our vast country, now the work is being done only in a few places. In Native States, only very little is being done. There are States which spend a lot for Polo, Motor Cars, Hunting and other luxuries, but do not spend even one per cent. of their income for the sake of public health. It is said that Travancore is spending the highest percentage on tax in the whole world for education, and yet there is not yet an organised maternity and child welfare scheme worked up there. It is hoped that one of the new reforms which the new Maharaja will be introducing will be the introduction of this work. Under the enlightened inspiration of the royal mother—the junior Maharani who has seen the benefits of such work in many cities in India and abroad, may we hope, this long-felt need in that progressive State will be met and other States will follow suit. In British India, Madras Presidency has already appointed a Lady Doctor as Assistant Director of Public Health in maternity and Child welfare. Though every Provincial Government is straining every nerve to effect retrenchment, it must be admitted that this is a matter that no wise statesman can ignore or delay. Appalling maternal mortality and infantile mortality bring gigantic economic loss to the state and it is the sacred duty of every statesman to prevent it, especially when it is preventable. Not to prevent that can be prevented is a sin and those who do not prevent that can be prevented stand condemned before God and the bar of Humanity.

THE USE OF OILS, GHEE AND HONEY IN DOMESTIC INDIAN MEDICINE.

BY

V. K. VENKATASWAMI, M.B.B.S., F.I.M.

THE use of oils, ghee and honey, in the daily diet and domestic remedies is well-known to everybody in India. By oils are meant generally gingely oil and castor oil. In some places however, mustard oil and cocoanut oil are much used. Ghee refers to that prepared from cow's or buffalo's butter. Honey is the pure product got from a honey-comb or bee-hive. Before entering the subject proper, the readers should understand clearly the reason why, of all articles of dietetic and medicinal value, these three should have been chosen for a combined consideration.

Let us first consider the use of oils and ghee. In Sanscrit *tailam* is the term applied to oils and *ghritam* to ghee. They belong to a group of articles called *snehanam*. Snehanam literally means friendship. Like unto a friend, these things act upon the body. The other two members of the group are *Vasa i.e.*, fat extracted from meat and *majja* or bone-marrow. According to modern medical views, all these substances will be considered merely as so many varieties of fats. In Indian medicine, however, special virtues are attributed and indications for use given with regard to each class of *snehanam*. Oils are used both externally and internally. Ghee enters mostly into internal remedies though in some cases it is also employed for external use.

Anointing the body with oil and taking a hot bath afterwards using some powders to get rid of the grease, is a time-honoured Indian custom followed by every caste and creed. From the tenth day of the child's birth, oil-bath is given daily for the first year of its life. During the second year, it is employed on alternate days or once in three days. The oil used is that extracted from pure gingely seeds. Sometimes the seeds are divested of their skin before expression, to make the oil clear, colourless and non-irritating.

In Ayurvedic books much is written about the value of oil-baths. Even for adults, its daily use is advocated. Though not daily, most people in our country are in the habit of taking it twice or once a week. Anointing oil to the top of the head and to the sole of the foot is considered as giving strength to the nerves of vision. Besides this, the general effects of an oil-bath are as follows. The skin is kept soft, supple and free from cutaneous diseases owing to the smoothening properties of the oil and the cleansing effects of the bath. In virtue of the oil acting as a gentle counter-irritant and mild stimulant to the whole of the body surface, the circulation of the fluids in the system is rendered free and proper excretion of all waste matter as sweat, urine and faeces takes place. By these, the nervous, muscular, and other tissues get purified, body feels lighter, mind becomes clear and there is a feeling of general well-being in the system. This is

manifested by the person getting a refreshing sleep at night. Continued practice of this measure in one's life time, prevents the early onset of senility. This is, so to say, a method of rejuvenation that can be employed by all rich or poor from childhood onwards, especially in a tropical country like India.

Now about the use of oils internally. The extensive use of gingely oil and in some places cocoanut oil for cooking purposes need not be mentioned here. We shall first take up the periodical use of castor oil. Every Indian child from the first few days of its birth is freely given castor oil in small doses. Up to the end of the first year it is used daily. Thereafter it is employed twice a week; slowly the frequency is lessened so that when adult life is reached, it is taken two or three times a year.

Ghee is an important source of animal food to all vegetarians in India. It is an indispensable daily article of diet. It is considered to be a specific diet for the brain and nerves. Ancient medical books speak very highly of old ghee being as very useful in promoting healing of ulcers, wounds etc. Even now some family physicians in the west-coast keep in their houses pots of ghee handed down from generation to generation. Medicated ghees are much used as tonics and blood-purifiers.

Honey is mostly used for medicinal purposes. It is a common vehicle for administering other medicines. Externally it is dropped into the eye as a general stimulant in cases of fainting and sudden loss of consciousness. Equal parts of honey and water are boiled together and given as a nutritive and medicinal drink in all febrile conditions. This is contained in all confections called leghiums used in every house-hold to improve appetite and give a general tone to the body.

SKIN SWEATING AND MUSCLE SWEATING.

BY

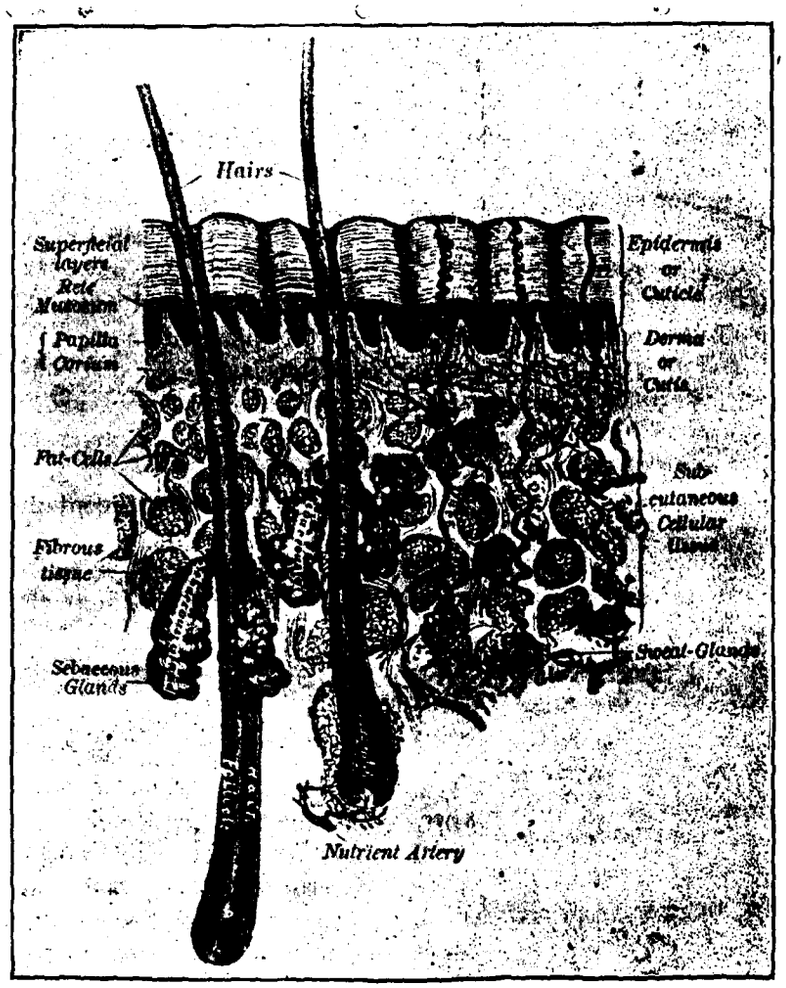
DR. FERNAND LAGRANGE

THE human body is a factory of poisons. This truth has been brought out by the recent progress in chemistry. The works of Professor A. Gautier, notably leave no doubt on this subject. If we would live without being troubled by all the toxic substances, *ptomaines* and *leucomaines*, which are formed incessantly in us in the chemical acts which result from life, the organs intended to rid us of them must be active in proportion to their formation.

The skin is one of the most important of all the excretory organs, by the functioning of which we rid ourselves of these toxic products. Through the innumerable pores by which the surface is perforated, it lets pass not only the liquids which constitute perspiration, but gaseous products, some of which are still unknown in their composition and their chemical properties, and the injurious influence of which is definite if they stay too long in the blood. One of the most useful results of physical exercise is the functioning of the skin.

From the remotest times, the necessity of making the skin function active-

ly has been known. Baths, sweats and frictions held a large place in the hygiene of the Greeks and Romans. To-day, it is interesting to note that baths of all forms are most in vogue with the people of the North. The Russians and Swedes have establishments for baths and sweats which, compared with our most beautiful ones, seem truly miserable. The bath in cold countries is not a practice of luxury. In Stockholm, during the rigorous winter season, all of the working population frequent the baths regularly. And throughout Sweden, the bath is considered so necessary as a hygienic practice, that one day of each week, the great pools of the bathing establishments are reserved for the working people, with a reduction in price which suits the smallest purse.



A magnified section of the Skin.

The need of functioning of the skin is especially felt in cold countries, where perspiration is not produced spontaneously, as in warmer climates.

The purpose of the bath from a hygienic point of view is to cleanse the skin, that is, to carry away the uncleanliness which obstructs the millions of little orifices called "pores," through which escape the liquid and gaseous substances of which the human organism has need to clear itself every instant.

But cleanliness is but half of the job. It is not sufficient to open the door of escape for these substances which one wishes to eliminate. A vehicle is needed to carry them away. This vehicle is perspiration. The insufficiency of the bath as a hygienic means is demonstrated by this well-known fact that certain characteristic odors due to emanations of the skin in persons who live too sedentary a life, persist notwithstanding the most minute care in cleanliness, and disappear under the influence of repeated sweating. Sweating is even, in certain cases, a natural means which replaces the bath, if not from the exterior cleanliness point of view, atleast from the hygienic point of view. In fact, it is well known what health is possessed by country people, with whom the bath is often little honored. With the peasant, the perspiration of each day cleanses not only the surface of the body but the internal organs, in carrying out from the blood stream the residues of the molecular changes, the impure wastes of nutrition, against mal-odorous embarrassment from which the most powerful soaps will not save the elegant person who does not perspire.

A fact of common observation can make us understand the hygienic importance of sweat; it is the differences shown in the liquid of cutaneous perspiration of an animal that has lost its habit of work and of one that is accustomed to work each day. The sweat of an animal habitually inactive is thick and charged with solid residues; on the contrary, it is clear and aqueous, in one whose skin functions every day, according to its work. I do not know that anyone has made a comparative chemical analysis of the sudoral liquid of two animals, one of which worked each day and perspired, and the other of which rested each day, from enforced repose. But all men who manage horses know that the "trained horse," for example, has clear and limpid perspiration, while in one that has for a long time been kept in the stable, with less work, the skin is covered with a white, soapy liquid resembling foam. This difference in aspect and the consistency testifies that in the inactive animal the liquid excreted is surcharged with organic products which thicken it: whereas, these products having been already eliminated in large part by the daily sweat in the trained animal, are found in much less quantity in the secretions of its skin.

Nothing is better known than the happy effects of sweats in the beginning of maladies. And one cannot comprehend how the sweat can moderate different affections which threaten the lungs, the bronchial tubes, the intestine, if it is not admitted that it carries outside of the body many of the injurious principles of which we do not yet know the nature and the exact chemical composition, but of which we cannot deny the existence and the pathological effects.

It is possible to stimulate perspiration by artificial means, such as heat, drinks, sweating remedies, or to have recourse to the natural means par excellence, which is exercise. But perspiration through exercise must be preferred to all others, when the state of the subject permits it to be taken. We lack, it is true, exact scientific data to determine strictly the difference in chemical composition which distinguishes the perspiration induced by the sweating-room from that which results from muscular work, but the facts observed demonstrate that the cleanliness due to perspiration from work is more complete than that which is produced artificially.....

It might be said, to strengthen the picture, that the hot bath would make the skin sweat, and that muscular work would *make the muscles sweat.* This expression, a little broad, would be proper at least to represent a real fact, viz., that among the chemical compounds eliminated in perspiration, there are some that are analogous in diseased muscles. In certain forms of painful rheumatism, the living tissues and notably the muscles, are impregnated with lactic acid, the product of incomplete combustion which is formed under the influence of various morbid states, such as rheumatism and gout. Now the perspiration is in part composed of lactic acid, and it is well known that exercise taken until perspiration is produced is the best remedy for painful rheumatism.

"When an old horse limps," say experienced horsemen, "he is made to go very fast." And it is often observed, indeed, that with the first sweat, the lameness disappears in old animals, because often the pain that made the lameness has its seat in muscles impregnated with lactic acid under a rheumatismal influence. And the perspiration caused by forcing the animal eliminates the excess of lactic acid which hampers the action of the muscles. It is the same with many rheumatics whose pains disappear as soon as the body is sufficiently "heated."

It would be an error, then, to say as a known fact that an exercise moderate enough to induce some tendency toward perspiration is suffcient. To obtain the true hygienic effects of exercise, the adult must always, except in particular cases, continue the muscular work until free perspiration is produced.

Let us note, then, that perspiration in exercise is more necessary to the adult than to the child. Profuse sweating could be, in young subjects, a cause of exhaustion in causing a loss of weight, a loss of living material that the child has need to use for growth of the body. With the adult, on the contrary, the loss is nearly always useful in order to restore the equilibrium of the organic budget which too often inclines toward the side of receipts, on account of our habits of over-eating.

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