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EDITORIAL

Physical Fitness and Military Service

THE serious discontent and the long standing grievance of people of some parts of India against the Government policy of favouring certain classes only for recruitment to the army have been allayed a little by the recent announcement of His Excellency the Commander-in-chief in the Council of State, who said that recruitment to the army would be shared proportionately by all parts and classes of India and would not be confined to a few classes. This is indeed a welcome change in the policy of the Government. But the full benefit of this change can be achieved only when the people are found physically fit for selection. That throws a heavy responsibility on the people themselves. They must be able to supply young men of the required physical standard—men who are strong and well-built and who can withstand the rigours of a modern warfare. We find that one of the reasons for rejection of recruits to the army is that

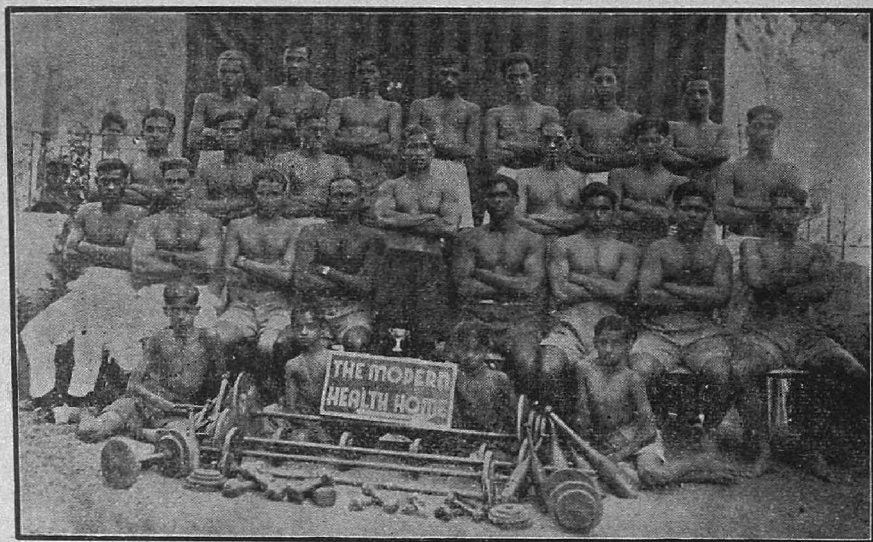
our young men are physically much below the standard. Another reason is that they are found to have serious physical defects or impairments which disqualify them for physical exertion. So this serves as an index to the general physical state of the population, especially of the students and adults.

Now, the question naturally arises as to who is responsible for this state of affairs. Honestly, we cannot hide our faults and absolve ourselves of all responsibilities. We do not pay as much attention to the physical development of our young men as we do to their mental equipment. Our students concentrate more on their studies to the detriment of their physical welfare. Very often, parents, being ignorant of the fact that a good physique is as great an asset as success in an examination, discourage their boys from taking an active part in games and exercises. They do not know the significance of the old

saying "All work and no play makes Jack a dull boy". It should therefore be impressed in their minds that a mere degree without good physical fitness will not serve their boys in the long run. They should be told that the greatest brains inhabit a healthy body, and the best athletes usually have a first class brain.

Some people are oblivious of the fact that, sooner or later, they will be called upon to witness what is now

We all know that 'just as the twig is bent, so is the tree inclined'. Poor health in the adolescent and adult life, will cause serious physical impairments, which will pass on from generation to generation, until at last the whole community and the nation deteriorate and decay. Unless we bestir ourselves now, irreparable harm may be done to the health and physical fitness of the future generation as a whole. How many fatalities



The members of the Modern Health Home, started recently in Matunga, Bombay, by Mr. T. V. Narayan (standing in the first row at the centre) the founder and late Physical Director of the Matunga Athletic Club.

taking place at a comfortable distance. It is unwise to shut our eyes against the forces of nature. Events are moving on so rapidly that on any day, we may be called upon to take the responsibility of defending our country against an outside aggressor. We must, therefore, be well prepared. We must have a strong army, consisting of smart and will-built young men to defend our motherland.

We can view this question from another angle also. The young men of to-day are the fathers of to-morrow.

we see among young men who are just out of their schools and colleges, falling an easy prey to tuberculosis or some other dreadful diseases, all on account of their poor physique! The poor father stakes his all for the education of his son, who, on the eve of his brilliant success, falls a victim to a terrible disease from the clutches of which, he is unable to extricate himself due to his poor health. If he or his parents had bestowed a little care towards his physical development, this catastrophe could have been avoided.

Another fault is in our diet. This problem is a knotty one and has vexed many a research worker. Galen remarked "as many diseases as men"; with equal truth, we may say "as many diets as men." The nutrition problem has to be adopted to the varying geographical, economic and social conditions in the different Provinces and States of India. Malnutrition, resulting from ignorance, poverty and financial stringency, has been the cause of many preventible diseases. It was reported to the Government of India that the average duration of life in India was about half what it ought to be and that the increasing prevalence of tuberculosis and other diseases which are associated with malnutrition suggested that the conditions of life of the people were steadily deteriorating; xerophthalmia, rickets, osteomalacia, avitaminosis, stomatitis, are some of the deficiency diseases that were rampant in this country. The diet of a South Indian is much inferior to that of a North Indian and so some of the diseases mentioned above cause great havoc in this part of the country. Rice, the staple article of diet in South India, is deficient in proteins and fats which are the main muscle-building factors. The people of North India take whole wheat, plenty of dhal, large quantities of milk and ghee which are all good body-builders. The milled rice that we use, has lost even the little nutritional properties that it contained. So, we should include in our diet, plenty of dhal, a good supply of milk and its products (butter, curds, ghee, etc.), liberal quantities of vegetables and fruits. The quantity of rice should be reduced in the diet, and sweets should be used sparingly. Government and local bodies should start dairy-farms, so that cheap and pure milk and dairy products are made available to the people. Children of poorer classes must be given free supply of milk in schools. Parents should be properly educated on the dieting

requirements of their children by lectures and distribution of leaflets.

We have seen how the Government has also a share of the responsibility in the physical development of the people. We wish to add that the education policy of the Government should be so altered as to produce young men of strong build and undaunted courage, instead manufacturing an army of job-hunters. The present medical inspection of schools and colleges has many defects. It is not carried out with the attention it deserves. It has no follow-up policy. Beyond isolated attempts done here and there, there is no uniform policy of medical inspection throughout India. Neglect in this respect is a 'penny wise and pound foolish' policy. By careful medical examination, many diseases can be detected early and nipped in the bud. Special attention can be given to boys of poor physique and any fault in their living can be remedied. We all know that "a stitch in time saves nine." The health of our young men is more important than the saving of a few thousands of rupees by the Government. We therefore strongly urge that medical examination of schools should be carried out properly.

Our Universities and other educational institutions can do a lot for the physical development of our young men. Compulsory physical training has been recently introduced twice a week in our schools and colleges. We consider this to be quite inadequate and insufficient. Lest it should be construed as a cloak to cover up the defects of our educational system, physical exercise should be made the daily routine. It should, however, be remembered that this training can benefit only the healthy and not the sickly child. We suggest that schools must be closed early in the day, at least at 4 p.m., so that the boys may have some rest after a hard day's work before they come to the playground at 5 p.m., for their games and exercises. As far as possible, students

should be encouraged to play manly games on holidays also.

A sound body and a sound mind are quite essential for success in any walk of life. It is more so in the case of a soldier. So, if we want our young men to be good soldiers, if we want to protect our motherland from foreign

aggression, and finally if we want India to be placed in the forefront among Nations, we must be ready and willing to play our part well. We hope that those who are responsible for the training up of our young men will seriously consider our suggestions and act upto them.

DUST AND DISEASE

BY NANIGOPAL DEBDAS, M.B., Bogra.

ROAD dust is a public health nuisance of great magnitude and far-reaching consequences. We are all more or less exposed to this nasty but monstrous enemy. Now-a-days, we hear so much about tuberculosis. It is no story to tell you that it is through the agency of dust that the disease is chiefly spread. In order that infection by dust may take place, the bacteria mingled with it must survive drying in air and be carried by ordinary air-currents. Phthisical sputa get dried and along with dust blown about in the air, the bacteria are inhaled and thus infect the lungs. Tuberculous patients are not isolated in this country. They spit about on public roads and conveyances. It is in this way that the dust gets contaminated. Moreover, there being no provision for public spittoons, people are sometimes compelled to spit here and there.

Another highly dangerous disease, for which dust is partly responsible, is cerebro-spinal fever, commonly known as meningitis. The bacteria of influenza are possibly conveyed by dust. In a like manner, tetanus and anthrax may spread. The dust also carries the infecting material, such as the scales of small-pox and measles formed after the scabs have dried.

Prolonged inhalation of dusty particles favour the onset of chronic bronchitis. Workers in dusty occupations

have the highest mortality from tuberculosis. The dust from corn, rice etc. is among the exciting causes of asthma. Lastly, bacterial food poisoning is, sometimes, due to contamination of food with dust. Epidemic diarrhoea in children is often conveyed by dust.

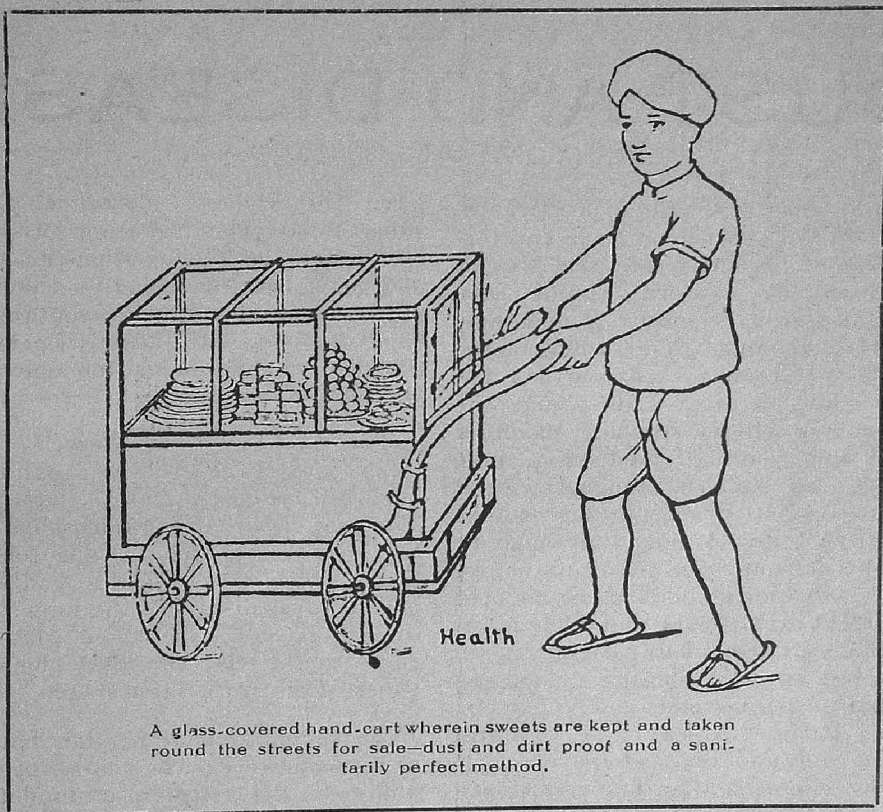
The dust may be derived from other sources as well *viz.*, coal, iron, lead, tin, copper, quartz, slate, etc. The workers in mines, workshops and factories are exposed to this sort of dust, which may lead to a disease called "dust disease of the lung". The disease is not tuberculous, although there is the risk of development of tuberculosis in the later stage.

We should be alive to the dangers of dust-nuisance. The control of dust will mean the control of a number of dangerous diseases. In England and Wales, dust-proof road-surface, and ensuring pure milk supply have largely contributed to the reduction of infant mortality rate. Unfortunately for us, even the major problems of public health *viz.*, supply of pure drinking water and pure milk and sanitation have yet to be tackled. God alone knows when the local mortal demigods will be pleased to remedy this nuisance. It is obvious that unless a comprehensive National Health Service Scheme for the whole of India is taken on hand, no lasting and real improvement can be expected.

The Hindu-way of treating floors, paths and court-yards with cow-dung is good so far as one's dwelling place is concerned. Watering of roads and working places reduces the amount of dust temporarily. The method is not quite effective. The roads in the countryside being made of mud, an

prohibitive. However, the Road Development Board should gradually take up the work of constructing surfaced roads in right earnest in rural and urban areas for the health and comfort of the people.

In factories, mines etc., the management should take particular care to



enormous volume of dust is scattered by bus traffic which has of late developed considerably. Concrete roads, roads paved with stone-slabs, or surfaced with tar or asphalt are the best for preventing dust. Unfortunately, in a poor country like ours, the cost is

prevent dust at its source or its rapid removal by adequate modern devices now available. Of these, mention may be made of respirators and exhaust ventilation.

As to our food, it should be carefully stored to avoid contamination by dust.

Dust and Influenza

“Local epidemics of *Influenza* are often associated with local weather conditions. Wet, humid autumns, with alternating hot and cold days, are conducive to the disease. Wet, open winters, with an early but variable spring are also favourable. Wind and dust storms are followed by an increase in incidence.”—*Oriental Watchman*.

Public Health Organisation

AND

Medical Relief in Ancient India

IN this short paper, an attempt has been made to narrate briefly the various measures adopted by the administrators and sanitarians of Ancient India in the matter of ensuring the smooth working of public health organisation and medical relief in this country.

Almost exactly in the same way as in modern times, the sanitarians of ancient Hindusthan stressed prominently on the need for sanitary housing, availability to the people of a pure and wholesome water supply, prevention of epidemics and segregation of infected people, disinfection of infected places, mass vaccination of people, sufficient and nutritious food supply, cleaning of houses and public places, provision of ample and efficient medical relief to the people, removal and disposal of night soil etc.

Essentially a religious and spiritual country as ancient India was, in prehistoric days, the sanitary side of life was never lost sight of; for, the ancient sanitarians and administrators always held it as their primary duty to inculcate the idea of sanitary consciousness in their people, and in order that the public might be successfully educated in sanitary knowledge, they imparted instructions in such a marvellous way that their religious teachings and academic curriculum were always blended and interwoven with teachings on personal hygiene and public health. Longevity was the rule in those days, the reverse being regarded as unusual and as a curse from God, which had to be expiated by doing virtuous deeds and by leading sinless lives. Even the

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Yogis, practising Yogasadhanas, were ordained to keep perfect health and physique; for, the very first teaching of Yoga Sastras is that a man, willing to be initiated into yogic life, must possess robust health in order to practise the Sadhanas successfully.

No words would perhaps be more significant of the naked truth, no proof more convincing, no truth more truthfully told than a quotation from a learned and noble speech of that great Governor, Lord Amphill, delivered at the opening ceremony of the King Institute of Preventive Medicine.

Lord Amphill then remarked—"British Rulers of India have been bringing back more of the knowledge which emanated from this country, centuries ago; and when we undertake the municipal water supply schemes, with filter beds and hydraulic pressure, when we build hospitals and establish medical schools, when we promulgate regulations to check the spread of plague, or when we impose on local bodies the duty of watching over the health of the people, we are not introducing any modern innovations or European fads, but merely that which was done centuries ago and again centuries before that, but which has long since been forgotten by all except the historian and the archaeologist."

His Excellency further remarked, "the modern plague policy of evacuation and disinfection is not a

bit different from that enjoined in ancient Hindu Shastras. Now we are beginning to find out that the Hindu Shastras also contain a sanitary code no less correct in principle and that the great law-giver, Manu, was one of the greatest sanitary reformers the world has ever seen."

For the perusal of my learned readers, I quote another nice extract from a speech of Dr. Furnall, Deputy Surgeon-General and Sanitary Commissioner, Madras, delivered on 18th April 1882. Dr. Furnall says—"as the ancient Hindus were superior to all others in other respects, so also were they superior to others in recognising the importance and value of water as well as in insisting upon preserving the water from filth of any kind whatever." He also narrated the instructions contained in the Hindu Medical Works with regard to the use of water which he described as being most remarkable.

In ancient days, arrangements were made by the sanitary authorities for the mass inoculation of people. It is a well-known thing that the sanitary principle of inoculation against small-pox was discovered by Hindu Scientists long before Jenner's discovery. Col. King remarks in this connection, 'that both the Hindus and Muhammedans used small-pox virus as a protection against small-pox and certain it is that long before Jenner's great discovery or to be more correct, re-discovery of vaccination, this art of inoculation was used for a while in Europe, where it had been imported from Constantinople; and the knowledge of medicine which flourished in the near East at the commencement of the Christian era emanated as I have already shown you, from India."

Col. King quotes a passage from the writings of Dhanwantari in connection with the technique of vaccination—"Take the fluid of the pock on the udder of the cow, or on the arm between the shoulder and elbow of a human subject on the point of a

lancet and lance with it between the shoulders and the elbows until the blood appears; then mixing the fluid with the blood, the fever of the small-pox will be produced. This is vaccination pure and simple. It would seem from it that Jenner's great discovery was actually forestalled by the ancient Hindus."

The idea of sanitary housing is not new as many would think; it is as antiquated as the days of the Vedas. The sanitary engineers of ancient India took special care for the building of houses on healthy grounds and on scientific hygienic plans. An interesting passage from *Manosara*, Chap. I, quoted in Ram Raz's '*The Architecture of the Hindus*' page 16, is reproduced here in support of this fact: "The best sort of ground should abound with milky trees, full of fruits and flowers; its boundary should be of a quadrangular form, level and smooth, with a sloping declivity towards the East, producing a hard sound, with a stream running from left to right, of an agreeable odour, fertile, of a uniform colour, containing a great quantity of soil, producing water when dug to the height of a man's arm raised above his head and situated in a climate of moderate temperature."

Charaka, the greatest Hindu Physician of ancient India, advised the construction of the lying-in-room in this fashion:—"The land should be cleansed of bones, gravels and potsherds, the ground selected should be of auspicious odour, taste and smell. The gate of the house should face towards the East or the North."

According to the same authority, the child's room is to be constructed thus:—"The engineer is to construct a room, spacious, full of light, well-ventilated but free from draughts, strong and free from beasts of prey, animals with fangs, mice and insects. There should be kept water, mortar, and separate places should be assigned for bathing, cooking, urination and

defæcation.....The child's bed, covers and sheets should be soft, light, pure and scented. These should always be free from sweat, dirt, worms or bugs, urine and faeces. If repeated change of new clothes be impossible, the soiled coverings should be well washed and the beddings well purified with steam and thoroughly dried before they are used again. To purify or sterilise the dress, beddings, coverings and sheets by fumigation, use the following medicines with clarified butter :—Barley (*Hordeum vulgare*), Vaca (*Acorus Calamus*), Mustard Seeds, Lin Seeds, Asafoetida, Guggula (*Balsamodendron Mukul*), Vayastha (*Chebolic Myrobalan*), Coraka (*Andropogon Acicularis*), Golomi (*Panicum Dactylon*), Jatila (*Nardostachys Jatamansi*), Palankasa (a variety of Guggula), Asoka (*Saraca Indica*), Rohini (*Picrorrhiza Kurrora*) and snake's skin.....”

In ancient Hindustan, hospitals and charitable medical relief centres and institutions were built all over the country for the administration of free medical relief to the people. It would very much interest the modern readers to learn that the ancient Hindus were the first nation to establish hospitals and for centuries, they were the only people in the world who maintained them. In the Buddhistic period, ancient India was studded over with numerous hospitals and charitable dispensaries. These institutions were staffed with physicians learned in the art and science of public health, surgery, medicine, Rasayana (rejuvenation), Bhutavidya (demonology), Agadatantra (toxicology) etc. From the Edict II of Asoka, the great Buddhist Emperor, we learn that innumerable hospitals and charitable institutions existed all over India for the treatment of human beings as well as of animals. The Edict reads as follows :—“ Everywhere in the kingdom of the King Piyadasi, beloved of the Gods, and also of the nations who live in the frontiers such as the Cholas, the Pandyas, the realms of

Satyaputra and Keralaputra, as far as Tambapani, (and in the kingdom of) Antiochus, King of the Greeks and of the Kings who are his neighbours, everywhere the King Piyadasi, beloved of the Gods, has provided medicines of two sorts, medicines for men and medicines for animals. Wherever plants, useful either for men or animals were wanting, they have been imported and planted. Wherever roots and fruits were wanting, they have been imported and planted. And along public roads, wells have been dug for the use of animals and men.”

From Houen Tsang's account, we learn that Siladitya II (610-650 A.D.) being inclined towards Buddhism forbade the slaughter of living animals, built stupas, and constructed hospitals provided amply with medicines, food and drink in all the highways of the towns and villages throughout the length and breadth of India. Learned physicians were maintained in all the medical relief centres, being provided with ample stock of medicines for free distribution to the travellers and to the poor persons residing in that area.

Houen Tsang also mentions that the father of Bhikkhu Srutavimsatikoti had established a number of rest houses from his house to the snowy mountains, and his servants continually went from one to another. Whatever medicines were required were supplied to each of these places for free distribution to the travellers and the villagers living all round.

Charitable institutions, called Punyasalas, were very common in India. “ There were formerly in this country many houses of charity for keeping the poor and the unfortunate. They provided them with medicines, and food, clothing and necessities, so that travellers were never badly off.”

Further, we know from Houen Tsang that “ benevolent Kings founded at Matipura a house of “ Merit ”

(Pūnyasala). This foundation is endowed with funds for providing choice food and medicines to bestow in charity on widows and bereaved persons, on orphans and the destitute."

From Fa Hian (405—11 A.D.), who was a contemporary of Chandragupta Vikramādityā, we learn about the existence of charitable dispensaries in the town of Pataliputra. "The nobles and house-holders of this country have founded hospitals within the city to which the poor of all countries, the destitute, the cripple and the diseased may repair. They receive every kind of requisite help gratuitously. Physicians inspect their diseases and according to their cases order them food and drink, medicines and decoctions, everything, in fact, that may contribute to their ease. When cured, they depart at their convenience."

Smith remarks: "No such foundation was to be seen elsewhere in the world at this date; and its existence, anticipating the deeds of modern Christian charity, speaks well both for the character of the citizens who endowed it, and for the genius of the great Asoka, whose teaching still bore such wholesome fruit, many centuries after his decease. The earliest hospital in Europe, the Maison Dieu of Paris, is said to have been opened in the 7th century" (Smith's *Early History of India*, 2nd Edn., p. 280).

Even private individuals built hospitals and charitable resting houses for the diseased, and the infirm. "Upatisso, the son of Buddha Das, built hospitals for cripples, for pregnant women, and for the blind and diseased". (*Mahawanso*, p. 249). "Dhatushena built hospitals for the benefit of cripples and the sick" (*Mahawanso*, p. 256). Buddha Das, a great philanthropist, established asylums for the crippled, deformed and destitute persons and appointed a staff of qualified physicians, one physician being ordained to administer medical relief for every ten villages on the important roads of India.

Not only did the ancient Hindus minister to the medical needs of the people, but they also established animal hospitals for the treatment of the sick and infirm and crippled animals. The following account of the existence of such an animal-hospital in the 18th century is furnished by the pen of Hamilton: "The most remarkable hospital in Surat is the Banyan Hospital, of which we have no description more recent than 1780. It then consisted of a large piece of ground enclosed by high walls, and subdivided into several courts or yards for the accommodation of animals. In sickness, they were attended to with the greatest care, and here they found a peaceful asylum for the infirmities of old age."

"When an animal broke a limb, or was otherwise disabled, his owner brought him to the hospital, when he was received without regard to the caste or nation of his master. In 1772, this hospital contained horses, mules, oxen, sheep, goats, monkeys, poultry, pigeons and a variety of birds; and also an aged tortoise, which was known to have been there for seventy-five years. The most extraordinary ward was that appropriated for rats, mice, bugs, and other noxious vermins, for whom suitable pod was provided." *Hamilton's Description of Hindusthan* (120) Vol. I, p. 718, Quarto Ed., Cooke, *Things Indian, Art Pinjrapole*, (Murray 1906)].

The ancient sages of India, namely Viswamitra, Samvarta, Agastya and others highly eulogise the merits of the founder of a hospital. Viswamitra says: "there is no gift more precious than the gift of curing a person of his ailment; hence it should be given freely to the sick to augment one's good fortune. He who gives medicines, diet, food, oil for smearing and shelter to the sick, becomes free from all diseases."

According to Samvarta Rishi, one who gives medicines, oleaginous remedies and food for the cure of the sick,

becomes free from all diseases, attains happiness and long life. Agastya says that the giver of rice and medicines freely would attain happiness, and good health.

The ancient Hindu Puranas, namely *Saura Purana*, *Nandi Purana* and *Skanda Purana*, highly eulogise the free gift of medicines to the sick and the provision of medical relief by the establishment of hospitals and charitable dispensaries.

From *Saura Purana*, we learn that the person who gives medicines to the sick for the alleviation of their suffering attains longevity, happiness and health for ever.

From *Nandi Purana*, we come to know that the great man who gives Anjana (collyrium) in charity for the cure of eye diseases goes to Suryaloka (region of the Sun) after death. "The giver becomes fine looking, fortunate and free from eye diseases. For the attainment of Dharma, Artha, Kama and Moksha, one should have perfect health and physique. Therefore, the persons, who afford medical relief to the sick and the distressed, and who establish and endow hospitals provided with medicines, clothings, learned physicians and surgeons, servants and rooms for scholars always attain religious merit, wealth, pleasure and emancipation."

Arogyashalam jah kuryat Mohavaidya
puraskrtam

Sarbopakaranopetam tasya punyaphalam
srnu.

Dharmartha Kamamoksanamarogyam
Sadhanam jatab

Tasmadarogyam danena tadrttam Syach-
chatustayam. (*Skandapurana*).

"Hear all, the fruits of religious merit attained by a person who erects an Arogyashalam (hospital) endowed with all the necessary medical equipments and staffed efficiently by learned physicians who are ever kept contented with rewards and donations. Since the maintenance of healthy physique (Arogya Sāadhanam) is a

necessary step to the final attainment of Dharma, Artha, Kama and Mokhsa, therefore the person, who renders the sick healthy, bestows also these four blessings."

I should not tire the patience of my learned readers any longer by narrating the tales of medical relief as obtained in ancient India. I would like, however, to quote a passage from Charaka, enlightening us on the mode of constructing and equipping a hospital in the pre-historic age. "The engineer skilled in the science of Architecture (*Bāstu-vidyā visārada*) should erect a strong and spacious building, well ventilated at one part, the other part being free from draughts. The scenery should be pleasing and one should be delighted while walking in it. The hospital should not be behind any other high building. It should not be exposed to the smoke and dust nuisance nor should it be directly exposed to the dazzling rays of the sun. There should be nothing in the building which would be repulsive and poignant to our sense of sound, touch, taste, form and smell. There should be stairs, large wooden mortars and pestles; there must be enough of base ground for the construction of privy, bathroom and kitchen. There should be learned physicians and surgeons, highly versed in the science of Ayurveda; there should be good servants and companions. The servants should be good, amiable, virtuous and skilful in different types of work—they should be generous, pure in character, well qualified in nursing, competent in cooking dainty dishes of rice and curries, competent to administer a bath, expert at massaging, trained in raising and moving a patient, dexterous in cleaning bedsteads. Those engaged in compounding medicines should be qualified in this art. The companions should be good singers and musicians, fluent speakers, well-versed in distichs, ballads, tales, history and mythology, well acquainted

with the design of a patient's nods or signals, agreeable and should have knowledge of the season and the locality. There should be a dairy attached to the building. The cows should be good-natured and healthy, and should give profuse milk. Their calves must be living". Charaka then describes the furnishing and surgical and medicinal equipment of the hospital, which may very well stand comparison with the up-to-date method of hospital equipment. (*Charaka Samhita* I, xv; Mukherjee—*Surgical Inst. of the Hindus*).

Kautilya's *Artha Sastra* has passages referring to sanitation in ancient India: "Sanitation attracted the attention of the Government. Even in those early days, the State seems to have made provisions for preserving the health of its subjects. In ordinary times, physicians and medical men were stationed in all centres of life. The chapter on *Janapada-nivasa* contains a reference to medical officers in the villages, and these seem to have been maintained by grants of land enjoyed by them. In towns, such duties were entrusted to medical men under the *Nāgaraka*, who was bound to look after the health of citizens and take care of men suffering from disease or in bad state of health. While this was the arrangement in ordinary times, prompt measures were undertaken for combating and controlling outbreaks of pestilence or epidemic.

For ensuring the good health of the country, great attention was paid to sanitary arrangement as also to the prevention of adulteration of food-stuffs. Royal officers supervised the cleansing of village roads or sewers and stringent regulations were enforced, punishing offenders who caused nuisance or injury to public health. In town, the drains and sewers were regularly inspected, while the City Magistrates punished those who committed nuisance on thoroughfares, kept refuse matters in house fronts, deposited carcases of animals on public roads or cremated the dead in inhabited quarters. The sale of meat as well as of cooked food was carefully supervised and this work of supervision was entrusted to the *Sunādhyaksha*. The Public Works Department was also very active in the interests of public health. The creation of dams, and water reservoirs, the making and repair of roads, etc., were in their hands" (*Kautilya, Artha Sastra*, Chap. XXI, N. C. Banerjee—*Kautilya or Exposition of his Social Ideal and Political Theory*. Vol. I & II.)

My idea in writing this article is to acquaint the readers with the mode of public health organisation and medical relief in ancient India. In compiling this paper, I have freely consulted the works of numerous authorities to all of whom I gratefully tender my indebtedness.

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SANITATION IN A VILLAGE

By

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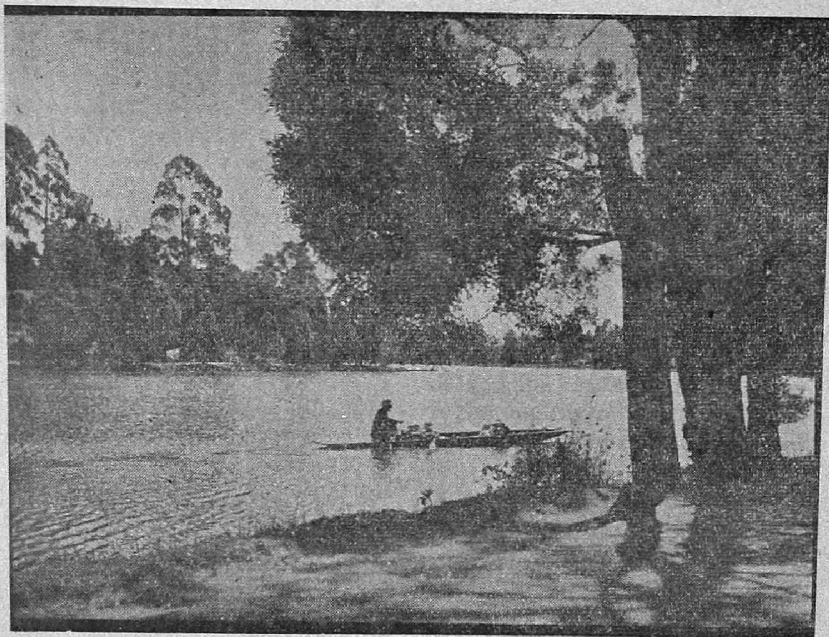
THE problem of sanitation in a village differs to a great extent from that of an urban area. In a town, there is a municipality and the

ventilation. Moreover, the villagers generally remain, most of their time, outside their rooms and they get the facility of pure air sufficiently.

If we come to a village, we find certain things which particularly draw our attention.

Road.—We approach a village over a kutchra road and we find that this road is either full of dust or full of knee-deep mud.

Ventilation.—The inmates get sufficient fresh air and there is no danger of bad



Rowing in the Lake gives pure and fresh air.

arrangement of sanitation is somewhat organised, whereas in a village, there is no such thing and the greater portion of the population of our country lives in villages. The importance of the subject is thus apparent and interests in this respect are being taken by all the authorities concerned.

Drain.—The kutchra drains by the side of the village roads are generally in a filthy condition, as there are no arrangements for cleansing them.

Dwelling Places.—Then we find the kutchra dwelling houses. The yard though not paved is kept clean. The rooms now-a-days are fitted with

windows. The air is fresh and not much polluted.

Planning.—The defect lies in the construction of houses most irregularly. There is no system, no planning and none to look to the mode of construction of these huts. These are constructed according to the convenience of the owners of the plot of land, who are generally ignorant of the primary laws of sanitation. They seldom care about the selection of site, the condition of the ground, the proper drainage and the ventilation of the place. Only one point, *viz.*, the convenience of the inmates, is looked into. But, on the whole, where sufficient space is available—and in villages there is least chance of overcrowding in the huts constructed though not systematically—there is little chance of poor ventilation.

Drinking Water.—Now-a-days, great difficulty has arisen about the supply of good drinking water. In olden days, there were big and good tanks, the water of which could be used. In these tanks, the water, though polluted to some extent, by reason of reverence towards the purity of water and the oxygenated air and sunlight, is kept upto the mark and could be used for the purpose of drinking. Now-a-days, these tanks have been filled up to a certain extent. They are seldom re-excavated and very little care is taken towards keeping these tanks free from pollution. The result is that the water seems to be of bad odour and taste, and the tanks have become full of water weeds. The leaves of trees falling on the surface water often pollute the tank. The indiscriminate use of washing and bathing, both of animals and persons, makes it more dangerous to public health. The excreta passed on the bank, pollutes it to the fullest extent. Reserved tank is seldom found and in many villages during the summer season there will be real scarcity of drinking water. The river, if there be any, also dries up in the summer and

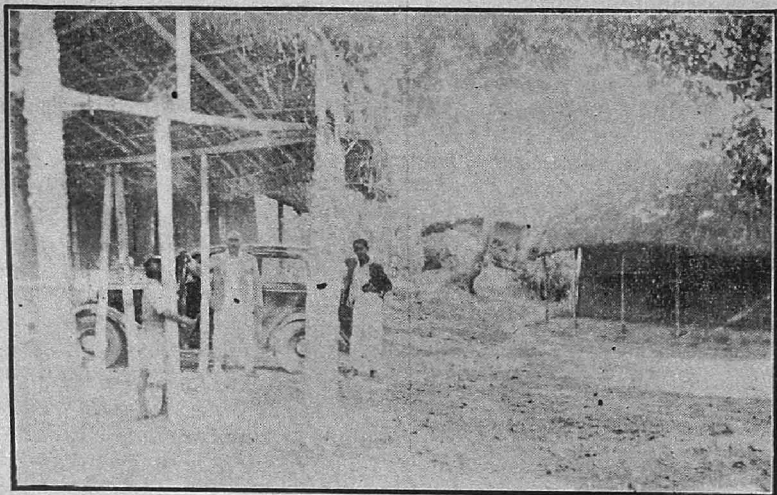
becomes too much peaty during the rains. The water of the shallow wells is unfit for drinking, which also dries up during summer. The deep wells are very costly and the poor people of a village seldom find the means for having such a one. The present solution, therefore, lies in sinking tube wells. The water of these tube wells is fit for drinking purposes but the hardness of the water and the large quantity of iron salts in it make the water not upto the standard of drinking water, required by human beings.

Food.—The problem of food supply has become also an important one. In old days, the paddy of the field, the vegetables of the garden, (the fish of the tank), the milk of the cow and the *gur* from the sugar cane were abundant and were sufficient for the villagers. At present, the produce of fields has diminished, the price of the surplus cannot fetch sufficient money for the other wants of the modernly civilised villagers; most of the earning members live outside the village, and they seldom come to their rural home; the power and energy of the village folk to produce the crop, have become also sapped up by various other factors. They have often to rely on the labour of other persons (especially Santhals).

Vitamins.—Some vegetables are generally grown in the garden and the villagers get more vitamins than the urban people do get; but the products are generally taken to towns for sale, and little remains to be consumed by themselves. The condition of the tank does not produce much fish and fishery has become an art to-day instead of abundant supply of the past. The fish and milk are the two important foods of the Indians and, by the curse of Providence, both of these articles have become scarce in this country. Most probably, people of no other country relish milk so much as the Indians, and what a

fate! A cow in other countries yields a maund or more of milk a day, whereas the average yield of an Indian cow is only a seer per day. On enquiry, you will find half of the villagers are to depend upon milk purchased from the *goalas* or other dealers and often this milk is adulterated. And the fact is that often the diet of a villager is deficient in protein, fat and vitamin A. How then can their health be maintained only on carbohydrate and sunshine?

Sunshine.—Sunshine is no doubt



"Go back to the village" is the cry. But, 'who to bell the cat'? We fight shy.

abundant in villages, but it only scorches them. They are forgetting the use of leafy cover and they have got no sufficient means for the purchase of an umbrella. The heat only unnerves them and makes them lazy.

Clothing.—Sufficient clothings are not available, they are not practised also to heavy clothing. The general costume is only one dhoti. This costume does not prevent the excessive quantity of sun-rays from penetrating into the body, which is thus markedly pigmented and this does not protect them from the bite of disease-carrying insects.

Malaria.—There is no more important problem in villages than the infection of malaria. The greater number of mosquitoes in town is *Culex*, whereas the *Anopheles* are more abundant in villages. Malaria is causing havoc in our country and the half-hearted preventive measures, that too taken only in selected places, are powerless in combating the disease and the pitiable condition of the malaria-stricken villagers is really deplorable. None of the persons residing in a village can afford to take full diet in all the days of the year, none is capable of working for

half the number of days in the year, as none of them escapes the infection of the so-called preventable disease of malaria.

Diseases.

—Their vitality is sapped up and they create good medium for the infection of

other diseases, notably pneumonia. The personages from a city, while travelling in a train or in an automobile, see green fields, waving golden screen of beauty and some express a desire to reside in the paradise of a village or lecture on "Go back to villages". Enter a village, and what do you find? The muddy roads, the jungles the filthy dobas, the damp soil and the lifeless expansion of the village with nothing but scattered muddy huts. There may be poetry in mind; but, on the actual field, there is only prose in all its nakedness.

Excreta.—Enter a by-path or go towards the outskirts, and you will find

excreta everywhere—on the road, by the side of the road, on the bank of the tank, on the fallow land and on the field. There is no proper arrangement for privies or for the disposal of night soil. The animals and the soil bacteria perform this function. In one of my previous articles, I stressed on the construction of septic tank latrines. The bored-hole latrines and the septic tank type of latrines are the solution of this defect in a village.

Refuses.—The arrangement for the disposal of refuses also needs mention. Generally, there is a manure pit and the waste refuses are collected in that pit. It is never covered with earth; at the end of the year, the contents are utilised as manure for the paddy field.

Flies.—Fly-breeding is excessive and during the latter part of the summer season, this pest becomes unbearable; people suffer also from various food and water-borne diseases. The elementary knowledge of hygiene appears to be lacking amongst the villagers and they laugh at the primary principles of health. They will be found covering their heads whenever they come out of their home after evening hours in the month of October, being afraid of the cold of dew, but they are ignorant of the fact that flies may carry disease or the water from the *ghat* (landing place) of a tank, where people wash themselves after defæcation, is dangerous to be drunk; they are ignorant of many such other simple facts. The Hindu *Sastras* or the social customs, for which the villagers have got great faith, often lead to various superstitions, though a few of these are indeed wholesome and carry much weight.

Superstition.—None is allowed to enter a kitchen unless he takes a bath, or to enter with shoes on; the hands and the places which come in contact with boiled rice are to be washed; earthen pots of the kitchen are to be changed on occasions; ablution is to

be performed if anybody comes in contact with fæces, or such other dirty things; women should not perform any household or religious duty during the time of menstruation; there should be a *Tulsi* plant in every house; the lying-in-room should be segregated. These are examples of superstitions and customs which are beneficial to health. On the other hand, the partaking of food by a wife from the same dish in which her husband took his meals, swallowing dust from the feet of a superior or dust from the place in front of a diety, are examples which may tell upon the health of the individual.

Medical Help.—Medical relief in villages, is very much wanting. The poverty of the people prevents them from seeking medical help for minor ailments, or for diseases from its beginning. When a disease has established itself with alarming symptoms, then only, as if by compulsion, they seek the help of a medical man, but then also they are likely to take the help of a quack; and when the patient dies, the quack attributes his fate to the decree of Providence. The help of a qualified medical man is too costly for them and is generally not available easily. The medical men try to avoid settling in villages, because they are either not paid properly or they find it very troublesome to attend the calls in the neighbouring villages, owing to the lack of convenient conveyance, or they themselves suffer so much from malaria that they do not like the village-life. The charitable dispensaries which are at present set up in the district areas are only few and far between and cannot meet the demands properly. If a proper system be established taking all the villages of a district into account, and if sufficient staff be provided, this difficulty may be removed to a certain extent.

Poverty—The people of a village are generally very poor. The rich persons either live in towns or come

to their village houses so rarely that they are excluded from the category of village folk. This poverty of the villagers creates a vicious circle. If they can produce sufficient crops, they have to sell them for meeting their other necessities and so they are under-fed themselves; and with difficulty they procure their daily requirements. They do not get sufficient food, clothing, medicine, sanitation and education.

Education.—It is needless to discuss the necessity of education. villagers seldom get this facility and this want keeps them backward and foolish in all senses, and due to foolishness, they do not understand the value of education which, on the other hand, has become so costly now-a-days that not to speak of villagers, even the town-people are very much afraid of it. The fault lies in the system of education. Unless it fetches livelihood, its advantages are not felt keenly. The higher authorities agitate for mass education, but unless proper facility is pro-

vided, the attempt would be a failure.

Home-Industry.—The real want, as far as my experience goes, is the lack of industry in our villages. Home-industry is the most important thing which is wanted sorely in our country. Everything is hanging in the balance of home-industry. I had the opportunity of seeing a village which had once a flourishing home industry and which recently lost it through force of circumstances. I had seen the prosperity of the villagers, their pride, their sanguinity and their self dependence, and when that industry was lost, their condition became wretched and their appearance haggard-looking.

These villages how fine they are,
Beauteous as many a blue sapphire;
But, alas! their sorrows know no bound,
Till means for redress are anon found.

The villages are beautiful no doubt, but when you go to a village you see all round want, poverty and bad health. Unless the conditions of the villagers are improved, the nation is sure to suffer.

Rizal's Don'ts

- Don't gamble.
- Don't be a drunkard.
- Don't break the laws.
- Don't be cruel in any way.
- Don't be a rabid partisan.
- Don't be merely a fault-finding critic.
- Don't put yourself in the way of humiliation.
- Don't treat any one with haughtiness or contempt.
- Don't condemn anyone without first hearing his side.
- Don't abandon the poor man who has right on his side.
- Don't forget those who, worthily, have come to want.
- Don't fail those without means, who show application and ability.
- Don't associate with immoral persons or with persons of bad habits.
- Don't overlook the value to our country of new machinery and industries.
- Don't ever cease working for the prosperity and welfare of our native land.

—*Bulletin of San Juan de Dios Hospital of Manila.*

THE PREGNANT MOTHER

RACE preservation through reproduction is one of the most fundamental instincts in human beings. And to the glory of woman, let it be said that she has been assigned the major role for this function. Womanhood, therefore, is incomplete without the role of a useful mother. In spite of all the social advancements, resulting

By

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care, hygiene of pregnancy, process and progress of labour, post-natal care and the systematic care of the child.

We begin with ante-natal care. The object of ante-natal care is two-fold:—

(1) To keep the patient well looked after, and to ensure that she will pass through the pre-pregnancy period



Hard exercises involving muscular strain are contra-indicated in the case of pregnant women.

from the so-called revolutionary concepts of modern civilization and the demand of equality, wise people still maintain that if Nature is not to be frustrated and that if our race is to survive, woman should continue to play the role of a mother willingly and cheerfully—irrespective of her social pre-occupations and professions. In order, therefore, that this function be successfully carried out, it is incumbent upon every woman to make a special study of mother-craft—which should acquaint her with ante-natal

without injury; and to prepare her for an easy and uneventful labour resulting in the birth of a normal healthy child.

(2) To discover abnormalities early so that, by effective and opportune treatment, grave disasters of pregnancy and labour may be prevented.

The first part of the object can be realized if the woman observes the ordinary laws of hygiene. Pregnancy is a natural function of a woman and therefore, she must continue to practise

healthy, normal habits—like the daily cleaning of teeth, bath, sleeping with open windows (weather permitting), daily exercise and use of plain and simple food. In short, the general health activities and outlook should not be interfered with on account of pregnancy.

Diet.—The food should be plain, simple, easily digestible and devoid of harmful constituents. The prevailing misconception that a pregnant woman should eat much more than usual in order to meet the requirements of the "body in making" must be eradicated. It should be just sufficient to maintain the health of the mother and to provide for those materials necessary for the development of the child. This extra requirement could easily be covered without attempts at over-feeding. Milk, fruits, vegetables and plenty of fluids constitute the right diet, because it supplies the vitamin, calcium and mineral needs of the mother and the child. If calcium is not provided for in the food, the growth of the child—particularly bone-formation—suffers and the child develops rickets. In the event of shortage of calcium, it has been found that calcium is drafted from the mother's bones and teeth—producing decalcification and softening. Prolonged experience has established that meat and high protein foods should be sparingly used to prevent toxæmias of pregnancy. Constipation must be corrected.

Exercise.—Sedentary life, which is very often advised through ignorance, has no justification. Normal life with regular light exercise in the form of walking is very much recommended. It keeps the muscular system toned up. Of course, hard exercises involving strain or jolting are to be avoided. Cycling, riding, lifting weights and dancing are therefore inadvisable.

Dress.—Clothing must be light and loosely wrapped round. Tight garments and constricting, elastic bands

should be discarded. A maternity corset for the support of a lax abdomen may be useful.

In the last six weeks of pregnancy, the breasts should receive attention. The nipples should be washed daily with soap and water, scrubbed with a soft brush and massaged with lanoline, a good castile soap or a little olive oil to make them hard.

In order that everything should pass off smoothly, the pregnant woman must be examined regularly at intervals. Urine examination may reveal the presence of albumin which generally portends evil. Rise of blood pressure and albuminuria of pregnancy are the earliest signs of pre-eclamptic toxæmias (fits) and precursor of grave conditions. Early examinations can also forestall and prevent Hyperemesis Gravidarum (excessive vomiting). The unfavourable positions and presentations of the foetus can also be ascertained and corrected. Another common difficulty is the non-fixation of the foetal head by the 36th week of pregnancy. A careful investigation will reveal a contracted pelvis, the nature of which can be ascertained by Pelvi-metry or X-Ray, if necessary. Ante-partum hæmorrhage due to abortion, placenta prævia or accident must not be ignored. Careful examinations followed by suitable treatment can prevent many a disaster.

A few such simple facts can save many a mother from preventable death. Therefore, it is in the fitness of things that such useful knowledge must be imparted and propagated among women through articles, lectures, classes, magic-lantern shows and clinics. Schools, Colleges and other educational institutions must include this subject, in their regular syllabuses for female students. Hospitals should establish ante-natal clinics where efficiently trained staff can teach people, examine pregnant women and save their lives through

timely interference and judicious treatment. Institution of the 'Health-Visitor' scheme which provides for trained staff, visiting pregnant women from home to home—is a step in the

right direction. If only we can dignify the mother's role by protecting her from preventable mortality and morbidity and economic anxiety, the nation stands much to gain.

DYSPEPSIA is one of the common ailments of man in this modern civilised world.

DYSPEPSIA AND ITS PREVENTION

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

A person suffering from dyspepsia is conscious of the activities of his digestive organs and feels uncomfortable when they are active. On the other hand, a healthy person never feels anything more than the physiological sense of appetite and its repletion.

Dyspepsia is classified into the following three groups:—

(1) *Organic dyspepsia* wherein the digestive organs are abnormal in their appearance due to a diseased condition or otherwise.

(2) *Functional dyspepsia*:— Here, the digestive organs look normal and healthy but they do not do their function properly.

(3) *Nervous dyspepsia*:— In this type of dyspepsia, the digestive organs and their functional capacity are normal, but the nerve centres which regulate their activity work irregularly.

In spite of this classification, it is an established fact that all the three varieties are so intimately related to one another, that if the digestive organs exhibit evidences of disease, the nerve centres controlling them also strike work and *vice versa*.

Causes.—Now, what are the causes of dyspepsia? They are many and varied and it will not be possible to enumerate all of them. However, they can be classified into the following:—

1. Defects in the physical habits of life.

(a) Imperfect mastication of food

due to deficient or carious teeth; hurried meals.

(b) Irregular meal and tiffin times.

(c) Lack of exercise, too much of exercise or moderate exercise immediately before or after food.

(d) Improper and irregular evacuation of the bowels.

(e) Excess of smoking—smoking on an empty stomach even though in moderation.

2. Errors in the diet taken.

(a) Intoxicating drinks beyond moderation.

(b) Excess of coffee and tea, especially if they are over-drawn.

(c) Too much of fluids during meals.

(d) Too much of solids in the diet

(e) Excess of fatty substances in the diet.

(f) Sugar and sweets in excess.

(g) Over-ripe and under-ripe fruits.

(h) Food-stuffs improperly cooked in dirty utensils.

3. Dyspepsia is one of the concomitant features of some of the diseases of lungs, liver, heart, and blood-forming organs and very often, it serves as a pointer to their existence.

Signs and symptoms of dyspepsia.

—They are:—

1. A burning sensation or even a pain of varying intensity in the region

of or around the navel, more commonly just above it.

2. Excessive formation and elimination of gas in the intestines, belching, excessive salivation (watering from the mouth).

3. Nausea and vomiting early in the morning or on waking up from the bed and after meals. The vomit contains undigested or partially digested food particles.

4. Lack of appetite.

5. Other symptoms such as a sallow complexion, coated tongue, foul breath, bad teeth, irregular bowels, sleeplessness, inaptitude for work, mental depression and an irritable temper.

How to prevent dyspepsia?—Dyspepsia, though not in itself a dangerous condition, has been responsible for the onset of more serious conditions such as ulcers and cancerous growths in the stomach and adjacent parts of the digestive tract, and as such, the ways and means of preventing the onset of dyspepsia cannot be over emphasised. Strict observance of the following advice will not only ward off the condition but will also cure the ailment if it is in its early stages.

1. Keep your mouth and teeth clean. Brush your teeth at least twice a day, once in the morning and once in the night, before going to bed. Carious teeth should be pulled out.

2. Avoid hasty meals. Masticate your food well. Do not take too much of water with your food. Take your meal and tiffin at a definite hour every day.

3. Devote at least 1 or 2 hours for exercise every day.

4. See that your bowels open regularly every day. If they are irregular, make it a point to be at the stool every day at a fixed hour for about half an hour. In a month's time, it is highly probable that your bowels become regular.

5. Give up the habit of smoking. If that is not possible, at least give up the habit of smoking on an empty stomach.

6. Give up the habit of drinking coffee and tea in season and out of season, for the liability to suffer from dyspepsia increases with the frequency with which these beverages are taken.

7. Alcoholic drinks are the great harbingers of dyspepsia and as such the advantages of giving up that habit cannot be exaggerated.

8. Diet:—The ideal diet is no doubt one which is well balanced, consisting of adequate quantities of carbohydrates, proteins, fats, vitamins and minerals. But, for practical purposes, a mixed diet consisting of rice, wheat, dhal, curds, milk vegetables and fruits will suffice. "A generous meal consumed with mirth is better than a physician's prescription in the solitude of the chamber"; (Allbut). Eat well when it is time for you to do so. Do not take anything except water in between your meal or tiffin times. Even a cup of coffee or orange crush will upset your appetite and digestive vigor. Occasional fasting or a diet consisting entirely of fruits, goes a long way to keep you fit.

Effects of Tobacco on Women

Dr. Hofstaetter of Vienna tells us that among his many women patients who were heavy smokers, he had only a single one who was not childless or who had not stopped having children when her heavy smoking began. The women working in the tobacco factories in Vienna, he says, seldom have children.—*Good Health (Lond.)*

Prayer for Health and Happiness

Standing on the threshold of a New year as we do, we wish to suggest that this is the time :—

- for the healthy to thank Divine Providence for the gift which is not so much appreciated as when it is lost : health ;
- for the sick to ask once more Divine Providence for the most precious of earthly possessions : health ; and if this is not possible, for the necessary fortitude to bear patiently to the end the pangs of disease ;
- for the poor to renew his pleas so that God may continue providing for his daily needs ; and that his be a better lot next year ;
- for the rich to pray God so that his money may not be the cause of the perdition of his body and his soul ; and to inspire him so that he may devote his fortune to useful purposes ;
- for the downtrodden and the afflicted to rekindle in their hearts the Faith in God who is Just and is kind ;
- for the wrong-doers to pause a little and think that there is an invisible Power, that sometime, somehow, may be in themselves or in their offspring, metes out the corresponding punishment for any misdeed that they have done ;
- and for everyone to remember once more that this same Power that punishes, rewards also any good deed, even the slightest.—*Adapted from 'The Bulletin of San Juan de Dios Hospital.*

Nutrition, Health and Physique

THE discoveries in the field of nutrition show with ever increasing certainty that faulty diet plays an important role in increasing the rate of mortality, especially infant mortality, and that it may account for an excessive proportion of under-developed school children and adolescents. The last World War furnished as a very striking example of the deteriorating effect of diet on health when other factors such as sanitation, housing, climate, etc. were practically unchanged. The effect of the last World War on the death rate of tuberculosis in central Europe is well known. Its effect on the health of the people in those countries where food restrictions were enforced was very marked. The greatest rise in mortality rate occurred when and where the restrictions were most severe. The food producers on the land suffered less than the city dwellers because they could always keep some foodstuffs for their own use. On the other hand, the inmates of prisons, asylums, etc., suffered most because they had no chance to supplement the ration given to them. While in agricultural states

such as Bavaria, the rise in the tuberculosis death rate from 1914 to 1918 was only 23 per cent, in the city of Berlin it was as much as 65 per cent. The most destructive effect of food shortage is found in children. The high food requirement of children during growth renders them very sensitive to dietary deficiencies. Failure to achieve normal growth can be easily measured in the case of children by anthropometric measurement and clinical examinations. It has been found that school children in Berlin, born and brought up during the war, were definitely stunted. Those children born in 1918, who entered school in 1925 were 6 to 6.5 centimeters shorter and 1 to 1.5 kilos lighter in weight than those who entered school in 1933. The difference was even greater in children leaving school at the age of 13 to 14. The studies of Nicolls on the height-weight-age averages of Ceylonese children showed that height and weight are correlated with economic status and income and hence with diet and not with race. In India, investigations of height and weight tend to the same conclusion. Additional evidence has been provided by numerous experiments showing the gain in weight in children, resulting from addition to their usual diet of one glass of milk a day. It has been found, for example, that milk when given twice daily to school children in Paris for six months resulted in a 40 per cent extra gain of weight in boys and 65 per cent in girls as compared with children who had not received additional milk.

A well-fed and healthy population is vital to every country for its development and future. It is only to be regretted that our government allocates only a meagre sum of money for the study of national nutrition or for the attempts to improve it. There is no longer any doubt today that improvement in economic condition and consequently in the proper feeding of the poor population brings about a considerable increase in health and saves many young lives. It is now recognized by all health authorities that nutrition has played its part in the present stage of human progress all the world over. Medical science has already made great strides in the control of disease, and in this advance the science of nutrition has participated, not only in the prevention and cure of the so-called deficiency diseases but also in increasing the vitality of the organism. This progress is only now beginning to be realized. It is on improved sanitation that triumphs of modern medicine are founded. It is in improved nutrition that greater triumphs remain to be achieved.

The state of malnutrition that exists in this country should cause a most serious apprehension on the part of our authorities not merely for humanitarian reasons but for its possible effect on the future social organization and internal peace of this country.—*Journal of Philippine Islands Medical Association.*

Parents of Enthusiasm

KNOWLEDGE is power; the exercise of a self-developed skill is joy; and these are the parents of enthusiasm, which can ward off "the slings and arrows of outrageous fortune," and conquer the world.—*The U.S.T. Journal of Medicine.*

High Content of Vitamin B₁ in Plantain

YANG and Read (Chin. J. Physiol.) have found plantain to contain 1,500 mg. per cent vitamin B₁, the percentage increasing with ripening.

Vitamin C Requirement of Man

ARMENTANO (Z. Vitamin Forsch) has computed that the daily requirement of vitamin C is 45—56 mg., but this value should be increased in fevers and muscular exercise.

Todhunter and Robbi (J. Nutrition) have also found that a daily intake of 1.5 to 1.7 mg. of ascorbic acid per kilogram. of body weight is necessary in adults in order to maintain saturation.

Garlic for Asthma

GARLIC is a cure for asthma as discovered by a doctor in the eighteenth century, who made a handsome fortune by it. The bulbs are boiled until they are quite tender and then dried in a cloth. An equal amount of the strongest vinegar is added to the liquor in which the bulbs are boiled with enough sugar to make a syrup, which is poured over the bulbs. The patient should take one or two before breakfast regularly each morning and he should soon get relief.—*Municipal Gazette*

Test of an Equitable Mind

AMAN's reaction to blame, to his own blunders and the other fellow's censure—there's the deepest test of any human, including yourself. No matter how brilliant you may be, how charming or versatile, industrious or loyal, generous or honest, you're a flop and you're doomed to failure if you can't admit that you are in the wrong, take the blame and then forget it.—(Phi Chi Quarterly).

Dangers of too much Athletics

ACCORDING to Dr. C. Wroczynski, of the League of Nations' health organization, two out of three highly-trained athletes suffer from excitability, cold hands and feet, constipation and acidity of the stomach. Over-training makes them liable to a breakdown in health; chills, boils, and more serious infections, such as typhoid and blood poisoning, are much commoner than in normal people.—*Good Health (Lond.)*

Truth

THE truth can always be had by those who desire it, but one must seek it for himself. That only which we have within can we see without. If we meet no gods, it is because we harbour none.—*Dr. Alcinous B. Jamison.*

Monstrosities

MONSTROSITIES, being unnatural and infrequent, arouse the curiosity of not only the professional class but also of the laity. Attempts have been made to explain the cause of such productions by all types of people. In consequence, there are many facts revealed about them, and many theories proposed.

In olden times, and even among ignorant and backward people of to-day, monstrosity is believed to be caused by the supernatural, the gods or the evil spirits, the stars or the moon. Consequently, many superstitions connected with the period of gestation are found. Thus a pregnant woman is to avoid certain dates or even hours, certain places or people. She is to omit certain kinds of food, and cease doing certain kind of work. She is to wear or carry with her certain articles to protect the growing embryo from any supernatural displeasure and any injurious influences of the moon or stars.

Causation by maternal impression is another theory that has a strong hold not only on non-scientific people, but also on scientific people as well. Pregnant women are to be protected from sudden shock, fear, or excessive excitement. They are to avoid visiting theatricals; and they should not visit an unfinished house the disorder of which may leave an impression on the mothers and so produce some malformations in the developing embryos.

Turning to scientific and present day theories, it is only necessary to mention a few of the more outstanding ones. They are disorders in embryology, pressures and poisons. Developments of the embryo in some cases are arrested by traumatism and mechanical pressure. In some others, poisons in the maternal circulation, such as syphilis, nutritional disorders, and endocrine disturbances are considered to be the causes of monstrosities. Nevertheless, every theory is still open to criticism and remains a theory. Study of embryonic pathology may lead to a solution of the mystery, and perhaps prevent, to some extent, the production of monsters in the future.

Early prenatal diagnosis becomes very important, as it not only means relieving the mother from wasting time, energy and bearing unnecessary suffering in order to carry an unfruitful pregnancy to term, but also saves her from other dangerous disorders. Therefore whenever the symptoms and signs are suggestive of an abnormal pregnancy, a medical man ought to be consulted.—(*Chinese Medical Journal*).

Creative Activity

NO man or woman can be wholly sound, psychically, who is not engaged in some form of creative activity. This may be anything from the primitive and basic business of bearing and rearing children to the building of a cathedral, and includes an inexhaustible variety of occupations and interests. Happy is the man whose heart and mind are eagerly engaged in his vocation!—*Clin. Med. and Surg.*

Blindness due to Venereal Diseases

CURRENT studies of the National Society for the Prevention of Blindness show that more than 25,000 blind persons in the United States, approximately one-sixth of the entire blind population, lost their sight as a result of syphilis or gonorrhœa. Records of schools for the blind in all parts of the country show that about 12 per cent of the blind children lost their sight through syphilitic infection, and about 8 per cent through gonorrhœal infection (a total of 20 per cent). Statistics relating to the causes of blindness in adults indicate that at least 13 per cent lost their sight as the result of syphilitic infection and at least 4 per cent because of gonorrhœa.—*M. Rec., New York.*

The Influence of Mother on Child's Temper

ALL mothers frustrate their children, but the mother of the sort I am describing, having no sympathy or patience, increases the inevitable frustration a hundred or thousand fold. Instead of sympathizing with the jealous child, she is angry, instead of comforting him when he is miserable, she gives him a slap, instead of joining in his play, she puts him to bed, instead of taking part in his phantasy life, she accuses him of lying. It is not that she uses any particular form of punishment or indulges any special cruelty. It is not that she says or does anything very terrible; but the way in which she does and says the ordinary everyday things of life is what seems to damage the child. When he is treated in this way, it seems to me small wonder that the child develops a greater degree of rage, jealousy and libidinal demand than the average. Bowlby John in "*Internat. J. Psycho-Analysis.*"

Cancer is Second in the List of Causes of Death

AN article, "What You Should Know About Cancer," appeared in *The Health Officer*, September, 1939. We abstract it as follows for the information of the lay public:

"Twenty-five years ago, it stood seventh in the list of causes of death. Now it is second, claiming over 140,000 lives annually—more than twice as many deaths as are attributed each year to tuberculosis. Only heart disease kills more people."

Principally a disease of adult life, it occurs most often between the ages of forty and seventy. Although it may affect any part of the body, it occurs more frequently in the female breast and genital organs; thus women are afflicted by cancer more often than men.

"Many absurd ideas regarding the relationship of diet to cancer are prevalent. Neither a high protein diet, a vegetarian diet, the ingestion of alcohol, nor over-indulgence in any type of food have any demonstrable effect upon the incidence of cancer. On the other hand, clinical evidence suggests that poor teeth, or lack of teeth, the ingestion of hot food and drink, irregularity of meals, and

gastro-intestinal diseases may be of some importance in the causation of stomach cancer."

Particular food substances, methods of food preparation and the use of certain cooking utensils—aluminium ware, for example—have no known influence upon the causation, prevention, or cure of the disease.

Cancer is not contagious, nor is the influence of heredity determined; but its exciting causes are known to be many. Chemical irritations, for example, exposure to heat, light, X-rays, or radium over prolonged periods of time, may start the abnormal growth of cells known as a cancer.

"Despite many claims, no reliable skin or blood test has been developed for the diagnosis of cancer. Much experimental work is being done, however, and it is hoped that a dependable test will in time be worked out. Physicians now depend for a diagnosis upon the microscopic examination, by a competent pathologist, of a small piece of the suspected new growth."

Under the heading "Danger Signals," the article lists certain symptoms which point to the possibility of cancer and these should lead immediately to a visit to a physician. These "signals" are:

1. Any persistent lump or thickening, especially of the breast.
2. Any irregular bleeding or discharge from any of the body openings.
3. Any sore that does not heal, particularly about the tongue, mouth, or lips.
4. Persistent indigestion, especially when accompanied by distaste for meat.
5. Sudden changes in the form or rate of growth of a mole or wart.
6. Pain is usually a late symptom—do not wait for it.

There are over 5,000 quack "cures" for cancer on record, according to the article, which further warns against the "sure fire" treatments advertised to cure all types of cancer by methods which are kept secret. The modern treatment of cancer employs surgery, X-rays, or radium, or a combination of these methods. No other instrumentalities are recommended.

Fear and ignorance of the nature of cancer prevent many persons from securing early treatment. It has been estimated that 25,000 deaths from cancer could be prevented each year if people were fully informed and took advantage of existing knowledge of the disease.

"So far as possible, one should avoid prolonged irritation to any part. Protection from over-exposure to the sun and wind, prompt repair of all birth injuries to the womb, permitting the breast to function normally, repair of jagged teeth, avoidance of ill-fitting dental plates, self-control in using tobacco, correction of chronic constipation—in short, elimination of unnecessary abuse of any tissue is a common sense method of helping to guard against cancer.—*Illinois Medical Journal.*

Convulsions

THE term "convulsions" covers a great number of widely different conditions. Broadly speaking, they are of two main forms—those which are a synonym for epilepsy and those of infantile convulsions.

Epilepsy—This condition was traced by our ancestors to the influence of heavenly bodies or to the invasion of the patient's body by a demon.

Its causes and also its manifestations are most varied. At the one extreme, there is the full and fledged fit (*grand mal*) and at the other end, there is the brief moment of mental confusion with automatic acts which easily escape notice. Transient loss of consciousness without convulsants is commonly known as *petit mal*.

The majority of epileptics, when given a proper chance, are able to live fairly normal lives, and the tendency towards mental deterioration can in some measures be combated by the maintenance of interest in life and by sensible adjustment to the environment.

The hereditary factor must not be ignored, although popular opinion has much exaggerated its importance. Predisposing causes of epilepsy than birth injuries and accidents involving the brain later in life are certain infections, such as meningitis, encephalitis, syphilis, etc. Lead and alcohol poisoning may also predispose to epilepsy.

Once a tendency to epilepsy exists, a convulsion may be brought on by almost any irritation or stimulus—constipation, eye strain and the whole gamut of emotional storms.

Therein lies the clue to preventive treatment. The patient whose environment is harmonious and whose physical and mental health is maintained at a robust level, may pass months or even years without a *grand mal* attack. The diet should be varied and, in the case of children, rich in fats and poor in starchy food is often very beneficial. Drugs are best left to the doctor's decision.

Infantile Convulsions—At a discussion held in Paris a few years back, it was discovered that infantile convulsions were declining in many areas, thanks to the educational activities, to pre-natal and post-natal welfare and to the campaign against alcoholism.

The public are firmly convinced as to the importance of the part played by the teeth and intestinal parasites in the genesis of infantile convulsions. Many mothers ask the question—"Are the convulsions serious or not: are they the forerunners of epilepsy or some other serious disease of the brain?" The answer is reassuring.

The convulsions which overtake a child between the third month and the third year of life nearly always pass off without serious consequences. A few infantile convulsion subjects become epileptics, but most infantile convulsions lead to nothing.—*First Aid*.

The wish to be cured is of itself an advance to health.—SENECA.

Diet in Pregnancy

IN an analysis of the chief causes of maternal mortality we find that toxæmia is one of the chief contributory factors, and for this reason much attention has been paid during the past few years to deficiencies in the diet of the expectant mother as a cause of toxæmia.

The nutrition of the expectant mother is of the utmost importance if we are to maintain a high standard of health and prevent a high rate of maternal mortality and morbidity.

The chief cause of food deficiency and malnutrition is poverty. There is little choice of food, and the protective foods such as fresh dairy produce and green vegetables are prohibitive in price. Bread is eaten because of its bulk and comparative cheapness.

The food supply may be adequate but ruined by bad cooking. If we are to improve the condition of the expectant mother, we should enforce a knowledge of cookery upon the future mothers of the nation.

Too little attention is paid by the medical profession to the preparation of foodstuffs. Expert advice by dieticians should be given as to the various food values, selection and buying, and the proper storage, the deterioration of foodstuffs by prolonged cooking and keeping.

Among the better class of people, there is a tendency to over-indulgence in rich food and this throws too much strain upon the digestive and excretory organs in pregnancy.

The popular, but dangerous, fallacy that the mother must "eat for two" is one which leads to many complications in pregnancy.

Milk contains calcium and protein and is therefore a valuable protective food, but should not be taken to excess. A pint a day is adequate. Care must be taken that the milk supply is free from infective germs, and if it is impossible to obtain "safe" or pasteurized milk, the household supply should be boiled at once on admission. The argument that the vitamin content is destroyed does not deserve comment, as the gain in safety from such diseases as tuberculosis and scarlet and typhoid fevers is surely sufficient proof.

If the diet contains fresh fruits and vegetables, those make up for the slight destruction caused by boiling the milk. Milk from herds fed on sunny pastures has a higher vitamin content than from stall-fed animals.

Fats in the form of butter, cream, oils are necessary, but should not be taken in excess in pregnancy, as patients may complain of heartburn. Reduction of fats, also by baking food in milk instead of frying, together with dry meals as a rule cure this complaint.

The expectant mother should walk two to three miles daily.—*National Health Review*.

Learning is an ornament in prosperity, a refuge in adversity, and a provision in an old age.—ARISTOTLE.