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Health

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EDITORIAL

The Holy Ganges.

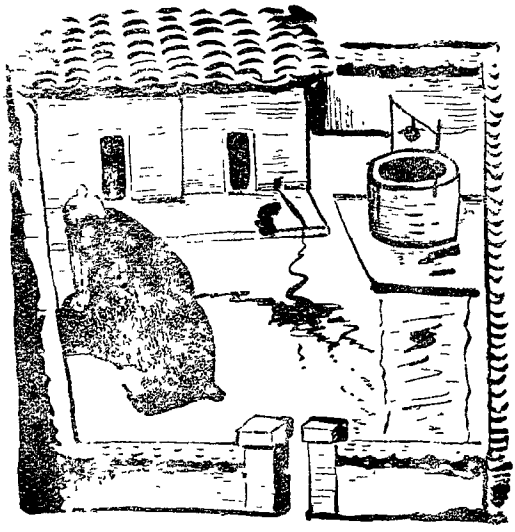
Elsewhere we reproduce an interesting article from 'Good Health', London (Feb '34 issue) under the caption 'Is the water of the Ganges Holy'? for the edification of our readers. The learned writer of the article, Dr. C.E. Nelson, is surprised to find that the water of the filthy Ganges-filthy, certainly, from the point of view of the sanitarian—remains fresh all the way in the ships that sail from Calcutta to England, taking this water for consumption. For us, however, it is no surprise. In India we know that the water of the Ganges is always pure and fresh, no matter for what length of time it may be kept and the river has been held sacred from remote past. The Vedas have sung its praise, the Puranas have spoken highly of this river, and Lord Sri Krishna Himself has said in the Bhagavat Gita, "Of purifiers I am the wind . . . . . ., of Streams, the Ganga am I".

Before we begin to comment on the scientific aspect dealt with in the article in question, we must confess, to our shame, that the water of the Ganges is being daily defiled, not merely by the millions of devotees who bathe in the sacred river with good, bad and indifferent health, but also by the throwing in of innumerable corpses of human beings that die of various infectious and communicable diseases, for the supposed salvation of their souls and the letting in of all the sewage and filth of the many cities and towns that are situated on its banks. The Hindu religion never countenanced such abominable and unhygienic deeds nor the Hindu Shastras ever permitted the defilement of water under any circumstances. On the other hand, our

Shastras enjoin• that no · filth of any description shall be mingled with water-supplies. "One may not discharge into water (water according to Srutis are Divinities) either urine or ordure or spittle or anything smeared with (what is) unclean or blood or poisons (natural and artificial)" — so runs Manu's Ordinance.

Further, the laws of Manu teem with minute directions as to the collection, retention and withdrawal of water in a pure state and it is most unfortunate that as a result of later-day perversion and misreading of the shastraic injunctions, there has been a wholesale pollution of rivers. We ask, what has the Government of the day done to prevent the pollution of river waters? Why should not the Government forbid the burning of corpses on the Ganges ghats or the throwing in of corpses in the Ganges water? If religious neutrality and non-interferance in religious beliefs of the Hindus is the answer, then how does the Government justify the abolition of the Sati to save the widows from self-immolation and the promulgation of the Sarda Act to save the maids from early marriage and consequent early widowhood? While we gratefully acknowledge the efforts made by Provincial Governments and the Local Bodies in India to provide the urban population with pure, constant and copious supply of drinking water, we cannot but deplore their neglect of the rural areas, whose teeming millions drink nothing but sullage and fall easy victims to water-borne diseases such as Cholera, Dysentery, Diarrhoea, Typhoid &c. It is a pity that even the Gods are against these helpless beings and have not provided them with water of the Ganges variety for their daily use. Inscrutable indeed are the ways of Providence!

Now coming to the scientific aspect, we would like to take our readers back to the days of our ancients, when science and religion were intermingled. That great law-giver and sanitarian, Manu, classified water into 5 divisions, according to its grade of purity viz. (1) stagnant water (2) well-water (3) spring water (4) tank water and (5) river water. "Stagnant water is more pure (and purifies more effectually)



Insanitary surroundings defile well-water.

than water taken out of a well or the like; the water of a spring is more pure than that of a tank; the water of a river is more pure than that of the former". The purity of stagnant water has been scientifically justified by Dr. Frankland's observations on the enormous bacteriological purification of water, following rest in reservoirs. The well water, spring water and tank water are pure so long as the surroundings are kept clean. As to river water, it is pure, because it is purified by its current. This is what Manu says:—"By

earth and water, what is to be purified is made pure; *a river becomes pure by its velocity . . . . .*" With this statement, modern investigators fully agree. Researches on the Dee, Isar and Jumna show the purification is effected at varying rates. But according to the laborious investigations by 'Hankin', the water of the Jumna is purified with singular rapidity. The Ganges water evidently becomes pure instantaneously. Lt. Col. King I.M.S, late Sanitary Commissioner for Madras made experiments with the Cauvery water years ago and demonstrated that a flow of about 18 miles would be necessary before water once contaminated by choleric matter freed itself of infective power. So, the theory of river water being purified by velocity, which Manu propounded, several thousands of years before the birth of Christ, when perhaps the modern civilized nations of the world were in the womb of Nature, has been scientifically upheld. Now, Dr. D. Herelle's researches have brought 'Bacteriophage' to the front. Another recent research made by an Indian Scientist declares that the Ganges water contains only .03 per cent of Iron, calcium, phosphates, silicates &c., but none of the impurities such as chlorides, sulphur &c. Hence its power of immunization. More researches are being made and the mystery of the purity of Ganges water still remains unsolved. No wonder then, the Ganges is said to be Divine, and millions flock to Benares to have a dip in that holy river to purge themselves of all their physical, mental and moral ailments!

The importance of Health Visiting in the early detection and Prevention of Tuberculosis*

By

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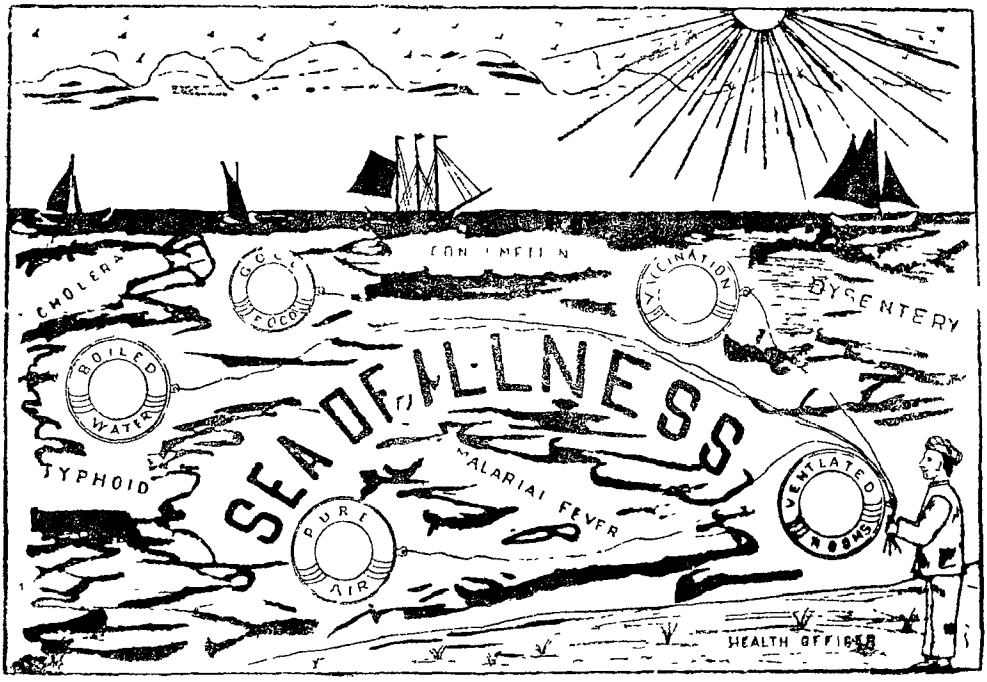
The Health Visitor, when functioning with tact, patience and sincerity constitutes one of the most important factors in the maintenance of the public health. The health visitor combines in himself or herself the manifold duties of teacher of the household, messenger of health, and the pioneer in the work of notification and collection of health statistics. In the case of tuberculosis, the importance of the health visitors' work is most pronounced beecause by its very nature the disease is often so insidious that the medical man and health officer have much fewer chances of coming into contact with the latent and incipient cases than the health visitor. India is still so far behind modern countries in the matter of public health and sanitation that the statistics regarding even the mortality from tuberculosis are quite unreliable. Bearing in view the fact that the vast majority of cases of

* *Being the radio Lecture No 9 delivered last year and specially sent to the Health for publication.*

early tuberculosis make a natural recovery, it is very difficult to estimate the prevalence of the disease in any population, unless a very close contact is established between the health officer and the public through the agency of the health visitor. The degree of prevalence of tuberculosis in a community is an index of the general health efficiency of that community and though the mortality rate bears a fairly definite ratio to the prevalence of the disease, the latter affords both by its general extent and by its variations in different areas, a reliable basis for the adoption of measures for the improvement of health conditions in the localities concerned.



The duties of the tuberculosis health visitor can roughly be classified into 1. early diagnosis, 2. advice as to adoption of domiciliary treatment 3. education in the matter of prevention of spread to others and 4. general instruction on the subject of healthy living with a view not only of curing the existing condition of early disease, but of preventing the occurrence of it in the healthy individuals, especially, the children in the house.

Health visiting requires considerable tact, patience and sympathy especially in this country where due to ignorance and suspicion, the health visitor is not likely to be a welcome visitor in the home to which he or she is a stranger. The health visitor should try and obtain a quick and accurate conception of the sanitary conditions of the house visited and form a correct idea as to how tuberculosis has gained a foothold therein. Conditions of ventilation, cleanliness within the rooms and in the surroundings, food conditions, amount of air space per individual, destruction of discharges when an open case of tuberculosis lives in the house, should each and all engage the attention of the Health Visitor and adequate advice to suit the economic conditions of the household should be given with sympathy, prudence and gentle persuasion.

The patient should be given the best ventilated, airy and naturally lighted room of the house and where a room does not exist should be advised to remove to a hospital or other institution or made to live in a temporarily constructed open, thatched structure in the open area outside the house some distance away. There must be free cross ventilation in the patient's room, the windows facing south and north, the direction in which the natural breeze blows in most places in this country. The patient and others as well should be asked not to cover the face when sleeping. The cups, spoons, saucers and other utensils used by the tuberculous patient should be boiled thoroughly in water in which a little washing soda has been dissolved and the clothes soiled by the patient should be steeped in 1 in 20 carbolic lotion or other disinfectant for 12 hours. The patient's room should be daily mopped with a cloth soaked with lotion and not dry swept and the dressings etc., used for the patient should be destroyed by burning them. The patient or better an intelligent attendant should be given clear instructions regarding the recording of temperature, weight etc., and the patient should be advised to keep at perfect rest in bed and cough as little and as gently as possible, as otherwise the infection is apt to spread and the disease get worse. The food of the patient should be of a highly nourishing and digestible character with good protein and vitamine content and he should therefore be made to take milk, curd, butter, eggs, fruit, vegetables along with rice or bread, the non-vegetarian patients being made to take meat, and fish as well. It is essential that the stomach should have as much rest as possible and the patient should therefore be instructed not to take food more than four times a day or of a quality which might injure the functions of his stomach or bowels.

Bodily and mental rest constitute a most important part of the patient's treatment and when the temperature has come down to nearly normal as a result of treatment, graduated walking exercises should be taken in accordance with medical advice. The tuberculous patient should be prohibited from attending dramatic, cinema or other performances indoors as the stuffy air is apt to do him harm. Out-door recreations and hobbies should be enjoined during convalescence and after recovery. The physical exercise involved should not extend to the point of fatigue and overstrain of every kind should be strictly avoided.

An important duty of the health visitor is the co-operation he or she should give the health authorities in statistical work. In judging health conditions and devising remedial measures it is quite essential that the degree of infection and disease should be accurately estimated and the health visitor with the special equipment of the knowledge of the signs of early tuberculous disease in its various manifestations e. g., tuberculous disease of the lungs, glands, bones, joints, skin, bowels, abdomen etc., ought to be able to notify the medical or health authorities, regarding suspicious cases confirmed by the latter by a regular examination. All advice regarding attending a tuberculous dispensary for systematic examination and detailed

advice should be given to the members of the household showing suspicious signs without creating any distrust or avoidable inconvenience to the family.

The health visitor is the pioneer of health in all communities and his or her duties should be discharged with a keenness, self-restraint, sympathy and patience worthy of the nature and importance of the responsibilities that the health visitor is called upon to discharge.

Eyes as a Causative Factor of Headache

By

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HEADACHE is one of the most common complaints met with in every day life of an individual and yet one is surprised to see how negligently one deals with this apparently trifling complaint, leading at times to serious results.

One of the factors in misleading the public to neglect this, is the modern business schemes of high sounding advertisements of the various patent medicines, claiming to cure the various maladies like a charm. Majority of the persons suffering from headache will give you the history that they have already tried "Aspirin" and its various "cousin sisters and brothers" available at the patent medicine vendor's stall, and yet they are not relieved of their headache. It is only after failing to get relieved by all sorts of their own treatment, that they are forced upon to consult a medical man, but many times they are too late and pay the penalty of their own negligence. The idea of these lines is merely to stress before the general public, the significance and importance of the care of the eyes in cases of headache.

There are various factors in the human system which lead to headache, but out of them the eyes form an important group to invite individual attention. The headache due to the eyes may be directly originating from the eyes or the root cause may be somewhere else yet one may feel or refer the headache to the eyes. In spite of the eyes being the root cause of the headache, one sees externally no indication whatsoever in the eyes to direct one's attention. Externally the eyes look perfectly normal and in a sound condition. It is these types of cases which are neglected. The cases where eyes get sore etc., usually seek an early medical help.

If one knows what a delicate machine the human eye is, one could easily understand, how it gets out of order and causes the trouble. In man the visual mechanism has reached its highest development. The nearest mechanical contrivance to understand the construction of the eye is the photographer's Camera.

The intrinsic parts in both are similar:—

Camera	Eye
1. Focussing lens. (outside)	Focussing lens. (inside the eye)
2. Diaphragm.	Pupil.
3. Focussing glass Screen or sensitive plate.	Retina.
4. Mechanism to get proper focus of the picture on the plate by shifting backwards or forwards of the lens from the glass slide or plate.	In the eye this shifting is not possible, but it is done instead by changing the curvature of the lens, by contractions of small muscles.

The principle underlying is the same, but the results are obtained in the eye by slight changes. The lens of the eye is situated inside the eyeball and has a capacity of changing its refracting power, by contraction of its muscular mechanism which is known as accommodation. The pupil is automatically regulated by its own muscles, varying in size according to the amount of light prevailing. Lastly there being two eyes there is another factor added, viz. co-ordination in all its movements so as to obtain a single binocular vision, controlled by the muscular and nervous mechanism of the human system.

In a normal eye these three mechanisms, viz. Refraction, accommodation and the co-ordination of the two eyes to get a single visual-picture, work harmoniously. There is no other organ in the body which shows a finer or a more intricate structure than that of the human eye and there is none other from which a more exacting function is demanded than the eyes. Being such a highly sensitive organ and so full of complicated mechanisms, as it is the rule with all the complicated systems, it has its defects viz. less resistance it can offer to the wear and tear than the crude mechanisms. Modern civilization and struggle for existence put an exorbitant demand on this complex mechanism and the eye is by no means able to cope with them. The result is eye-strain. Eye-strain is the net result of the efforts put forth continuously by the eye to overcome small defects in the refractive, accommodative and the muscular mechanisms of the eye.

Headache is the commonest symptom associated with eye strain. This headache is met with in all grades of severity from slight heaviness to the most excruciating and splitting headache preventing sleep and proper rest. The area of the distribution of pain also varies from the eye brows in the front to the back of the head. It may remain localised to one area or be distributed all over the head area.

Errors in the refractive mechanism of the eye are the most common cause of this headache and associated with it, the muscular in-coordination aggravates the condition. This type of headache is often excited by looking at a series of moving objects—theatres, driving, train journey, riding etc. The only remedy to get rid of this headache is to correct the refractive error by means of suitable glasses prescribed by a competent ophthalmic surgeon, after a thorough examination.

Besides the above errors there is another disorder originating from the disturbance of the circulatory mechanism of the fluids of the eyeball, viz. glaucoma. This usually affects elderly persons after the age of 35, failing vision and other visual symptoms being associated with the headache. A systematic examination by an oculist reveals this condition which deserves to be treated by him.

Another important factor of rest to

the eyes, just as to any other organ of the body is also essential, after a long period of reading or writing. A regular outdoor life, good general health associated with simple nutritive diet, which go a great way to the well-being of any organ, also stand true in the case of eyes.

Role of Insects in the Propagation of Diseases

By

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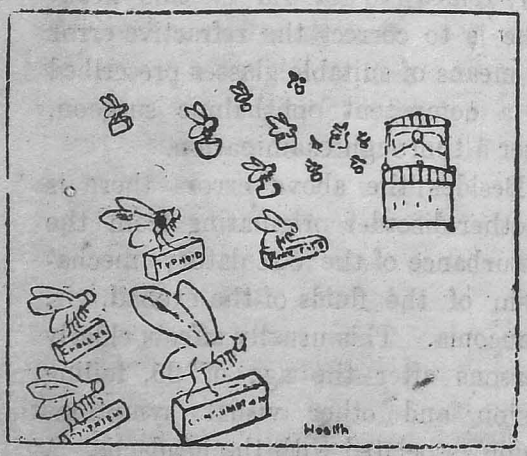
WE meet with myriads of insects in our daily life. Some of them are well known vectors of diseases. We should be acquainted with these enemies of mankind so that we may be careful to avoid them. Their number is legion. I wish to point out a few of them only, noting in brief some of the preventive measures.

1. **Flies.**—Flies breed in the filthy places. They feel the same craving both for the food we take and for the excreta we give out. They carry infection of diseases from the excreta to the food and thus cause diseases. They

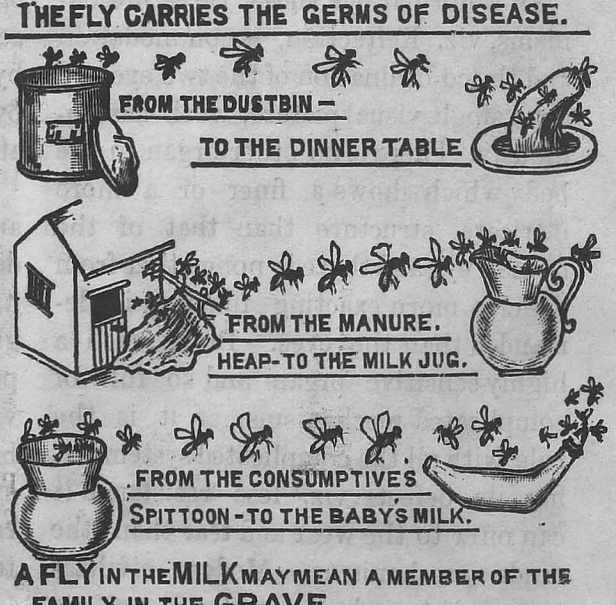


may cause: Cholera, Typhoid, Dysentery, Diarrhoea, Erysipelas, Ophthalmia, Diphtheria, Smallpox, Sores etc.

Prevention: Care of the breeding places, use of the Borax and other chemicals to destroy the larvae, destruction of the adults by poison e.g., Formaline; by fly-paper, fly trap and protection of food from their contamination.

2. **Mosquitoes.**—They breed on water. The adults suck blood and thereby spread diseases from one person to another. The female Anopheles mosquitoes carry Malaria, one of the most prevalent diseases and scourge of our country.

The species, Culex mosquitoes spread Filariasis. The Stegomyia group



of mosquitoes spread Dengue and Yellow-Fever.

Prevention: Destruction of their breeding places. Screening and use of Volatile substances to keep them away.

3. **Fleas.**—They breed on the hair of the host animal, generally, rat. The adults suck blood. They spread diseases during sucking by regurgitating some blood from their mouth, full of bacilli, inside the body of a person.

The Xenopsylla Cheopsis group of fleas transmit the bacilli of plague from rat to rat and from rat to man.

Prevention: Destruction of rats and destruction of fleas. Kerosine and other chemicals are used to destroy the fleas.

4. **Lice.**—They breed on the hair of animals. There are three varieties of lice, (*a*) head lice, (*b*) body lice, (*c*) pubic lice.

The head lice live on the hairy head. They come from the head of one person to the head of another. The body lice live on the surface of the body of a person and they live on the undercloth-ing. The pubic lice live on the pubic region of the body. All of them are blood suckers, and live on human blood. They are not direct transmitters of diseases but various germs of diseases may gain entrance through the scratching formed as the effect of bite. They spread Typhus, Relapsing fever and Skin diseases.

Prevention: Cutting of hair; use of some antiseptics, boiling of the garments in water, clean habit.

5. **Bed bugs.**—They are domestic insects, they live in the chinks of furnitures. The odour given out by them is peculiar; they are blood suckers. They may continue their existence for a long time without taking any food. They are carried from one place to another in the clothings. The bite is irritating.

They are suspected to spread a few communicable diseases viz., Kala-Azar, Relapsing fever, Leprosy, Plague etc.

Prevention: Use of kerosine mixed with Benzene or Turpentine applied to the chinks. Corrosive sublimate lotion may be used in the same way. Scalding hot water kills them. Fumigation with sulphur, and Hydrocyanic acid is effective.

6. **Black-beetle or cockroach.**—They generally live in the kitchen, privies and similar other places. They live on food material of all sorts, as well as dead animal matter, wollen and cotton cloth.

They spread infection of diseases by contamination.

Prevention: Fumigation with sulphur, poison viz. Sodium Fluorid, Plaster of paris mixed with flour; Sanitary improvement.

7. **Ants.**—Their habits are well known. They contaminate food and thus spread diseases.

Prevention: Keeping food in ant-proof cases.

8. **Sand-fly.**—They live in cow sheds and in similar places. The body and the wings are hairy. The adults suck blood.

They spread diseases like Kala-Azar etc.

Prevention: General sanitary improvement, use of fine mosquito curtain.

Brahmacharya

or

REGULATION OF SEX-LIFE

By

ASHUTOSH ROY, L.M.S.,

Hazaribagh.

One of the soundest advice on Public Health in ancient Hindu shastras was "*Brahmacharya*" or regulation of sex-life of an individual.

(1) **Strict Brahmacharya in Student life:** In the old days, every boy and girl student was advised to practise strict "Brahmacharya," stating its benefits. A student was enjoined to concentrate his entire energy and attention to study and not to divert these on matters sexual. As a result of such teaching, sexual abuses and perversions were almost unknown in our country. These vile practices upset bodily and mental health considerably during the growing period of life. In the present crisis through which India is passing in every sphere of life, it is very desirable to impart to our students some general (not sectarian) moral instructions including sex-knowledge and the practice of strict "Brahmacharya" for National well-being and uplift.

Unfortunately, sex-instinct develops much earlier in our tropical country and this is strongly fanned by amorous books and amorous cinema scenes and sexual abuse has thus become more common not only amongst our boys, but even amongst our girl-students (a thing unheard of a quarter of a century back). There is a talk of introducing co-education in our country, for good or bad. It is all the more necessary at present to instruct about the advantages of strict "Brahmacharya" before boys and girls are allowed to mix promiscuously in class-rooms and outside. Otherwise there will be plenty of romance in our humdrum life, much undesirable from the national point of view in the land of "Sita" and "Savitri". Once the national ideal is lowered, it is bound to reflect adversely and bring on chaos and confusion in society.

(2) **Restricted Brahmacharya in domestic life:**—Ancient Hindu wisdom teaches the practice of restricted "Brahmacharya" in "Grahasta-asram" (domestic life). Although child-marriage was introduced later on, due to changed circumstances of the country with the advent of foreigners as conquerors and traders, it was something analogous to betrothal in the west. A child-wife after marriage was not brought to the father-in-law's house, until she grew older and attained puberty, when a religious ceremony was performed in that connection. The life of a Hindu was a life of Religion, throughout from birth to death. The various socio-religious and sanitary laws were promulgated amongst the mass of the illiterate people in the name of religion, which they now dared to disobey.

The holy object of wedlock was diffused amongst the people and marriage was not considered as merely a means of enjoyment of carnal desires and passions. The husband used to meet his wife after he had finished his education and entered the life of a house-holder. It was enjoined in Ayurved to have sexual connection with wife only once a month, after the monthly flow is over, on an auspicious day in

order to beget a healthy child and to stop any more connection sexually, till not only delivery but also re-establishment of the monthly flow. Artificial feeding was then unknown and unnecessary.

3. **Artificial Birth-control *vs* Brahmacharya**:—In these days of increasing economic difficulties, it is a positive sin to have too many children and birth control and its benefits have been widely recognized in the West as well as the modernized East. The question is whether we are to follow modern artificial methods of birth-control as broadcasted through the platform and the press in the west or practise restricted Brahmacharya and broadcast such knowledge, the ancient ideal of our country? Even the modern west is recognizing the ill-effects of such a doctrine being broadcasted, which may be briefly stated as follows:

(1) Being an artificial procedure it affects physical health of both parties.

(2) It stimulates sexual enjoyment without the responsibility of parents towards their children. It thus induces irresponsibility amongst young men and women, leads to promiscuous vice and immorality. It is thus very dangerous to place this instrument of physical and moral deterioration in the hands of ardent young men and women.

Until the knowledge of regulated "Brahmacharya" is re-introduced and diffused amongst the people, from adolescence, they will not be able to exercise any sort of self-control. Knowledge of modern methods of birth-control should not be openly broadcasted, but should be imparted by the medical profession only to those parents who really need or deserve them on account of ill-health or extreme poverty which compels restriction of families, as the joint-family system of the Hindus (the co-operative credit Society in the family) is fast disappearing under changed circumstances.

Brahmacharya is self-control:—Strong sexual instinct is no doubt a sign of rugged physical health, but it can be kept up and thereby longevity increased, if one abstains from sexual abuse and sexual excess. Strong sexual instinct can only be kept down, when the mind is fully pre-occupied in Religion (as in the case of a "Yogi" or "Fakir"), in study (as should be the case with the student) or in ambition (as in cases of successful business or professional men, politicians, athletes, scholars and research-workers, religious teachers etc.) The main question is wedded to a great cause or a great ambition and his mind is so pre-occupied that he has no time to think of sexual matters. He has thus sublimated his strong primitive desire and naturally exercises Self-control.

Medical Explanation of advantages of Brahmacharya:—The sex glands have got two secretions, one external ("Birjya") and another internal ("Ojha")-They are in reciprocal relationship. Sexual excess leads to diminution of "Ojha," the vital body-fluid.

Prof. Dixon has analysed "semen" and found it to contain natural (organic) glycero-phosphates of calcium and some other minerals, organic fat, organic

protein and organic sugar. It is thus the best nervine food and loss of it leads to nerve-deterioration and nerve waste, deterioration of body and mind, decay of health, increased susceptibility or lowered resistance to all kinds of infections. One of the potent causes of increased Tuberculosis, and increased infant mortality, in their ultimate analysis may be found in sexual errors and perversions in early life and sexual excesses later on.

Syphilis and Eye Troubles

By

S. M. DAVE, L.C.P.S., (Bom.),

Mogal kote. Nadiad.

SYPHILIS now-a-days is a very common disease. In private general medical practice, patients of syphilitic infection as a routine measure are very common, in one form or the other. With the spread of western civilization in India this western disease, syphilis has spread among the urban and rural population of the country. India got western civilization and syphilization side by side. The Indian standard of morality has lowered in this age. Since syphilis has entered in a section of civilized population, it has gained a name—"Gentlemen's disease".

Syphilis is a great scourge to the humanity. A person who commits a crime suffers not only himself throughout life, but he gives sufferings to his progeny as a parental property, and makes them unhappy for ever; just like a father who gives a great amount of debt to his sons as an ancestral gift.

Syphilis is a subject both of importance and interest to all shades of professional persons as well as laity in India. It is a vast and extensive subject and connot be fully discussed in a short essay like this. Only most common and important features of common eye complications in syphilitic infection will be dealt with here.

Syphilis is the causal factor for about 2 to 3% of all troubles of the eye. Both eyes are afflicted in 50% of cases.

When we look to the ball of the eye, we see the white outer covering which is called sclera; and in continuation of it, a raised watch glass shaped black portion called cornea. It is transparent and black colour is due to the diaphragm like curtain with a hole in the middle named iris. This is a muscular structure and is connected and continuous with a vascular structure-choroid which is behind the sclera.

When a person gets a syphilitic ulcer, mostly on or near the generative organ by impure connection, (either party, primarily infected), this is called acquired syphilis.

Iritis.—Iritis is an inflammation or swelling of the black curtain in the eye, often is due to acquired syphilitic

disease after the primary stage has passed away.

Symptoms:—Pain may be little or may be very severe; there may be vomiting and fever; running of water from the eye and photophobia-fear of light. A diffuse rose red colouration about the cornea, impairment of sight and pus in the front compartment of the eye are the few signs out of the host of symptoms.

The popular form of iritis is a very characteristic form of syphilitic iritis. Very small papules are formed at the free margin of the pupil, which is greyish yellow. These papules occur in the second stage of syphilis. There is severe pain and redness in the eye. Firm nodules indicate syphilis of old standing.

In 50% of these cases vision is impaired. Relapses are dangerous.

Treatment:—A man who has suffered from primary syphilis and gets above-mentioned symptoms in his eyes, should at once consult his doctor and inform him about his previous syphilitic disease; so that proper steps can be taken to preserve the eye-sight without wasting the time.

Keratitis.—It is the inflammation of the cornea. It is an important manifestation of congenital syphilis. It is a disease of first part of life from 5 to 20 years of age. It is twice as common in females as in males.

Symptoms are haziness of the cornea, pain in the eye, watering of the eye and photophobia, severe sneezing and redness with other signs of syphilis: history of miscarriages in the mother of the child, prominent forehead, depressed nose and fissure marks at the angle of the mouth; syphilitic teeth, deafness, and deformity. A trivial injury of the eye may light up the attack.

In such cases proper treatment should be taken.

Syphilis also attacks the inner structures—retina, optic nerve, choroid, eye muscles etc; and produces swelling and bleeding in the eye and thus causes permanent blindness if proper treatment is not taken in time.

Once a mistake, everlasting is the consequent suffering.

Digestive Disorders of Infants.

By

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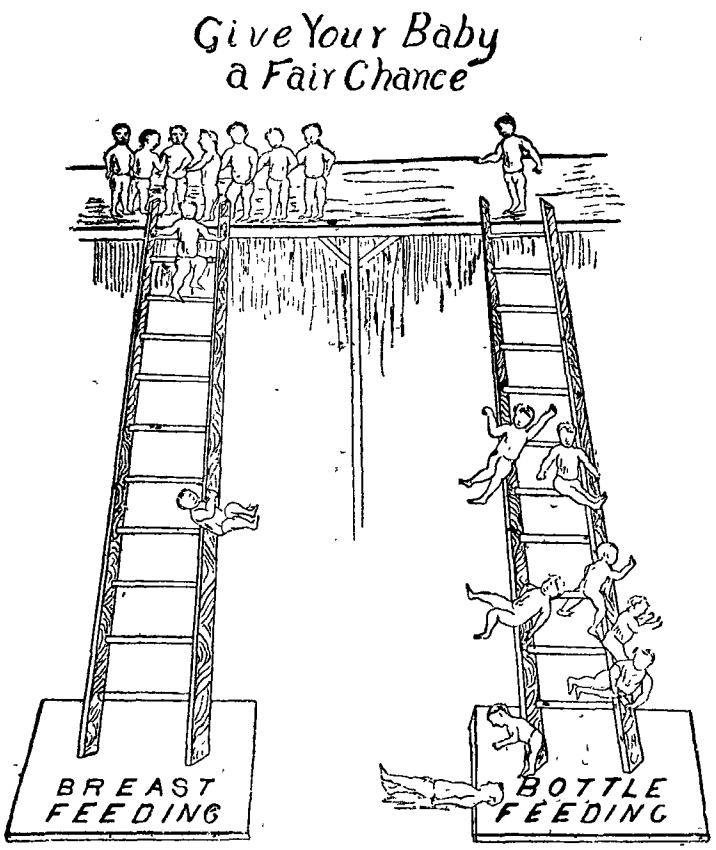
In a vast country like India with its appalling infant mortality, towards which gastro-intestinal disorders contribute no mean share, a knowledge of the nature of different digestive ailments of infancy together with their household treatment is of no small importance. Intimately connected as the question of infant feeding is with the digestive disorders of infants, the subject becomes all the more important as owing to the chronic economic distress of the masses and their sad lack of knowledge of element-

ary principles of hygiene, a deplorable carelessness, particularly in hand fed babies, with its consequent disasters, is exercised by the literate and the illiterate alike. The babies reared on the breast are undoubtedly less liable to digestive derangements than the artificially fed infants, amongst whom the mortality, too, is about 5% as against one percent only amongst the former. A description of some of the every-day met disorders of digestion of infancy will be read with advantage; and I propose to deal with them hereunder according to their prominent symptoms:—

Flatulence and Colic.—These two conditions are extremely common in infancy. The accumulation of flatus in the stomach or intestines is almost invariably the result of improper feeding. It may either be due to an excess of either casein, starch or sugar, or it may result from the food being given in too large quantities or at too short intervals. Flatulence may also be due to air drawn into the stomach by sucking at an empty bottle or at a preforated teat used as a comforter. But sometimes, no cause can be assigned, a child fed at the breast with all possible care may suffer from flatulence and colic. In these cases one can only suspect that the milk may not be so good as it looks. It may contain too much fat or the mother's health might have affected its composition. When colic occurs without flatulence, coldness of the extremeties and insufficient covering for the abdomen may be suspected as its cause. The presence of undigested food or hard masses of constipated faeces in the intestine may also give rise to colicky attacks.

Colic in infants is easily recognisable.—The child screams during an attack and draws up its legs, the muscles of the abdomen being hard and contracted. This may occur at intervals for an hour or more and then, perhaps, after the passage of the flatus the child becomes easier, or the screaming may continue until from exhaustion the child becomes quiet and falls asleep. These attacks are very likely to occur in the evening; the child being quite free from them during the day. When the attack is severe the child be-



comes pale or livid about the lips, there may be slight twitching of the lips or the eyes may be rolled upwards, or the limbs may become rigid and the fists clenched. In weak infants general convulsions may occur or they may be collapsed.

Treatment: In a breast fed infant the frequency and quantity of the feeds must be regulated, and any defect in the mother's health must be attended to. It is hardly ever necessary to take resort to weaning, but if the milk appears to be poor, it may be advisable to supplement it by hand feeding two or three times a day and continue suckling at other times. In artificially fed infants the diet must be carefully revised. Casein must be diminished or the curd made more digestible by dilution with lime water or barley water. Some of these infants may be suffering from the result of a diet which contains much starch, specially some patent foods, which should be avoided. The presence of hard masses of faeces may require a a Glycerine enema and subsequent laxative treatment. A tea spoonful of dill water given just before a feed or mixed with it may prevent the attacks. In all cases the abdomen and thighs should be warmly covered.

During the attack hot flannels should be applied to the abdomen and the child's position should be shifted frequently to encourage the passage of the flatus which may be assisted further by pressure or friction over the abdomen. The relief often times afforded to a child while lying prone on nurse's knee or shoulder is undoubtedly due to the pressure thus applied. A tea spoonful of hot water with a few drops of brandy may give relief and sometime a small tea-spoonful of salad oil may stop the pain. The use of opiates as well as soothing powders or syrups should as a rule be avoided.

Hiccough.—This is frequently troublesome in infants and specially during the first few months of life. It usually accompanies some digestive disturbance such as flatulence etc., often there is no cause to account for this spasmodic contradiction of the diaphragm. The attacks of hiccough sometimes occur daily and though not serious, are often very distressing to the little patient as well as its parents.

Treatment: When the attacks are frequent, the diet must be carefully considered, a slight alteration may stop the hiccough. The attacks may sometimes be shortened by frequently changing the baby's position, gently patting on the back or by friction applied over the upper part of the abdomen. A tea spoonful of hot water with 5 to 10 drops of brandy may prevent the hiccough in some cases; while in others a little lime juice or two drops of dilute sulphuric acid in a tea spoonful of cold water may be effectual.

Vomiting.—In infants who take their food greedily, whether at the breast or from the bottle, a little regurgitation of food during first 2 or 3 months of life is almost normal. A few minutes after or sometimes before the meal is finished these infants regurgitate without effort and without discomfort, a small part of the contents of the stomach. This vomiting is a sort of protective arrangement to prevent over distension of the small infantile stomach. This has no ill effect,

yet it should be checked as it establishes a sort of vomiting habit, which it becomes difficult to break.

The commonest cause of vomiting in infancy is gastric irritation which may be due to faulty feeding, the quantity, quality or the frequency of feeding may be at fault. Vomiting is not infrequently associated with diarrhoea, indeed it is rather rare to see a case of acute vomiting without some intestinal disturbance.

Apart from the derangements of stomach and intestines vomiting is very often a common symptom of the onset of many acute diseases in infancy. Vomiting may be acute or chronic.

An acute attack of vomiting is most frequently the result of acute indigestion. The child seems ailing, lies quiet and pale or cries with colicky pains. The temperature may be 101°F or 102° degrees F. Vomiting occurs at short intervals and lasts several hours until the stomach is emptied. Diarrhoea usually begins after the commencement of vomiting and lasts a day or two after the vomiting has ceased. In severer cases vomiting may continue even after the stomach has been emptied and mucous, sometimes bile stained, at others, blood tinged, may be vomited. In such cases diarrhoea, too, is severe and the general constitutional disturbance considerable. Attacks of acute vomiting are pretty serious in young infants and often end fatally; but in most cases the illness ends favourably. Infants who had suffered from these attacks are very liable to relapse with the slightest error in diet.

Chronic vomiting is particularly common in hand-fed babies, and is usually due to chronic indigestion. This sort of vomiting may persist for many weeks and there is often nothing to attribute it to except undue irritability of the stomach.

Irrespective of the cause of vomiting, a child suffering from attacks of vomiting soon begins to lose flesh and becomes pale and fretful. The appetite is either large or diminished, and there is pain and screaming after meals. The tongue becomes furred, bowels irregular—constipation alternating with diarrhoea. Unlike the regurgitation of food immediately after or during a meal described above, the vomiting of acute or chronic indigestion occurs a quarter or half an hour after a meal. In worst cases the child grows weak and emaciated, and death ensues from exhaustion, broncho-pneumonia or any other complication.

Treatment:—The vomiting described above is due to digestive troubles and all what one has to do by way of treatment is to carefully revise the diet. When it is a symptom of some other disease nothing need be done. In an acute attack of vomiting due to faulty feeding, evacuation of the irritant is necessary, which is often sufficiently accomplished by the vomiting. But it can be hastened by washing out the stomach or giving the child warm water in large quantities. In severe cases it is advisable to stop all food for some hours and then feed with small quantities at short intervals. A few drops of brandy in a tea spoonful of cold water or hot water may be quite enough for a few hours. Infants reared on the breast should be allowed to suck only for a very short time, or better still they may be kept

on whey or albumin water. Albumin water can be prepared by cutting up with scissors the white of one raw egg and shaking it with half a pint of water. It should then be strained and flavoured with cinnamon or dill water. After the attack of vomiting has passed off, the digestion is left much impaired, hence utmost care should be exercised in feeding the baby afterwards, else a relapse is very likely to occur.

In chronic vomiting, food is again the most important consideration. Sometimes another is successful and it is often necessary to try several foods before a suitable one can be found. Whey, peptonised milk and malted prepared foods are all useful at times. The food must be given in small qnantities and at short intervals. If the vomiting persists in spite of these dietetic measures, the question of washing out the stomach and giving sedative drugs will have to be seriously considered for which a physician's advice will be necessary.

Posture Training

By

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(Continued from page 49 Vol. XII, No. 2).

Round and Drooping Shoulders:—Good posture claims square shoulders. But how often do we notice people of either sex with round and fallen shoulders. The condition is often due to the defective habit of sitting and standing, at home and especially at school. More so, by faulty desks and chairs. Pressure of loads carried on weak shoulders is harmful. Children carrying slinged bags always on the same shoulder may also hurt it. Again, the spine may be involved. I know of a preaching Canon in Madras who has for years carried his evangelistic literature by his left shoulder and courted a permanent deformity.

Arrange chairs and desks so as to insure that the child sits in a good position. The important point in the treatment is to increase the power of the back and shoulder muscles. This is best done by the application of massage and exercise, the latter necessarily directed to extend the back. Guard against over-fatigue. The patient should lie on the back at night without a bolster and with a pillow well beneath the shoulders. The general nutrition and health should be attended to. This exercise, for example, is helpful; stand erect with feet slightly apart and raise arms above the head to verticle position; stretch the arms upwards with jerks and count 4, trying to touch the sky, as it were, on each count; and then jerk them backwards 4 times, feeling the muscle-pull all the while. Repeat a number of times. Do it honestly every day.

Hollow-Chest:—People with sunken chest are often met with. For example, adolescents up to the age of 16, who have a habit of continuous stooping, as in reading and writing. Weak sighted people stoop very low on their books. This induces hollow chest. One deformity leads to another. Agents causing round-shoulders and spinal deformities may also induce this condition. Cobblers and tailors do not present very

good chests. I have my doubts about cycling too.

Let young men and young women be bold and learn to walk straight and bear their heads in a becoming manner. Let people call you haughty and vain, but pay no heed to them. Take breathing exercises and callisthenic movements which open the chest and increase lung capacity.

Knock-Knee:—This is a deformity in which the knees touch with and rub against one another. It is a condition of fixed abduction of the legs from the middle line so that the patient walks with feet wide apart. Young children are afflicted due to the after effects of rickets. Thigh and leg bones are involved. Children of weak bones who have been allowed to run about too early are most liable to it. This occurs in young people under 20, of loose constitution, who carry heavy weights. Young nursemaids, bricklayers, smiths and porters are liable to it. Riders with short legs, like jockeys, may also be afflicted with this condition.

In children who have suffered from rickets, suitable weight-increasing diet should be ordered. Absolute rest is enforced; the limbs should be rubbed daily and such pressure and manipulation employed as will help to straighten the limbs. In older children splints may be applied, right from the hips to the feet. The treatment is slow but pretty sure. Let the knees yield out by slow degrees. When the correction is nearly made, complement the treatment by cross-leg squatting exercise just as sadhus do.

Bow legs—In this case the knees keep away from one another, while the ankles are in contact. Leg bones curve out like bows and look ugly. It, again, commences in early childhood. A common practice in vogue with mothers and nursemaids is to make premature attempts to teach the infants to stand up on their legs. This is due to an impatient desire to see their young ones walking about. But they are unintentionally doing a very great harm to the infants as their bones, being very soft and unprepared to receive the body weight, will bow out.

The best treatment is to be found in preventing this condition. In severer cases splints should be applied. Strengthen the muscles by massage.

Flat foot.—This is very common with young adults, exposed to long standing, over-fatigue or carrying of heavy weights, etc. Falls on the feet may injure certain tissues and ligaments and bring about this condition. The sole of the foot is flat and comes in contact with the ground throughout the whole of its extent.

Give rest and massage. Square-toed boots must be used, and the heels may be slightly thickened on the inside. Teach children to run on toes, with toes pointed forwards. Exercises such as rising well up on toes for a number of times are very effective. Muscles will regain their tone and grow strong.

Last, but no less important, is the consideration of diet. Our diet should contain all vitamins and bone building material. Malnutrition and undernourishment are ever adherent causes of Physical deformities. Calcium is one of the most important of all mineral constituents of food that makes bones It is plentifully found in milk, butter -

milk, cheese, whey, eggs, nuts, fruits, and green leafy vegetables. Derive the benefit of sun rays. Young folk should form the healthy habit of playing various games and taking Posture Training exercises.

To all who wish well of themselves, their children, and the State, I approach with the hope that they will co-operate with me in bringing about the kingdom of radiant Health and Physical perfection.

Is the Water of the Ganges Holy?

HOW INDIA'S SACRED RIVER HAS HELPED MEDICAL SCIENCE

By

C. E. NELSON, M.D , F.R.C.S., F.RI.P.H.

THE river Ganges is considered by the Hindus to be sacred, and they affirm that its water is pure and cannot be contaminated. We would consider it to be reeking with filth all the time for at Benares, the principal holy city in India, millions bathe in the river every day as a religious privilege and duty. Sewage, dead bodies, and all sorts of refuse are also thrown into it.

Yet it is a striking fact that ships leaving Calcutta for England take their water from the Hugli River which is one of the mouths of the filthy Ganges, and this Ganges water will remain fresh all the way to England. On the other hand, ships leaving England for India find that the water they take on in London will not stay fresh till they reach Bombay, the nearest Indian port, which is a week closer to England than Calcutta. They must replenish their water supply at Port Said, Suez, or at Aden on the Red Sea. Is it because the water of the Ganges is sacred that it will remain fresh during the journey from India to England, and is the water of the Thames so unholy that it will not remain in a fresh state until it reaches India?

Strange though it may seem, the probable answer is that the water of the Ganges remains fresh because it is so filthy. Certain recent bacteriological discoveries at least tend to prove the assumption.

During some of the cholera and dysentery epidemics in India, when the bodies of those dying of these diseases were thrown into the Ganges,a French physician, Dr. D'Herelle, observed that only a few feet below the bodies, where one would expect to find millions of these dysentery and cholera germs, he was unable to find any germs at all. He then grew germs from patients having the disease and to these cultures added water from the river. When he incubated the mixture for a period, much to his surprise the germs were completely destroyed. And if only one drop of this dead culture were added to another tube of live culture in a few hours the cultures would be completely killed. If a drop of the second killed culture were added to a third live culture they, in turn, would be killed, and so on through an infinite series of such experiments.

Instead of adding the water of the Ganges to the culture, Dr. D'Herelle

then decided to use faecal matter from patients who had just recovered from cholera. After obtaining the stool from these patients he would filter it through a filter candle, which does not permit germs to pass through. A drop of this material was then added to live cultures and they were completely dissolved in the same way as when he had added the water from the Ganges.

This new discovery suggested the possibility of its use in the treatment of patients suffering from cholera or dysentery. He would grow many billions of these germs in culture media and would obtain, either from the stool of patients that had recovered or from the water of the Ganges, this material or substance that would destroy these germs and add it to the culture. After the germs had been destroyed he would give it to dysentery patients and, much to his satisfaction, found that the patients would be cured within twenty-four hours. He applied the name "bacteriophage" to this magic material.

As Dr. D'Herelle continued his researches he found not only that cholera and dysentery germs could be destroyed by bacteriophage, but also a number of other germs would respond in the same way. Now they are being used in treating a number of diseases and suppurative conditions.

It is not, of course, possible to find bacteriophages for all disease germs. There are something over 2,000 different kinds of germs, but only about one hundred varieties of germs that actually produce disease conditions; the remainder are harmless. Of the one hundred varities there are many separate strains. For example, there are a great many strains of the common pus-producing germ, *Staphylococcus*, yet a bacteriophage that will work for one strain of staphylococci will not work for another strain of the same germ; and it is necessary to search for a bacteriophage for the particular strain that is causing the infection in order that it may be used in its treatment.

In this country we do not have to send to India for water from the river Ganges in order to get material to make bacteriophage. Many types of bacteriophage can be obtained from ordinary sewage. If, however, we are to obtain a cholera bacteriophage, it is necessary to obtain sewage from localities where there are cases of cholera.

Bacteriophage therapy has been successfully used in cases of Asiatic cholera, bacillary dysentery, typhoid fever, pimples, boils, carbuncles, summer diarrhœa of children, chronic suppurations, such as bone infection, pus infections of the urinary tract, peritonitis, and similar conditions.—*Good Health (London)*.

The Value of Cow Dung

Cow dung is used freely by most Indians for smearing their floors and walls. It is also used for anointing wounds and sores. Foreigners, observing this custom, called it a superstition. But science is proving that cow dung contains bacteriophages that eat up disease germs. Lt. Col. Webb, Director of Public Health in Madras, has been experimenting with phages taken from cow dung and used as a preventive against cholera. The results were successful:—*The Treasure Chest*.