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THE WAY TO EASY CHILD-BIRTH

WE have, in our previous issues, stressed on the importance of *prevention* as better than *cure*. But it was only in a very short and general way that the subject has been treated. Prevention is as much a science as cure, and it has its own branches. Just as the science of cure is divided into gynaecology, obstetrics, pædiatrics, dentistry and so on, prevention also should be studied under various subjects, and as such, we may talk of many preventions, prevention of women's diseases, prevention of children's diseases and so on. Of all these preventions, prevention of women's diseases is better than others, as the health-standard of a child depends on that of his mother. Since disease means failure of health, whether the case be a man or women, the rules of general prevention are the same in both cases, but they differ in respect of diseases which are special to this or that sex. Of such special diseases, those that are connected with pregnancy are special to women. These diseases generally result in premature birth

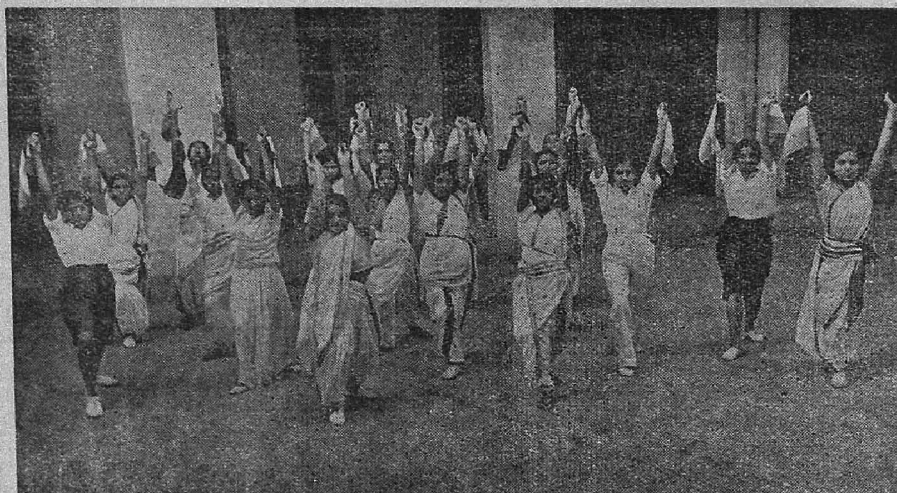
of child, and difficult confinements. And so prevention of such diseases as premature birth of child claims our first attention, and the way to easy child-birth is explained here.

Pregnancy is natural to all living beings of female sex. A woman should therefore have no fear of it. She should go about her business as if she were without pregnancy. The development of the abdomen should be viewed as quite natural unless there be pain or trouble with it. She need not pay too much attention to it by way of worrying; for, attention with ignorance is often the same as worry.

An exception to this rule comes when even the routine habits of the woman are unhealthy by themselves. For instance, the sedentary habits of a well-to-do woman coupled with absence of any worry about her pregnancy may end in some trouble, whereas the woman whose habits are natural, that is, giving work to all organs of the body, need not worry about the coming confinement. In some other cases, the pregnant woman

may deliberately abstain from giving exercise to her body under the false impression that it will give pain or trouble to the child inside. That this is a wrong impression is certified by medical men of the world. Dr. Kathlean Vaughan, M.B., invites our attention to the same fact in an article in the *Medical Officer*, 4-7-'42. She says that the field worker has her child safely with no more difficulty than the animals around, and that city-dwellers find their confinements increasingly difficult and dangerous for themselves and their offsprings. This

ting position, on the other hand, the whole pelvis is expanded to its utmost capacity. "Directly the women of any race" remarks the editor of *Medical Officer*, commenting on her article, "give up the natural squatting position and take to chairs and an indoor life, they begin to have difficult confinements". The writer has given also some simple exercises to counteract the ill-effects of sedentary habits and to develop flexibility of the pelvis joint through which there seems to be a real chance of bringing back child-birth to the normal pain-



The above exercises may also go to assist the specific ones given in italics below, for pregnant women to avoid difficult confinements.

is not a racial question, she adds, for, women of the same race and even family have easy confinements while some other members who migrated to town suffered as the townspeople do; there is something in city life inimical to easy child-birth; there are easy labours and large families among gipsies and canal boatwomen in England. She then attributes the increasing difficulty of child-birth to sedentary habits to a great extent and to the high chairs of civilisation which render the pelvic joint of woman so stiff and painful to stretch as the infant's head comes through. In the squat-

less routine function, as the commentator says.

"The exercises which increase the flexibility of spine, pelvis and hip joints are, first, squatting with feet on the ground, knees apart, back well rounded and the head down between the knees; second, squatting with hollow back, knees apart, head-thrown back and the eyes directed to the ceiling. These two positions can be combined in one exercise by a slow rocking movement on the feet forward and back, while the patient steadies herself by holding on to the side of the bed."

These exercises result in easy and short labour for the mother without damage to perineum which is stretched and made more flexible. This is more marked while the component parts of the innominate bones are still cartilaginous, that is, at any time before puberty. This fact is no doubt, according to Dr. Vaughan, the origin of the custom of early marriages in the East. Because there are more chances of living offsprings being born of a young and still flexible mother.

The rapid growth of pelvis in girls just before puberty is a testified fact, which chiefly affects all the parts near the sacro-iliac joints. There should be mobility of this joint and a constant change of pelvic inclination as

the woman walks, runs, sits, stands etc. as immobility of the joints leads to serious changes in the pelvic shape. In the female after puberty, the range of antero-posterior rotatory movement is greatest and increased temporarily in the later months of pregnancy. This rotation has the effect of increasing the capacity of the pelvis. At the end of pregnancy the pelvic joints become $2\frac{1}{2}$ times as flexible as in the unimpregnate state. This flexibility can be increased by suitable exercises, as already given.

We, therefore, recommend these exercises to all women of sedentary habits and child-bearing age as an easy and economic way of prevention of difficult confinements.

W H E A T



By

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THE staple article of diet in many countries of the world is wheat. Except Bengal and the South, the main article of food in India is wheat. In many of the tropical countries, rice is the main item of food, but wheat is consumed in some quantities. In England and Europe, more wheat is consumed regularly and in greater quantities than any other article of diet. The way in which wheat is consumed is mainly in the form of bread though, occasionally, it is taken as cakes, biscuits, pudding etc., so that frequently the food problem becomes the bread problem and even the Christian prayer becomes "Give us this day our daily bread...".

In the north of India, it is "Roti" or "Rotli", while in South India it is "rice" (or *choru* or *chattam* or *annam*). Much of the Punjab wheat, one of the best varieties of the world is exported to England, so that the price has gone up now to more than three times or even four times the normal level. There is a wheat

shortage and many Indians have to starve on account of this export—though India produces more food crops.

Wheat as an article of diet owes its importance to its being an ideal food. Doctors classify the needs of the human body into: (1) Carbohydrates, (2) Proteins. (3) Salts. (4) Fats, and (5) Vitamins for giving heat, building bones and blood, preventing diseases, maintaining strength etc. All these can be had easily by the rich who can spend freely. But the average man whose income is not much, must know which food to take with all the ingredients for body-building and up-keep. Wheat is such an article. The Punjab agriculturist mainly lives on wheat bread with practically no other item of food. This explains his good physique. The only defect is that it has not much of brain-building material. The Madrasi has a diet having too much of brain-building as is well-known. He must not be led away by

the theory now propounded with ulterior political motives of eating more wheat. More on this later. But he may conveniently and profitably include whole wheat in the diet occasionally, keeping his other diet the same.

Wheat should be taken whole; whole wheat contains 13½% protein, 2% fat, 69% carbohydrates, 2% mineral salts and vitamins A, B, and E. Wheat-berry is divided into wheat flour 7%, sharps 14%, bran 14%, germ or embryo 2%. Wheat flour is the starchy particles which pass through the finest mesh. Sharps are the next coarser matter which includes the inner skin and a mixture of the starch and a small amount of embryo. Bran is the outer skin with a slight mixture of embryo. Embryo is a valuable part of the wheat rich in protein, vitamins and mineral salts.

By milling and by modern machinery, much of the valuable matter from wheat is lost. Except when whole-meal bread is being made (which contains the germ), all the above products other than the white flour are considered offal and used for making cattle food. The white flour is deficient in bran, vitamins and mineral salts; these can be made up by other foods such as fruits, salt, vegetables etc., but the poor cannot afford all these. The policy of separating and selling sharps, bran and germ of wheat as offal is not only wasteful, but a dietetic error of the worst type.

The national-minded Indians have now taken up the slogan of home-pounded and home-ground wheat and rice. This is in the right direction, so far as the food value is concerned, not to speak of the economic gain to the country. Wheat and rice should never be sent to the mill for threshing, polishing or pounding. Polishing

removes the best of nourishing ingredients from the grain.

The poorer classes have white bread as the bulk of their daily diet and margarine or oil for butter; the lack of vitamin B necessary for proper growth is a serious matter and no sane person can suggest relatively expensive yeast, lean meat, eggs etc., and other preparations to remedy this defect in diet; the obvious and easy course is to replace the white bread with a whole-meal bread. Though the stopping of rice-mills which is a desirable objective is not in our hands, we should ask all to take whole-meal bread, which removes the many defects of the present Indian diet. The sharps remove constipation. By taking whole-meal bread much of the doctor's bill can be avoided. This is a blessing to the poor.

I do not wish to write on the Ottawa Pact and how it has adversely affected India. But let me take a short view of the wheat production of the world. In 1931, the world's wheat crop amounted to 545,000,000 quarters; the largest producers were Russia, the United States, Canada, India, (the second largest producer) Argentine, France, Australia and Italy. The British production was 5,000,000 quarters and the consumption 30,000,000 leaving 25,000,000 to be imported. This was mainly from India. India produces more than six times the wheat grown in the United Kingdom and yet the Indian does not get sufficient wheat for his food, but that is political. The Indian should take whole wheat instead of the polished one. That is in his hands. And every effort should be made to teach him that whole-meal bread is the best and to his advantage. And lastly, the South Indian should occasionally take whole wheat in some form to augment his diet.

2-DEC 1942

FIRST-AID

By

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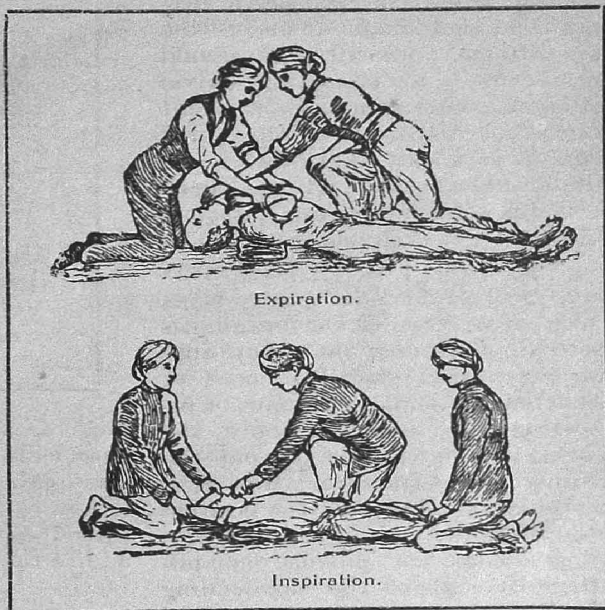
THE present international situation has unnerved the man in the street. Every individual has begun to think and act in terms of his own safety and that of his relatives and friends. It is essential therefore, that we as medical men should impart elementary knowledge of First-Aid, so that people can render medical aid to themselves before the arrival of a doctor, and thereby avert avoidable disaster.

It is a matter of common experience that one does try to help the injured according to his own means and common sense. But in order that it may be truly beneficial, it should be scientific and skilled. It is with this end in view that we prescribe a few scientific facts, the knowledge of which one must acquire so that the skilled assistance which he is thus enabled to render becomes truly helpful in providing comfort to the patient and prevent further complications.

The First-Aider should be observant to study the situation, tactful in handling the crowd, resourceful in improvising required appliances and applications, discriminating to ascertain which injuries are most pressing, clear in his instructions and sympathetic to all. All treatment must be very gentle without causing any unnecessary or avoidable pain. He should encourage the injured and his relatives and not frighten them through unnecessary fuss.

Having carefully scanned the scene

of the accident, the First-Aider takes note of the injuries. If the injured is unconscious or that his respiration is difficult or embarrassed, he must immediately be attended to on the spot. Bleeding which is one of the commonest causes of unconsciousness must be arrested by local pressure or tourniquet on pressure point. Failing to do this indicates that all other



efforts at reviving consciousness are bound to fail. If breathing has ceased, prompt measures by way of artificial respiration must be taken to restore it. Crowd must be pushed back or dispersed to give him free and fresh air. All obstructions to air passages like tight buttons or ties should be removed. A restful lying down position should be provided to assist vital functions of the body. Patient must be kept warm with blankets and hot water bottles. If it does not

complicate the injuries, patient could be removed gently to a safer and more comfortable place. Stimulants like tea, coffee, milk and alcohol should be judiciously administered whenever indicated.

These are some of the general principles of First Aid which, if properly acted upon, should prove very useful in saving life and mutilation. While rendering First-Aid, he must keep two more things in mind. Firstly, that he is not to doctor the case. His duties finish with the arrival of a medical man who should always be called for; and his treatment in the meanwhile should aim at preventing complications. Secondly, he should continue to do his job till the arrival of a doctor, who alone is competent enough to certify death of the injured man. - This means that death is not to be assumed, because a First-Aider's decision is not infallible and therefore it is likely that living injured man who may apparently look dead may die for want of First-Aid.

Now, let us consider a few examples where First-Aid may be useful. Suppose a man has broken his bones or dislocated his joints. By dint of his knowledge of human anatomy, the First-Aider can easily make out the site and type of fracture. He will so immobilise that limb that the position of the fractured ends of the bone does not get worse or produce complications by injuring the surrounding tissues or organs. If it is a compound fracture, he should so thoroughly clean and cover the wound that sepsis is prevented. Bleeding and shock which are so commonly met with should be suitably dealt with at once.

Burns and scalds resulting from fires (bombing, for example) is another major event. When a person's clothing catches fire he generally runs about in the open air thus unwittingly adding to his difficulties, because the wind fans the fire. The First-Aider should shout to him to lie down at once on the floor in such a way that the

flames are uppermost, and then smother the flames with rug, blankets sand or water. After having extinguished the fire, he attends to the



burn area by gently removing all loose clothing and covering it (without breaking blisters) with a soothing lotion to exclude all air. No pain should be caused, otherwise it will add to the shock and may even prove fatal.

In cases of asphyxia, the cause must be removed first. For example, when a man is found hanging, his body must be raised up to loose the noose and then cut the rope. In cases of poisonous gases, one should cover the nose and mouth with a wet handkerchief and crawl into the room to avoid gases which always ascend to the ceiling. Electric shock is another common occurrence. The sufferer must be pushed way from the contact with a nonconducting material of properly insulated article. Artificial respiration which may be required in

these cases must be administered perseveringly till it succeeds.

You may be called in to see an unconscious man. Obviously, you don't see any bleeding, nor is there any history of injury to his skull to account for this condition. You are naturally led to think of poisoning. In that case, you must guard the room so that nothing goes out. The bottle which may have contained the articles eaten, and any vomited matter should be preserved for analytical examination. In order to get rid of the poison, some emetic must be administered to induce vomiting; and appropriate antidote given to neutralise it. But in case

of such poisons which burn lips and mouth, emetic is contraindicated because corrosive vomit will further injure the tissues. Demulscient drinks like milk, barley water, gruel and eggs must be given to relieve pain.

First-Aid, thus rendered, may indeed prove a life-saving process. And lest people should die for want of First-Aid, every citizen with a civic sense must make it a point to learn and practise these elementary principles so that he does his job well before the arrival of a doctor and thus save a life which might have otherwise perished unattended.

PREVENTION OF DISEASE

In Early Infancy and Infant Feeding

BY W. C. HANSZE, L.M.P., (MADRAS), Southam Hospital, Demodera, Ceylon.

THE natural method is the best and the cheapest way of feeding a baby, but to manage breast-feeding is not so easy a matter as is generally supposed. An infant thrives best first when it is breast-fed by its own mother up to the seventh or eighth month or until the earliest milk teeth appear. Any difficulties can generally be overcome with the exercise of a little patience. Some mothers at an early date resort to artificial feeding under the mistaken belief that they have permanently lost their milk or because they believe, owing to restlessness and crying on the part of the baby, that the latter is being starved. As a matter of fact, the milk sometimes does not come until the baby is some weeks old or the milk may disappear temporarily but, more often than not, it returns if the infant is kept at the breast and applies its lips to the nipple. The mother, however, must be encouraged and persuaded to persevere. The mother should bear in mind that the condition of her

breast and nipples should be improved during pregnancy by drawing it out three or four times a day with some oil as olive or gingelly. The nipples should be washed before and after the child has the breast, in which case there is no necessity to wash the mouth of a breast-fed infant.

Now we come to the following questions for successful nursing:—

(1) Faith and determination on the part of the mother.

(2) Active sucking on the part of the infant.

If an infant is to suck well it must be hungry. Most infants are strong at birth and they soon become hungry if they are not fed artificially; for, at best they can only obtain a very small quantity of nourishment from the breast until the milk comes on the third day or later, the first secreted by the breast is known as *Colostrum*. This should be given to the infant and not thrown away as is done in

the case of the majority of Ceylon and Indian mothers. The first milk serves the double purpose of preparing the stomach of the new-born infant to digest the true milk when it arrives at the end of the third day or later. Colostrum is much more digestible than milk and it becomes gradually converted into milk as the glands become developed thus educating the stomach in the art of digestion. The number of feeds and the quantity at each require proper attention. Mothers are in the habit of giving the breast every time the baby cries and thus lay the foundation for future bowel disorders.

One of the most important matters to remember in connection with breast feeding is the necessity for absolute punctuality in the times of feeding. If the doctor says to feed the baby every $2\frac{1}{2}$ or 5 hours, the mother should be most diligent in obeying these orders and feeding the baby by the clock and not guess work. If perfect punctuality is observed, not only do the breasts themselves acquire a habit of punctuality, being ready for the baby when they are put to it, but the stomach of the baby also gets into a similar habit of punctuality and it is quite ready to digest the milk when it arrives.

There are many reasons why a mother should nurse her own child and the only cases where this rule may be deviated from is when the physician diagnoses that the mother is suffering from tuberculosis, heart disease, severe anaemia or poverty of blood and the like. A mother's constant supervision is required to see that the infant is well cared for; it may happen that instead of removing wet diapers which may cause the infant to cry, the nurse or mother might quieten the child by feeding it and thus lead the way to ill-health and disease.

The milk of a good wet-nurse gives better results than the most scientific and rational hand feeding. It is

important to get the wet-nurse examined by a doctor regarding her health. She should be between twenty and thirty years of age with plenty of milk. In the case of suspicious health of a nurse, it is essential to see her own child and judge its state of health and development and decide whether or not she would be a fit person. The food of a village wet-nurse should not be suddenly changed from the simple diet, to which she has been accustomed, to that of a rich full diet of the rest of the household, of which she becomes a temporary member. Failing a wet-nurse, milk from a healthy cow is very essential for the feeding of an infant (please see my table of quantities). To prevent ill-health and serious maladies, it is of the greatest importance to see to the cleanliness of feeding bottles and in the preparation of feeds. If Cow's milk is not satisfactory, goat's milk will do well. The goat should not be allowed to roam. When the infant is cutting teeth, give it a rusk to bite. Malted foods may also be given at this stage.

Costiveness of the bowels in infants after the fifth or sixth month shows that starchy food should also be included in the diet.

It is necessary to have the infant's nails clipped short for several purposes, especially to prevent injury by scratching, to prevent the eggs of worms being harboured under the nails and as infants are naturally in the habit of sucking their fingers there is the possibility of these eggs being swallowed which, in turn, is frequently the cause of worms in children. The habit of sucking the fingers should be promptly checked. Nothing should be put into the mouth which does not belong there.

A cold in the head (coryza), though trivial in older children, may turn out to be a serious affection in an infant. It may easily lead to bronchitis and broncho-pneumonia. Protect the infant from unfavourable conditions

of weather. In windy weather it should be indoors and should be in the open air in bright weather, morning and evening. It is a fallacy to keep children away from the sun in the Tropics, this measure being only necessary at the height of the mid-day sun.

Another important question is vaccination. This is best done in the first year of life as a preventive against Small-pox.

Feeding.—Measure the milk carefully in an accurate measure, not in spoons which vary greatly in size. Bottle feeding should never be resorted to until breast-feeding has quite failed. Give cow's milk until the baby is about nine months old, do not give condensed milk or any other



Give cow's milk until the baby is about 9 months old.

infant foods unless ordered by the doctor. Never give separated or skimmed milk to an infant. As infants sometimes cry because they are thirsty, sips of warm water (previously boiled) may be given. Get your baby into good and regular habits of feeding. Babies form bad habits just as quickly as grown-up people. For

time and quantity, follow the accompanying table. From the ninth to twelfth month the infant should be beginning to take solid food such as rusks in addition to fluid food. Barley water—it is a good plan at or about the fifth month to begin to use this instead of plain water in preparing the "Feeds". At first the feeds should be made with *Morton's Pearl Barley* (the writer's favourite) and subsequently, at the sixth or seventh month, with prepared barley.

Sterilization of Food.—It is advisable to bring the cow's milk to the boil in order to kill germs and keep it sweet. After boiling it should be cooled down quickly and kept in a cool place. As the time of feeding arrives, a sufficient amount should be taken from stock and warmed to blood heat. If at first babies cannot digest such food it should be partly pre-digested or Sodium Citrate should be added until the infants' digestion is sufficiently strong. Mothers should carefully bear this in mind.

Vitamins.—When infants are artificially fed they should always receive, in addition to the ordinary feedings, from one to three teaspoonfuls of uncooked fruit juice (Orange or Lemon mixed with a little sugar and water) and may be given independently of the bottle feedings. From ten months onwards the child should have four meals a day consisting of not less than one-and-a-half pints of milk daily with selections from the following:—

Dry crusts, baked bread or rusks with butter or dripping, mashed potato and gravy, a little lightly boiled egg, boiled fish, milk pudding, a small quantity of baked apple.

The most important question is that children must have no tea or coffee.

FEEDING TABLE.

Modification of Cow's Milk for Infant Use.

(When breast-feeding is impossible.)

Age.	Dilution.	Average quantity in 24 hours Ounce (Two table-spoonfuls)	Quantity of sugar (Tea-spoonfuls).	Quantity of cream (Tea-spoonful).	Number of feeds in 24 hours.	Quantity per feed Ounce (Two table-spoonfuls).	Hours of feeding.	
							A.M.	P.M.
2 to 7 Days	1 in 3	10	$\frac{1}{4}$	—	8	1	—	—
1 Month	1 in 9	20	$\frac{1}{2}$	$\frac{1}{2}$	6	2	6,9,12	3,6,10
2 Months	1 in 1 $\frac{1}{2}$	30	$\frac{3}{4}$	$\frac{3}{4}$	6	3	do.	do.
3 Months	1 in 1	35	1	$\frac{3}{4}$	6	4	do.	do.
4 to 5 Months	1 in $\frac{1}{2}$	35	1 $\frac{1}{4}$	1	5	5	6,10	2,6,10
6 to 7 Months	1 in $\frac{1}{4}$	40	1 $\frac{1}{2}$	1	5	6	do.	do.
8 to 9 Months	pure	40	1 $\frac{1}{2}$	1	5	7	do.	do.

WAR AND MORALE

*Adopted from 'Journal I. M. A.'**

THE entrance of Japan has marked a new era in the history of the present war. So long we had been, at best, sympathetic listeners to the devastations of war and the serious hardships to which the civil population has been subject not only in the absolute war zones but also in areas far remote, due to air attacks with high-explosive or incendiary bombing or even machine-gunning; but there was no immediate danger of direct attack on India.

A new feature of the present war, however, is the air attack of important towns—not only on military objectives but also on civil population partly by mistake and partly on principle to break the morale of the people to make normal life out of gear and thus make difficult the supply of food and ammunition to the army.

Though the biting fangs of military machinations of the enemy have not yet come directly on our heads, its

indirect havoc are already felt in the various social spheres of the country—the prices of essential commodities have already risen too high and are still rising by leaps and bounds day after day; the teaching staff in schools and colleges are out of employment; the professional people have lost their support; many businesses have been wound up, so many employees have to leave; students are out of their study due to evacuation; many peaceful families have been separated for the same reason; and last but not the least, various diseases are making their appearance in the villages, which again have become uninhabitable being over-crowded in the absence of public health measures, properly trained doctors and even everyday medicines.

It is not difficult, therefore, to understand the minds of individuals who, not being allowed to leave the cities with their families, would be at the limits of tolerance and their mental stability reserve completely

used up. Some of them at least will break down and get various mental disorders which may, therefore, appear in an epidemic form on the first bombing outrage; moreover, they may, in their extreme panic and anxiety, elaborate and circulate rumours and even infect others and create mental breakdown in the most stable individuals.

The best arrangement for the prevention of such a catastrophe is either to examine every ordinary and essential individual beforehand as regards his mental reserve or the arrangement of immediate treatment for those who get mental breakdown. As the previous examination of all individuals is not feasible, arrangements should be made in every first class A. R. P. Hospital of all the big cities in India for the immediate psychological treatment of anxiety states, bombshock, nervous exhaustion and so forth.

No elaborate arrangement is necessary. Doctors and psychologists were mobilised to meet these emergencies in England. But many of their expectations were not realised. Big hospitals set up to deal with nervous cases were not required. After three years of terrible warfare, the number of so-called war neuroses is not greater than that in the last war. It is said that this has been due to the sense of

humour, preparation for self defence, public morale, *esprit de corps* and *sang froid* of the Englishmen. We believe these will not be lacking in India when occasions arise. While arrangements for war neuroses are made in different hospitals, the public must be educated to practise self knowledge, self discipline and to put up a brave front. Reality experiences will be less terrifying than phantasy ones. Now-a-days, there is a certain amount to be said in favour of living dangerously and adventurously. Here are a few principles of what has been aptly termed Mental First Aid:—

1. Practise self knowledge; come to terms with your fears. Admit your fears, learn to recognise your unreal and your exaggerated fears and learn to laugh at them.

2. Practise self discipline; make a cool appraisal of real danger and be prepared for the worst that can happen.

3. Be prepared for action; because effective action drives away fear.

4. Put on a brave front; it helps yourself and a good example is infectious. But do not try to be a hero; just try to be yourself.

5. Practise mutual aid; be neighbourly and encourage community feeling. Loneliness increases fear; so, be social.—Ed. *Ind. Med. J.*

Death from Home Treatment with Electrical Device

“Any sort of self treatment by electric devices—home made or procured from unscrupulous manufacturers or their sales agents—may cause death by electrocution when applied by inexperienced and unskilled lay persons,” Richard Kovacs, M. D., New York, warns in *The Journal of the American Medical Association* for June 6.

Dr. Kovacs' admonishment is contained in a report on a Long Island, N. Y., clergyman who was found dead in his room, a victim of an attempt to treat pain in the back of his neck with a violet-ray machine. Undoubtedly, he had “grounded” the machine in the mistaken belief that by so doing he would increase the strength of the current and thus the efficiency of treatment.—*Texas, July, 1942.*

'SORE EYES'
is such a
common com-
plaint that it
may probably
be considered

SORE EYES

BY DR. K. G. IYENGAR,
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to require very little explanation. This is no doubt true from a medical man's point of view but not from that of the general public who, I expect, read the various common articles that appear in 'HEALTH'. I therefore endeavour to put a few points here about the disease to the general reader of this 'household magazine'.

The word 'sore eye' simply means that the eye is red, painful etc. There are various conditions in which these symptoms appear. But in this article, I try to explain that particular condition which is known as catarrhal conjunctivitis.

Causes.—It is a bacterial infection of the eye, appearing sometimes in an epidemic form specially in children. It is contagious in that it can be carried from one eye to another or from one person to another. The infection is generally carried by flies, towels or kerchiefs or by careless members of the family touching a sore eye and without washing their hands touching their own or others' eyes. Sometimes, persons with sore eyes blow their nostrils hard to get rid of the watery discharge from their nostrils and thus these infecting organisms are free in the air to settle on a neighbour's eye.

Susceptibility and Seasons.—Cases may be seen all the year round; but during certain times of the year it becomes pronounced. It is common during "the fly season" (i.e. the mango and margosa fruit seasons) and during the cold months, when colds and coughs are found every where. It is specially prevalent among school-children and the poor in crowded localities. It is rather rare in adults, specially of the better

classes. Persons with poor health easily catch the contagion, and those living in crowded towns where the air is polluted with smoke and dust are more liable to suffer from the disease than those living in open villages or bungalows and away from the dust and din of busy life. I should say that those of our people still living the "ancient religious life" of our forefathers, which the ultra-modern man would characterise as being uncivilised, are certainly remarkably healthy and free from several of the rampant contagious diseases. Their daily baths, their secluded, contented lives, their hard labour, their regulated diets and their natural horror of getting contaminated with the half-washed cups at the coffee houses, their smoke-free mouths etc. are certainly responsible for their long healthy lives. Western civilization has given us many superficial comforts of life. We hoard money to gain these comforts but with it we acquire many diseases.

Symptoms and Course.—The patient generally wakes up in the morning with a gritty feeling in the eye and a lot of discomfort. The eye becomes red. He is unable to face the light and the eyes begin to water. A little later there will be threads of mucus thrown out. Each time this discharge collects in the eye, he feels very uncomfortable with the gritty feeling and gets a little relief only when it comes out or he is able to knead it out by massaging the lids. The lids get swollen. The massaging, which he is not easily able to refrain from, causes some fine points of bleeding over the conjunctiva or the white portion of the eye. The eyeball becomes painful and the vision

gets disturbed. Sometimes, he suffers from headache and fever. He becomes very peevish and loses all desire for food and the company of friends. He feels happy when left alone. The condition gradually gets worse and by the next morning, there is a lot of purulent discharge and the lids stick. The patient is unable to open the eye till the whole thing is cleaned and the lids are set free. The discharge staying over the cornea (the black of the eye) irritates it and causes an ulcer. If not properly and promptly treated, the ulcer spreads, thus destroying the eye. Even if with fairly good treatment the ulcer is cured, it leaves a white scar on the cornea, which will interfere with the vision and mar the appearance of the person. The most characteristic feature of this disease is that all disagreeable symptoms are least felt in the mornings and gradually increase to an almost unbearable pitch by nights. Uncomplicated cases get on well with treatment in about 10 to 14 days. But there will be slight redness and dimness of vision for about a week or so longer. In some cases slight discharge in the corners of the eye will persist even for a month.

Treatment.—There are various household remedies in use. Some give relief, while some aggravate the condition, sometimes causing destruction of the corneal outer layer, leading to ulcers and scars. Please do not forget the old sanskrit dictum which says that of all the sense-organs, the eye is the most important one. No one has therefore a right to play with it thereby risking permanent damage. The best course is to run to an expert and get the disease attended to in the best possible manner.

I shall herein mention a few household remedies with their effects:—

(1) Fomentations with a cut bit of lime fruit with iron dust sprinkled on it: It may give relief to some extent provided the juice does not get into the eye and cause more irritation.

(2) Fomentations with various sources of heat are good, if the eye is kept clean by washing off and on with salt water (one tea spoonful to a pint) and then putting in castor oil into the eye to prevent the lids sticking.

(3) Alum drops into the eye:— Years ago, this was common but has been given up of late as it produces what is called Alum Keratitis. (fine white spots on the cornea) The spots disturb vision badly.

(4) The use of *Namakatti* as a paste over the eye: (*Namakatti* is the white stick used by the Vaishnavites for putting the caste mark on the forehead). If it gets into the eye it has the same effect as Alum.

(5) Mother's Milk:— This is no doubt soothing provided its purity can be assured. It cannot cure.

(6) Use of Protargol, Argyrol etc.:— There is no use of dropping these once or twice into the eye. To secure the desired effect, they must be used 5 or 6 times a day. After all, they are fashionable products (for the rich) of silver. No substitute can be as good as the original Silver Nitrate solution. No doubt, Silver Nitrate solution smarts in the eye, but is wonderful in its effects. Please leave the doctor to do it properly for you. He knows his job all right.

Whatever medicine you use, fomentations and some castor oil into the eye before retiring to bed will do a lot of good. While it is doubtful if an apple a day will keep the doctor away, it is certain that regular, clean habits will keep the most persistent doctor away.

THE DISEASE OF CIVILIZATION

By ERICH BENJAMIN, M.D., John Hopkins University, Baltimore.

THE following remarks demonstrate how closely the problem of the child's training is related to other problems of the social life of the community.

The rise to civilization is dangerous not only for the child but for nations who reach this high level.

After the time of nomadic life there came a period characterized by the small hamlet, by defense against beasts or other enemies and by lack of knowledge and lack of need for it. From this state there developed the city, with its Gothic cathedrals. This was the time of the discovery of the art of printing and of the translation of the Bible by Luther. Finally, there arose the civilization which has for representatives the metropolis, skyscraper, telephone, radio, steam engine, automobile and air-plane. With all the nations of the past the road has been in principle the same, although there are naturally important differences based on the era and on racial, geographic and other conditions.

When a height of civilization has been reached some social phenomena become evident which seem to repeat themselves whenever nations enter a state of high civilization. It will be seen that the present time is ridden with this disease. Its symptoms are today very obvious.

One could study this problem with the history of the empire of the Pharaohs or with the history of Greece. It seemed, however, easier to use the literature of the old Roman empire, which has been handed down to posterity so well.

When from the simplicity of the republic Rome developed into an empire, when world traffic and world commerce were flourishing and the new ideas of Greek education began

to spread, the educational problem became of prime importance.

Old Roman education lay above all in the hands of the father and the mother. According to the customs of the forefathers the child was educated for the purpose of becoming an efficient member of the community.

Virtus, not *scientia* was the aim. Instruction was restricted to reading, writing and elementary arithmetic. Discipline at home and at school was strict. To become a pupil was termed "to come under the rod."

The decay of the family at the end of the Republic injured the domestic training. The many-sided interests of women (one could call it an emancipation) let them forget their duties toward their children. The youngsters were entrusted to the care of Greek nurses. Plutarch (*Consolatio ad uxorem*) wrote to his wife: "There are many mothers who take their children on their arms like dolls only if they have been cleaned up and dressed by other persons."

At the same time new tendencies penetrated education. Tolerance and indulgence toward the child, respect for his personality, became its principles: "Instruction should be a pleasure; the child should be praised, encouraged and everything should be arranged so that the child loves what he is doing" (*Quintilian Institutionis oratoriae*, I, 1, 20). The program of the school work began to enlarge and the problem of overburdening began to play a part (*Pseudo-Plutarch, de lib. ed. chapter 12*).

The doctrine of the only-child was founded by Seneca. (*De ira*, 11, 21): "Thus the mind of only-sons is the more spoiled the more one indulges them and the more they are allowed to do. He would not know how to stand bad luck if he were never

refused anything, if the careful mother always wiped away his tears and if he always was protected against his teachers."

Quintilian (*Institutionis oratoriae* I, 3, 3) described those premature talents the smartness of which hides their lack of inner force but which will disappoint later on.

Impressive are the famous sentences by which Tacitus (*Dialogus de oratoribus*, chapters 28 and 29) compared the education of the old Roman people with that of his own era: "Even the fathers do not accustom their children to modesty and order but to fresh and pert behavior wherefrom impudence and disrespect of themselves gradually arise. Let us add the foolishness of our city, which I have to consider as almost planted into the still unborn child: the predilection for actors, the passion for gladiatorial games and horse-races. When the mind is occupied and obsessed by these things, how much time will there remain for the good? Where are people to be found who talk about other matters?"

The importance of the educational problem in the literature of this era can be understood only by looking at the totality of cultural conditions. I shall not discuss the whole problem, and so I am going to restrict myself to the enumeration of a few characteristic quotations of writers of that time.

Juvenal expressed surprise that no temples and altars had been dedicated to the sacred power of richness.

One of Martial's wishes was to find a wife who was not too much educated, and Juvenal (*Satirae VI, verses 448 to 451*) sneered at the ladies who during meals criticized the poets and did not give anybody else a chance to talk: "The woman whom you are going to marry need not have experience in all tricks of rhetoric nor need she correct all your grammatical mistakes as a learned linguist, but it is better if she does not understand everything in your books either."

In another satire the same writer described the sporting activities of the women adorned with the plume of helmet, the lance and the fencing gloves.

Suicide had become a matter of fashion: "Therefore the wise man lives as long as he wants, not as long as he can," said Seneca (*Ad Lucilium epistolae moralis 70, 13*).

In 220 A. D., there were brought forth, 3,000 processes concerning divorce. "Why should a woman blush because of divorce, since noble ladies don't count the number of years any longer according to the number of Consuls but according to the number of their husbands?"

Augustus had already tried in vain to take action against the decline of births through the *lex Papia Poppaea*. According to Plinius, barren marriages were praised aloud.

Ovid devoted two of his elegies (XIII and XIV) to artificial interruptions of pregnancies:

In amicam, quod abortivum ipsa fecerit

What helps it Woman to be free from warre?
Nor being arm'd fierce troupes to follow farrer,
If without battell selfe-wrought wounds annoy them,
And their owne priuie weapon'd hands destroy them?

Who vnborne infants first to slay invented
Deser'd thereby with death to be tormented,
Because thy belly should rough wrinkles lacke,
Wilt thou thy wombe-inclosed off-spring wracke?
Had ancient Mothers this vile custome cherisht,
All humane kinde by their default had perisht.

Why with his irons are your bowels torne?
And why dire poison giue you babes vnborne?

Armenian tygers neuer did so ill,
Nor dares the Lyonesse her young whelpes kill,
But tender Damsels do it, though with paine,
Oft dyes she that her paunch-wrapt child hath slaine
Shée dyes, and with loose haire to graue is sent,
And who ere see her, worthily lament.

These few quotations may serve as a warning not only to Europe but also to America. At the time Seneca, Tacitus, Juvenal and Plinius lived, the breakdown of the Roman Empire was not so far distant! In an address to the association of pædiatricians at Dresden (Germany) eight years ago,

I mentioned my studies of the decline of the West and finished my paper by the hopeful sentence: "It is not yet too late!" Today, I should like to say: "It is too late—at least for Europe!"—*American Journal of Diseases of Children.*

VITAMINS:

Their Necessity in Fortifying War-Time Food

BY FRANK W. BRITON, D.Sc.

RECENTLY, a new member of the Vitamin B complex has been isolated by a group of American chemists; it is concerned with the defensive system of the body which counters fatigue. A proposed name for the new substance is the 'vitality vitamin.' Originally, it will be remembered, vitamin B was thought to consist of only one accessory substance, but later two factors were discovered—vitamin B₁ and vitamin B₂, chemically called thiamin and riboflavin. Each had specific therapeutic properties. Finally, many more factors of the vitamin B complex were separated, one of the more recent being pantothenic acid, which is a potent growth control factor. It is quite probable that this complex vitamin consists of at least twelve separate chemical bodies each having definite specificity. Vitamin B is essential to the normal growth of the child, while the newcomer of the complex maintains virility in the older person. Water-soluble vitamins of the nature of vitamin B are found in the rice polishings removed as the

outer coating of the rice kernel.

Some investigators believe that all digestive derangements are due to vitamin deficiency, and there is no denying the fact that this is the chief cause of

gastric and intestinal disease. Until quite recently, the main dietary of the people consisted of food of a decidedly devitalizing nature. No wonder, that the symptoms of so many diseases manifested their presence. Hygienic living in the form of judicious physical exercise and balanced natural diet using more fresh fruit and vegetables has resulted in an improvement in health. We have almost unknowingly benefited by the inclusion of essential vitamins in our diet by use of the above foods, and their temporary deficiency at the present time on account of the difficulty in providing particular kinds of fruit may be obviated by the inclusion of regulated amounts of vitamin in the state-controlled foods.

Vitamin A, found in carrots, yolk of egg, etc., as the chief substance of carotene, must be present in food; otherwise, degenerative changes take place in the epithelial tissues, particularly of the face and mouth, where pyorrhœa is likely to occur.

Little need be said of vitamin B

complex, bearing in mind the foregoing remarks. Vitamin C is oxidized so readily by storage and heat that it should be consumed in fresh food as soon as possible. Spinach, potatoes, and fresh meat contain plentiful amounts of the vitamin. Potatoes should be baked and spinach consumed within three or four days, since the substance is destroyed within a week at normal room temperature. Pasteurized milk contains very little, and irradiated milk almost no vitamin C. Children's teeth, following deficiency of this factor, become chalky—a defect which may be treated successfully by the administration of the vitamin and calcium lactate. An interesting fact illustrating the potency of vitamin B is that the tissues of a person who has died from an infectious disease contain no sign of this vitamin, showing that until all reserves of the substance are exhausted a patient does not die. All diseases deplete the body's reserves of vitamin C. Pathogenic bacteria, especially in the mouth, are effectively destroyed by ascorbic acid—vitamin C.

Perhaps more has been written about vitamin D than any of the others. It controls the supply of calcium to the blood, at the same time regulating the affinity of the blood serum for calcium in order to effect complete assimilation of the element from blood. Nevertheless, calcium is assisted to combine with serum by vitamin D, but apparently this factor cannot assist in its isolation from that serum at the site of replenishment, and so a second factor is needed. This is sometimes called vitamin F, and consists of the group of unsaturated fatty acids of the linoleic and clupanodonic series. They are found in butter, cod-liver oil, etc., and assist in the work of assimilation initiated by vitamin D. Over-calcification may occur in the absence of vitamin F, so that vitamin D might induce a toxic condition. Indeed, in all probability, this occurs when sun-bathing

is overindulged in. Calcium accumulates in the pericellular fluids and is diffused in this matter by vitamin F, while it is drawn back within the blood-vessels and reabsorbed under the influence of vitamin D. Thus, the two accessory factors are opposed but nevertheless necessary to each other's work.

Vitamin E is a nerve-control accessory and has also been found to maintain the fertility of the generative organs; it has been used successfully in the treatment of paralysis.

A source of vitamin supply, with the exception of vitamin D, has been found in grass, and steps have been taken to conserve the food value of this important animal food. It has been estimated that there are more vitamins in 12 lbs. of dried grass than in 340 lbs. of fruit and vegetables. To us, of course, the idea does not sound very palatable—the thought of eating raw grass—but when it is subjected to a new quick-drying process nearly all the vitamin content is preserved. There seems no reason why powdered grass should not be used in food, considering that for equal quantities of grass, and all vegetables and fruits, the first contains forty times the number of international units of vitamin A contained in the last two. Grass contains ten times the weight of vitamin B than do fruit and vegetables of the same weight. It also contains the remaining factors of the B complex—11,000 units of riboflavin compared with 510 units in fruit and vegetables. Recent laboratory experiments with one of the members of the vitamin B complex (the 'vitality vitamin') have shown that hair is slightly darkened as the result of the use of this vitamin. This substance is present in grass along with the anti-scurvy factor C, which contains fourteen times as much as that in fruit and vegetables. Finally, grass is rich in vitamin E, which controls fertility. It should be observed that while grass supplies

large amounts of all vitamins with the exception of D, it could not be substituted for natural food, although it might be used as a valuable source in the vitaminization of much of our everyday food.

On the ground, therefore, that we are not getting the necessary quantity of vitamin rich fruit, such as oranges, lemons, grape-fruit, bananas, etc., it

behoves us to see that the deficiency is remedied by the addition of vitamins in our normal diet. It matters little whether such products are synthetic, because chemically both the natural and synthesized compounds are pure and act principally as catalysts or stimulants, boosting up physiological function. — *Prescriber*, June '42.—*The I. M. J.*

DISEASE AND DESTINY

BY DR. W. SCHWEISHEIMER, M.D., (*New Rochell, N. Y.*)

TYPHUS fever, spotted typhus, is a kind of disease which is invariably connected with war, famine and the utter misery of human wretchedness. It is relatively easy to cope with the disease under normal conditions, mostly by destroying all the lice, the carriers of the typhus germ with which actual and potential patients have been infected. But it is nearly impossible under the destructive conditions of war and famine. Typhus fever is indeed a war epidemic in the truest sense. That we know from the frightful losses of life due to spotted typhus in the first World War where Russia alone in four years lost 2,500,000 to 3,000,000 lives because of this dangerous disease.

When Napoleon's armies retreated from the burning hell of Moscow, they dragged along the famine, the uncleanness and the lice infection that form the basis for the spread of spotted typhus.

Spotted Typhus. A contemporary report on the fate of the beaten army describes how the onlookers could not believe their eyes when they saw behind Napoleon not the proud Grand Army they expected to see, but only a band of spectres covered with rags, women's pelisses, bits of carpet, or with dirty cloaks scorched by the fire of the bivouacs, and with feet wrapped in the most wretched tatters. They looked with affright upon the

miserable and emaciated soldiers, whose harassed and squalid faces were deformed with hideous beards, marching without arms and without order, hanging their heads and fixing their eyes on the earth in silence like a troop of captives. It was indeed but the shadow of an army.

The Grand Army felt itself not beaten by the enemy, by the Russians, but conquered by nature alone,—by disease and weather. Typhus cases had begun to appear as soon as the main bodies of Napoleon's armies were assembled and began to cross the Niemen in June 1812. The army, more than half a million men strong, consisted of Frenchmen, Swiss, Austrians, Prussians, Poles, Illyrians, Rhinelanders, North-Italians, Neapolitans, Saxons, Bavarians, Westphalians, Portuguese and Spaniards. Soon, the rations were shortened, and Marshal Mortier, full of gloom, told Napoleon that several of his Young Guard had starved to death.

When, after long hesitating, on October 18, the Emperor gave orders for the retreat from Moscow, not more than 80,000 men were fit for duty. Many typhus-sick soldiers were left behind, particularly in Smolensk. In Smolensk which was re-occupied in November, only 2,000 of the cavalry were left, and there were about 20,000 sick soldiers in the hospitals. In Vilna the hospitals and all the public

buildings were crowded. The sick, evacuated to that city, had accumulated to 25,000. The Russians soon took Vilna, but all what they found was a vast hospital of men dying from typhus, wounds and misery. By the end of June, 1813, only 3,000 of all these sick soldiers remained alive.

The retreating French army brought a terrible typhus epidemic to Germany, particularly to its Northern parts. The epidemic diminished in April 1813, but it spread enormously again after the battle of Leipzig. The military hospitals were the centers of typhus infection. There was a widely believed medical theory of that time that it was particularly dangerous for typhus patients to lie together in the same room with other patients suffering from the same disease. The typhus patients, therefore, were purposely distributed among all kinds of sick, in all sick rooms, and in this way the infection reached wider and wider circles.

The disease ravaged pitilessly in the fortresses where the infected field troops joined the various garrisons which so far had remained in good health. Different regions suffered in a different degree, according to their passage of troops, prisoners and fugitives. Of the civil population of the Duchy of Nassau which had sent many soldiers to the Grand Army, 16 per cent. suffered of war typhus between October 1813 and March 1814. About 3.3 per cent of the population of that Duchy died from typhus. Germany, at that time had twenty million inhabitants and about 300,000 died of spotted typhus. Another statistical figure shows that about five hundred physicians (without surgeons) died in Germany from typhus fever in 1813 and 1814.

Another threat to the Napoleonic Army was the terrible cold.

Cold.—Just as today, the soldiers were not only fighting the enemy, but cold, sleet, wind and snow as well.

The temperature in the region of Smolensk and Moscow goes down to 40 and 50 degrees below zero F., in that eventful winter of 1812 even as low as 66 below zero. F. This is frequent in the Leningrad section, and even along the Sea of Azov, in the "warm" South, the cold runs to 20 below. There are still colder regions in Russia. The coldest known spot on the inhabited earth is near Werchojansk in North Central Siberia where it is even colder than on the North Pole. Here, the thermometer goes down to 95 below zero, and even in summer the temperature never rises above 55 F. Nevertheless people live there the year round—besides plant vegetation and animals—and they know how to keep warm.

Marshal Ney, "the bravest of the brave", in early autumn had several times urged the Emperor to abandon the idea of advance and go into winter quarters. "It is late", he said. "The Russian winter will soon be upon us, and the Russian Winter, they say, is ferocious." Again in Smolensk, Napoleon had an opportunity of going into winter quarters and starting again toward Moscow in the coming spring. But he could not refrain from going forward.

The terrible cold pressed relentlessly upon the French army, but it also pressed upon the pursuing Russians. The two frozen armies dragged along slowly and wearily through the immense snow fields towards the West.

The Russian soldiers knew how to protect themselves better than Napoleon's soldiers. People who are used to live in a very cold climate, know many small tricks in clothing and housing that are unknown to men coming from a moderate climate. During the long forced marches in ice and snow and storm, there were endless cases of frost-bitten fingers and hands, feet, noses and ears which often ended in gangrene. Fifteen thousand men are said to have perished by the cold on the way back to Vilna,

and in Vilna the magnificent army had shrunk to 20,000 sick and disheartened men.

The winter of 1812 came later than do most winters of Central Russia. The fifth of November was the last day of autumn. Late that night came the change to winter. Out of the lowering, grey, foggy sky came down the famous Cold of Russia, the cruel and pitiless wind from the frozen Steppes of Asia. On December six, there were 63 degrees below zero, on December seven even 66 degrees below. This was the coldest day of the whole winter campaign.

Many horses had broken their legs on the icy, slippery ground and consequently had to be destroyed. On that super-cold day, the last of the horses perished. The tale goes that even the crows and the ravens dropped down like stones from the stiff, frosted branches of the fir-trees. The cold began to compel the troops to abandon the cannon and guns.

There were always some men who did not mind the cold, and Hazlitt tells us of one of them. During these dreadful days, when every bivouac was marked by its circle of dead, there was a most remarkable figure in the group, an old nobleman, a relic of the gay and brilliant days of the French court. As soon as day broke, this general-officer of sixty was sitting on the snow-covered trunk of a tree, employed with unalterable gaiety upon the details of his toilet. In the midst of the hurricane he dressed and powdered his head with the greatest care, as if in mockery of the miseries and the adverse elements which assailed him. Near him, the scientific men, almost cut in pieces by the north wind, were engaged in inquiries into the causes of its direction.

Snowstorms had a particularly bad effect on the retreating men, particularly when combined with fatigue. During his Antarctic experiments, Dr. Paul Siple found that, while a person wearing only a medium heavy sweater is reasonably warm at a zero temperature, he quickly becomes cold if there is a wind of even ten miles an hour velocity, because his heat loss increases in proportion to the increase in the velocity of the wind.

The extreme wretchedness due to the incessant cold led to excessive use of alcohol and that unhappy combination killed many soldiers. During the first occupation of Moscow, Marshal Mortier was forced to smash two thousand bottles of vodka to prevent the Young Guard from drinking itself into a coma.

Many cases of *pneumonia* occurred in connection with the cold and the diminished resistance of the soldiers.

Many soldiers suffered from a painful ophthalmia.

Ophthalmia.—Inflammation of several parts of the eye. The army physicians attributed this to the dazzling white snow fields and the smoke of the nocturnal coal fires.

Another of the chief opponents of Napoleon's armies was dysentery.

Dysentery.—This epidemic harassed the troops already when they marched toward Russia, and it exhausted the retreating soldiers. We have a description how sometimes on the march forward, after weary hours of marching, the troops came upon hot pools of foul-smelling water in the beds of dried up streams. The men fell upon their stomachs and lapped the stuff, but when they climbed to their feet to resume the march, some of their comrades remained there.—*I. M. J.*

Grey Hair or Bald Heads

ALTHOUGH little or nothing at present can be done to prevent the changes which bring about baldness or grayness, it can be predicted with a fair degree of accuracy that the man who is losing considerable hair from the top of his head will become bald before he is gray, that the one who is becoming gray all over his head will be slow in becoming bald and that the man who becomes gray chiefly at the temples is not likely to become bald. Old age, of course, alters all these prognostications.—*J. A. M. A., June 27th '42, p. 745.*

Milk and Nutrition

WHEN a delegation from the United States' Health Service went down to Puerto Rico to investigate health conditions among the children there with the object of improving the nutrition of the children, a question came up as to whether it would be wise to introduce milk into school lunch rooms and school lunches if it could not be continued as a permanent thing. Dr. McKinley, who was a member of the Commission, made an excellent answer when he said: "Yes. For every day that the child does get the milk, he puts calcium and vitamin A into his bank." That was an excellent reply to those who would have said, "Well, if we can't keep it up, we had better not start it."—*Medical Woman's Journal, Dec. 1941.*

[Experiments made by Mc Collum, Corry Mann, John Orr and Clark, with regard to nutrition and milk, revealed that significant improvements in the rate of growth and general well-being such as gains in height and weight, and more alertness in learning and the buoyancy of spirit were made by the children who received additional milk, when compared with the children who did not—(Ed.)]

The Rations of Enemy Prisoners

AREVISED scale of rationing for enemy prisoners has come into force. Excepting those employed in working parties the food-stuffs issued will be limited to the quantities allowed to British troops employed on sedentary duties. Working parties will continue to receive the normal home service ration, but modified to meet the taste of the nationals concerned. In working parties, the Germans will get 6 ounces of meat daily and Italians 4 ounces. But the Italians will receive 16 ounces of bread daily compared with the Germans' 10 ounces, and 16 ounces of potatoes against 13 ounces for the Germans. The Germans' ration of sausage offal will be three issues of 4 ounces weekly; the Italians will get none. Both will receive daily 1 1/2 ounces of margarine, 1 2/7 ounce of bacon, 4 7/10 ounces of cheese, 1 ounce of jam, 2 ounces of sugar, 1 7/8 ounces of coffee, 3 ounces of condensed milk and 5 5/7 ounces of fresh vegetables. Italian prisoners will get 1 1/4 ounces of tobacco weekly.—*J. A. M. A., June 6th '42, page 511.*

Influence of Cooking Utensils on Destruction of Vitamin C.

FLEISCH determined by titration the loss of vitamin C in milk, potatoes, kohlrabi, cauliflower and apricots caused by cooking in different types of kitchen utensils. A noticeable influence is already exerted by the length of time required until the boiling point is reached. The longer the time, the greater the destruction of vitamin C. Since pyrex has a poor heat conduction capacity, its destruction of vitamin C is greater than is the case in aluminium utensils. The destruction of oxydases by the cooking process does not prevent or reduce the destruction of vitamin C after the cooking process. This was ascertained over a period of twenty-four hours. When milk is heated in utensils of various materials for the same length of time, vitamin C destruction is least in pyrex: then follow aluminium, well tinned copper utensils, enamel ware, enamelled cast steel and badly tinned copper. However, if the utensils of various materials are heated with the same flame intensity and if cooking of the food is continued to the same degree of doneness, poorly tinned copper pyrex, enamelled cast steel, double boiler and particularly the fireless cooker all destroy more vitamin C than does aluminium. This applies to all the aforementioned foods.—*J. A. M. A., June 20th 1942.*

Posture

THERE is no good reason why every university, college, academy, high school, in fact, every school, having for its purpose instruction of children and youth or adults, should not give attention to the matter of posture, which has for many years been known to have an important bearing upon health at all ages.

But the posture training will be of little value if it is confined to corrective exercises. Training of this sort has been conducted in public schools throughout the country for many years, but with little or no effect. What is necessary is that every child should be posture conscious. Exercise alone will not accomplish this. The pupil must be instructed in the anatomical and physiologic damage which results from wrong postures in sitting and standing, walking, while at work, or when engaged in sports. Exercises may strengthen the muscles while at the same time deforming the body if care is not taken to place the head, trunk and limbs in a balanced position in sitting and standing and holding the different parts of the skeleton in proper relation to each other when employed in active movement.

Most important of all, perhaps, is that not only our schools but our homes should provide proper seatings. The chairs and other seatings which support the body when at rest should be so shaped as to hold the body in proper form when it is relaxed.

It is most surprising indeed that the matter of posture should up to the present time have been left almost entirely to the army and military academies. The writer has long urged that the posture training of which so much is made in the drilling of soldiers and in the discipline of military schools should receive attention in every public and private school, from the kindergarten to the university. Teachers as well as pupils should have posture discipline.—*Good Health.*

Methods of Reducing the Temperature of the Body

- (1) By reducing the number of bedclothes.
- (2) By the action of drugs (diaphoretics).
- (3) By the external application of cold.

The first method may always be used, the second method is not satisfactory, while the external application of cold is the most efficient.

There are many ways in which cold may be applied to the skin. (a) Cold bath. (b) Cold sponging. (c) Tepid sponging. (d) Cold pack. (e) Ice pack. (f) Ice cradle.

Cold Bath:—The approximate temperature is about 50 degs.—65 degs; F. The temperature of the bath is best lowered gradually. The patient's pulse, temperature, and general condition must be carefully watched.

Cold Sponging:—Start with water at a temperature of 70 degs. F. and cool down to 50 degs. F.

Tepid Sponging:—Start with water at a temperature of 90 degs. F. and cool down to 70 degs. F.

To sponge a patient, screens, one blanket and mackintosh for the patient to lie on, one blanket to cover the patient, towels, a basin with water, a bath thermometer, and a clinical thermometer are required.

Method:—Place the patient on one blanket and mackintosh sheet and cover him with the other blanket. Remove his shirt, proceed as in a blanket bath, sponging with long strokes the face, neck, limbs, trunk and back in rotation. Do not wring the sponge out dry. Twenty minutes is the usual time required for sponging. Take the patient's temperature and if not sufficiently reduced, sponge again using colder water. Do not rub the patient dry; leaving the skin slightly moist helps to lower the temperature.

The patient's temperature should be taken 20 minutes after sponging, and should be reduced 2 or 3 degrees.

If, while sponging, the patient shivers or shows signs of shock, stop immediately and apply hot water bottles and blankets.

Cold Pack:—The patient is wrapped in a sheet wrung out in cold water and covered with a blanket, the under bed clothes being protected by a long mackintosh sheet. The feet should not be covered, and a hot water bottle should be applied to them. When the temperature has been sufficiently reduced, the sheet is removed, the skin dried, and the patient wrapped in a warm blanket.

Ice Pack.—This is applied in a similar manner, but the sheet is wrung out of ice-cold water, and pieces of ice are wrapped in the folds.

Ice Cradle:—This consists of a large bed cradle, suspended from which is a metal tray, on which ice is placed. The bedclothes are replaced over the cradle so that the patient lies in an ice-cold atmosphere.—*First Aid.*

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Baths in Common Use

Name.	Temp. & Constituents.	Use.
1. Cold. Bath	65°F. Water	To reduce the temperature.
2. Tepid Bath	90°F. Water	To reduce the temperature.
3. Warm Bath	95°F. Water	Cleansing.
4. Hot Bath	100°F. Water	Cleansing and diaphoretic.
5. Alkaline Bath	95°F. Sodium Carb., 6 oz.; water, 30 gals.	In Rheumatism and Skin Diseases.
6. Bran Bath	95°F. Bran, 4 lbs.; hot water, 1 gal. added to warm bath.	In Skin Diseases.
7. Sulphur Bath	100°F. Sulphuretted Potash $\frac{1}{2}$ oz. to each gallon of water.	In Skin Diseases.
8. Mustard Bath	100°F. Mustard, 1 oz.; water 5 gallons.	Diaphoretic & Stimulant.
9. Vapour Bath	— Steam	Diaphoretic. — <i>First Aid.</i>

Duration of Pregnancy

IN an effort to determine the length of pregnancy, Arnot reviewed the history of the pregnancies of 3,606 patients and found the length to be two hundred and eighty and eight-tenths plus or minus ten and two-tenths days. Of the patients 53.5 per cent delivered later than the expected date of confinement, 42.44 per cent delivered before and only 4.07 per cent delivered on the estimated date. The average number of days late was eight and twenty-four hundredths and the average days early was eight and fifty-six hundredths. There was a tendency for women with menstruation cycles of less than twenty-eight days to deliver early and those with longer cycles to deliver late. Apparently in some women a mature child develops sooner than in others. There was a definite tendency for women to be consistent in the onset of their labours: if they were late with one baby they were apt to be late with subsequent babies, and *vice versa*. The baby's weight alone will not accurately determine prematurity or postmaturity. For uniformity, it is suggested that in using Naegele's rule one must count back three months from the last menstruation and then add seven days.—*J.A.M.A.*, June 20th 1912.

Carriers of Tuberculosis

CARRIERS of typhoid fever, scarlet fever, some streptococcal infections, cerebrospinal fever, diphtheria and acute poliomyelitis are well known. But it is surprising to note that little attention has been paid to the possibility of the existence of carriers of tuberculosis. Carriers are of two types—the known and the unsuspected. A known carrier has had the disease and has never stown to become bacteriologically negative; although he no longer suffers in any way from the infection in such a case the organisms appear to be saprophytic only. They are a known danger and can therefore be controlled to some extent.

The unsuspected type of carrier is much more dangerous, for his very existence may not be even suspected until damage has been done. Such persons may have had their infection in an abortive or aberrant form, the true nature of which was not recognised as far as clinical investigation can discover. But it is a surprise that little attention has apparently been paid to the possibility of the existence of carriers of tuberculosis. Of course it is well known that sufferers from chronic pulmonary tuberculosis may eject tubercle bacilli in the sputum for years, but a point often overlooked is that those who have ceased to suffer from the complaint *i.e.*, patients whose disease has been classed as and is in fact "arrested", may do the same thing, either continuously or at intervals. Such patients may be perfectly fit in the physical sense and every possible test which can be applied to detect the presence of tuberculous toxæmia or of progressive change in the lungs may be negative. There may be no fever even on great exertion, the weight may be steady and satisfactory, no sputum except when a cold or a mild bronchial infection causes slight expectoration, the sedimentation rate may be normal and the radiographs may show very little damage or, at any rate, no appreciable change over a period of years.

It is likely that many individuals who are quite unaware that there is anything at all wrong with the lungs may be coughing up tubercle bacilli from time to time, it is even possible that this also occurs in the case of some in whom no amount of investigation would reveal any trace of disease. Four cases are reported in which the disease showed not the least sign of activity and yet the patients were certainly infectious from time to time. The presence of tubercle bacilli in the sputum cannot be regarded as proving the contention that there is active disease. In other words, the expectoration of tubercle bacilli may be consistent with clinical health for a long period of time and persons so expectorating may well act as carriers of the disease. The fact that these cases are infectious is a matter of great importance from the public health point of view. We do not know of any measures that will render such a patient free from bacilli.—JAMES MAXWELL, M.D., F.E.C.P.,—(Abstracted from the *British Medical Journal*.)—"The Medical Review of Reviews" (September 1941).

The Government Protects Property against Injury from use of Tobacco

IT is interesting to note that the Federal Government recognizes in tobacco-smoking a menace to property worthy of attention, and is urging local authorities to forbid smoking in defense plants. This action is amply justified by the fact that, according to the *New York Times*, more than one-third of all the factory fires which occur in New York City every year are caused by smoking.

Nevertheless, the damage by fires caused by smoking is a mere trifle compared with the damage done to life and character by the tobacco habit.

Why should not our Federal authorities take steps to stop the use of tobacco in places other than factories; for example, in public places congregated by people some of whom are non-smokers and are greatly annoyed and inconvenienced by the poisonous fumes of tobacco?

A few hundred lives may be lost each year in factory fires, set by cigarettes or the matches used in lighting them; but scores of thousands of men and women die ten or fifteen years before their time (Raymond Pearl) as the result of absorbing the deadly poison, nicotine, from the smoke of burning tobacco.—*Good Health (U.S.) June 42.*

The Influence of Tobacco on the Digestive Apparatus

ACCORDING to Dixon, on whose work *Ar Medici* reported in 1928, the smoke of one cigar contains more nicotine than does that of 12 to 18 cigarettes. The latter, on the other hand, are more harmful on account of the paper component; least harmful are pipes, as part of the toxic substances are kept back in the stem. Tobacco smoke turns the teeth yellow and they either fall out or become carious. It is a well-known fact that smokers suffer from chronic pharyngitis and relatively frequently from cancer of the mouth. The antiseptic property of tobacco is but slight and only affects germ with slight resisting power. The development of leptothrix innumerate is encouraged in smokers. A variety of gastro-intestinal troubles have been observed, in addition to the commonly known symptoms of poisoning in persons smoking for the first time, which soon pass off, there are late disturbances which it is more difficult to get rid of. They may resemble those of duodenal ulcer, the motility, a moderate amount stimulates and large quantities paralyse it. The secretion of gastric juice runs parallel with it. The majority of research workers have stated that nicotine has an inhibiting effect on loss of appetite. Hypochlorhydria and diminished motility develop, associated with abnormal symptoms of fermentation. Dyspepsia is especially present in persons who smoke on an empty stomach or who swallow the smoke, who keep the cigar constantly in their mouth and thus swallow saliva that contains nicotine. The excessive use of tobacco produces epigastric pain, diarrhoea (especially in the beginning) and constipation. Merely being in a room filled with

tobacco smoke may cause symptoms of poisoning. With acute nicotine poisoning, the secretion of saliva is usually increased, but the reverse has also been observed. Concentrated tobacco smoke reduces the digestion of starch; Pyridin compounds increase it, but this is counterbalanced by the antagonistic effect of ammonia of which much larger quantities are contained in the smoke, so that a certain concentration of tobacco smoke remains without effect on the digestion of starch. Sulphocyanic acid which is present in the saliva of excessive smoker has an unfavourable effect on digestion. In animal experiments, swelling and haemorrhage of the liver have been demonstrated with acute tobacco poisoning; with chronic intoxication, annular cirrhosis has been found as well. Disturbances of the function of the pancreas and alimentary glycosuria may be present in excessive smokers. With regard to the influence of nicotine on the carbohydrate metabolism the results of investigations are still contradictory.—*Abstracted from Ars Medici,—The Miscellany.*

Treatment of Electric Shock and Electrocutation

.....The Scientists have not yet discovered that electricity and magnetism are the male and female elements in the Universe.

Knowing as I do that everything in the Universe is composed of matter varying in vibration only, and that the spirit body is composed of either, electric, and magnetic in its composition, one evening I inquired of one in the plane beyond the physical, one versed in the action of electricity, how it was that electricity could by its action destroy life, and I recall very distinctly his answer (Spirit of Michael Faraday).

"You are aware", he said, "of the voltage used in the various prisons when they put a criminal to death. You are also aware that frequently a current with many times the voltage used in electrocution passes through a body without serious injury. It may startle you to know that any person who has been electrocuted, or who has suffered a lightning shock, or who by accident has received a charge of electricity that has apparently produced death, could be restored to life by proper treatment. The charge of electricity, as applied in our prisons, paralyses the heart action, all the bodily functions, and the person is apparently dead. But you have—probably observed that whenever and wherever a person is put to death under sentence of the law, a post-mortem follows. Death was and is produced by the post-mortem and not by the electric shock. In the beginning surgeons were anxious to note the effect of the force, and undoubtedly made very careful post-mortems. You would be astounded to know, as we know, that post-mortems have lost interest and that frequently they now consist of jabbing a knife into the apparently dead body and passing it on for burial.

'When a person receives an excessive charge of electricity, either by accident or design,

and the bodily functions are thereby temporarily paralysed, if the body were immediately stripped, laid upon the fresh earth and sprayed with water, the electricity would be drawn therefrom, and would pass into the earth. If then artificial movement of the arms and stimulants were resorted to, the heart action would be resumed, and one apparently dead would get up and walk away. Persons die from electric shock because they are not properly treated. When the bodily functions are paralysed and the electricity is not immediately drawn from the body and the action of the heart is not started by artificial means, death will, of course, ensue in a short time. If the treatment described is administered in time, there is no occasion for dissolution for electric shock. Electricity is life, and life will not destroy life. In this day, where electricity is in such common use, countless lives could be saved if the facts that I am now giving you were known and the treatment applied—Extract from *The Dead Have Never Died* by Edward C. Randall, pp. 128-29, published by George Aleen & Unwin Ltd., London.—*Ind. Med. Jour.*

Leave 'em Where they Lie

THE back is made up of a series of round bones that are flat on top and bottom by layers of cartilage and joined to each other by little joints on each side, and held in place by ligaments.

There is a canal or channel that runs through the whole spine between these round bodies in front and the spinous processes or little knobs that you can feel on the backbone; in this channel is the spinal cord that carries all of the nerves from the brain that go to make up the nerves of the body.

What happens when there is an injury to the back?

One of five things:

1. There may be only a bruise or sprain;
2. One of the bony processes that come off of the vertebrae may be cracked or broken;
3. One of the round bodies of the vertebrae may be broken;
4. There may be a spring-back displacement (partial dislocation springing back into place) between two of the vertebrae which may crush the spinal cord between them;
5. The spinal cord may be pinched or severed (mashed in two) by a crumpling break of one of the round bodies.

The next issue will describe what to do in a case of a broken back.

LEAVE 'EM LIE—FLAT—TREAT SHOCK! When you move 'em keep 'em FLAT with something under the back.

A vertebrae may be dislocated but you cannot know this without an x-ray. So treat it as a broken back.

LAY 'EM FLAT—on their back with a cushion or folded coat under it: **AFTER SHOCK** is less, bring 'em in—laying FLAT.—*Texas, July '42.*