A Journal Devoted to Healthful Living

HEALTH

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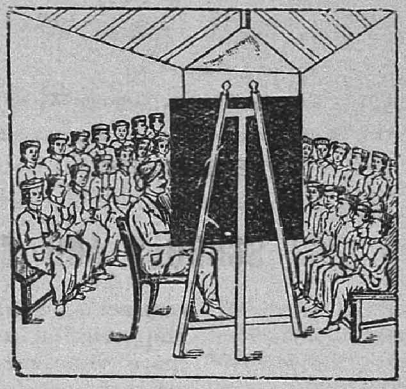
HEALTH IN HIGH SCHOOLS AND COLLEGES

EDUCATION is now-a-days received at the cost of health. Both the student and the teacher or the professor are interested in *passing* the examination and give little thought to the standard of health they keep. This would have been *alright* but for some defects in the educational system that is in vogue which lead to downward progress of health. College men have been declared less fit for military service than others by some investigators of the problem. Not only should the defects of educational system be rectified but positive steps too should be taken to improve the general standard of health of both the staff and students. We discuss a few of the defects and suggestions below with regard to this problem.

Of all the defects, the simplest to be rectified is the working hours of educational institutions. Mid-day is unanimously accepted by all medical men as the best time for full meal but this is denied to students who are the first to be cared for in respect of health. The result is that the average student relishes tiffin more than meals. The tiffin is not only more costly than meals but less nutritious. To add to this, it has a tendency to develop into a habit. But, if full meal is taken in the midday, the routine, namely, breakfast in the morning, full meal in the midday, milk in the afternoon and supper in the night, will be established. There is no strong reason why schools and colleges should not run two times with a few hours' interval in the midday.

The second defect is that students read more and work less as a result of the superfluous number of subjects they have to master and the amount of homework they have to do. The variety of subjects not only divides their concentration and interest, but gives them worry and exhaustion which youngsters of ten, owing to their age, do not openly feel. The process of studies seems to them like a regular struggle rather than a training. This

practically extends the working hours to the night also, that too under a sense of compulsion. The best time for study is the early hours of the day. That time should be spent for teaching and the afternoon should be set apart for home-work. But the 'home work' should be done in the institution and not at home. Nights should be free for the student to be spent in sleep which is more valuable before the midnight than after. The institutions should work from 6-30 or 7 a.m. to 11 a.m. so that the staff and the students may cultivate the good habit of getting up from bed before 4 a. m., before sun-rise. With such a programme, practically all cases of ill health arising out of wrong habits and wrong food will be counteracted. The wrong working hours are the worst enemy No. 1 of Health in High Schools and Colleges.



Open-air-school Movement

And then every school and college should maintain a garden, parts of which should be allotted to batches of students to take care of. In addition to the playing of out door games, the students should work in the garden for not less than 40 minutes every evening before leaving the institutions. Incidentally, manuring and plant rearing should also be taught to them. The garden must be of daily use to men, in vegetables or flowers for instance, and may fetch some income too. Gardening may be given to one and all students irrespective of age, caste or sex. This not only wards off ill-health of the student but will show a positive growth in his health. The staff should also join the batches of their classes in the gardens and move freely with them.

As the space is limited, only one more suggestion will be given to finish the idea and to make our suggestions self-sufficient and complete in a way. The suggestion is that every high-school and college should have a regular clinic attached to it with a doctor and a dispensary, maintainable by the income of the institution, to examine and advise the students in matters of health. A portion of the games feees should be allocated for the use of the clinic. Compulsory consumption of milk in the afternoon must be introduced at the cost of the students, other than poor. The doctor should be held responsible for examining each and every student and prescribing diets, precautions and the like in accordance with the state and standard of the student's health. The main concern of the doctor should be prevention of disease.

If educational institutions accept these above suggestions, it can be guaranteed that their general health standard will improve considerably.

The calm beauty of a well-ordered life" means health, strength, power and happiness to the individual, and it also means that he radiates an atmosphere like unto himself to all with whom he comes in contact.—*Good Health.*

Breast Feeding

By DR. S. K. GUPTA, B.D.Sc., B.O.,
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MOTHER'S milk is the best food for the baby. It is suited to his needs just as cow's milk is suited to those of its calf. The best method of feeding the baby for his first six or seven months is at his mother's breast. Until the end of this time, no baby should be taken entirely off the breast unless there is a very good reason. No mother should wean her baby except on the advice of her doctor.

Breast milk is easily assimilated, is cheap, clean and convenient. Breast feeding gives the baby the best chance for life and for steady normal growth. The death rate of babies not breast-fed is decidedly higher than that of breast-fed babies.

Almost every mother can nurse her baby. She should take for granted that she can do so. With this in mind, she should learn to care properly for her health and to avoid fatigue. She should nurse the baby at regular intervals. The breasts should be completely emptied to stimulate them properly.

Long before the baby is born, the mother should make plans for nursing the child. She should eat the proper foods and should care for her general health according to her doctor's instructions.

After the baby is born, the mother should take plenty of rest if she is to nurse the child successfully. It is well for her to take up her household duties gradually. The supply of milk may be irregular during the first four weeks; and if the baby does not gain, the doctor should be consulted. As a rule, the mother's milk supply will become well established if she follows these simple suggestions for healthful living.

The hygiene of the nursing mother is important. Successful nursing depends largely on the mother's health and on her attitude towards nursing. If her breast milk is to be of the greatest benefit to the baby, the mother should follow a well-defined plan.

Try to avoid worry and emotional upsets. The calm, unworried mother is likely to nurse her child more successfully than the anxious and excitable mother.

Sleep at least eight hours every night and take an hour's rest in the daytime after meals. After the first month, the baby should sleep through the night without any feeding after 10 p.m., so that the mother's sleep will not be broken.

Take pleasant exercise in the open air and sunshine, but do not tire yourself too much. Your daily work may give you enough exercise, but you should spend some time outdoors in the sun daily, preferably at midday in winter and before noon and after 5 p.m. in summer. You should get so much sunlight that your skin becomes tanned. Your milk will be better for the baby if you get plenty of sunlight.

Plan your diet with your baby's growth and health in mind, as well as your own health. Bathe often. Guard against constipation. Make every effort to regulate the bowels by means of food, exercise and regular habits.

Care for the breasts only with very clean hands. Wash the nipples with boiled water before and after each nursing, and cover them with clean cloth between nursings. Consult the doctor if the nipples are cracked or sore, if the breasts are caked or if for any reason the baby does not nurse well. A cracked nipple, if neglected, may result in an abscess of the breast.

Upon the care of the breasts, in many cases, depends the success of breast-feeding. Breast feeding saves many babies' lives. Follow your doctor's directions.

The mother's daily diet should be planned so as to provide the baby with the best possible food and at the same time to keep up her own strength. It should include plenty of the protective foods such as milk, eggs, vegetables, fruits, and if ordered by the doctor, cod-liver oil.

A quart of milk a day should be taken by the nursing mother. If a full quart is not used with the meals, either as a drink or in cooking, a glass should be taken in the mid-morning, in the mid-afternoon, or before going to bed.

If good fresh milk cannot be had, evaporated or dried milk may be used. Milk is the most important single food in the nursing mother's diet, but not more than a quart a day should be taken. The diet should be varied.

A Young Indian Munition Worker under Training in England

K. Singh, Amritsar, U.P., a 37-year old Sikh, now being trained in inspection, was formerly employed in a flour and cotton mill as an instructor-fitter in Lucknow Local works.

Vegetables, raw or cooked, should be eaten two or three times daily. Fresh vegetables of every kind should be used, especially dark-green leafy ones. Canned tomatoes may be used often, and other canned vegetables occasionally.

Fruits, especially oranges or grapefruit, should be eaten daily. Fresh fruit is best, but when it is too expensive, dried or canned, may be substituted for oranges or the grapefruit.

An egg may better be eaten every day.

At least a quart of water a day should be taken. Coffee or tea in moderation is allowable, but should not replace milk which is essential. Beer and other alcoholic beverages do not increase the supply of the

breast milk. Cod-liver oil is excellent to take but only under a doctor's directions. Viosterol is sometimes ordered by the doctor instead of Cod-liver oil; but this, too, should not be taken unless your doctor prescribes it. Eat the protective foods, and eat food that is nutritious and appetizing.

To regulate the bowels, green, leafy vegetables should be eaten and also fruits, especially figs and prunes. Whole-grain bread and cereal may help correct constipation. A glass of water taken the first thing in the morning may also prove the desired corrective. Avoid violent and harsh purgatives.

Nature in Relation to Health

BY DR. BON BEHARY DAS, L.M.F., (REGD.),
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Sleep or Rest.—Sleep and rest are the only remedies of fatigue. Fatigue—physical or mental—dominates the lives of all of us; it affects every phase of human life. This means that the problem of fatigue is perhaps the most important problem of modern medicine and hygiene today. Undoubtedly human life is shortened to a great extent by fatigue. So, work and sleep are the natural occupations of the day and night in turn.

It has been recognised through ages that normal sleep is essential, restorative and beneficial. "If one sleeps he shall do well." The nerves and muscles especially need rest in order to carry on their work and this is more fully realised during the sleeping hours.

A general condition of relaxation or exhaustion appears to be conducive to sleep, and to be kept awake over long periods of time is injurious to both old and young. One physiologist says, "Not only mental work but the working condition of itself fatigues the brain and it must, from time to time, be given an opportunity to recuperate. This recuperation takes place in sleep. If a person is denied sleep for a long time, very profound physical and mental disorders result". So, we must sleep so that the excess of fatigue and poisons accumulated within the body during the hours of daily activity, may be eliminated.

Natural, normal, healthy sleep is a condition that may be easily cultivated especially in early life, by right habits of living. The need for such habits, as well as their life long value, cannot be too strongly emphasised; for regular hours of sleep help to establish conditions that are essential in maintaining the healthy functions of the body and regulating normal metabolism.

Work and Exercise.—When once asleep, why does one wake up again? There has never been any satisfactory human explanation of this phenomenon. If one should lie in bed for as long a time as two to three weeks, he would find it very difficult to get out of bed and walk. Most people do not realise this fact. Physical exercise is necessary to maintain bodily health and vigor and as lack of physical exercise leads to weakness and waste of muscles, so does lack of excercise in spiritual things to weakness and leanness of the soul.

Exercise, if properly used, is as equally important as rest. As soon as the child is born, he begins his activity or exercise. This is an important feature in the child's development. It is interesting to watch children grow and develop until they are able to

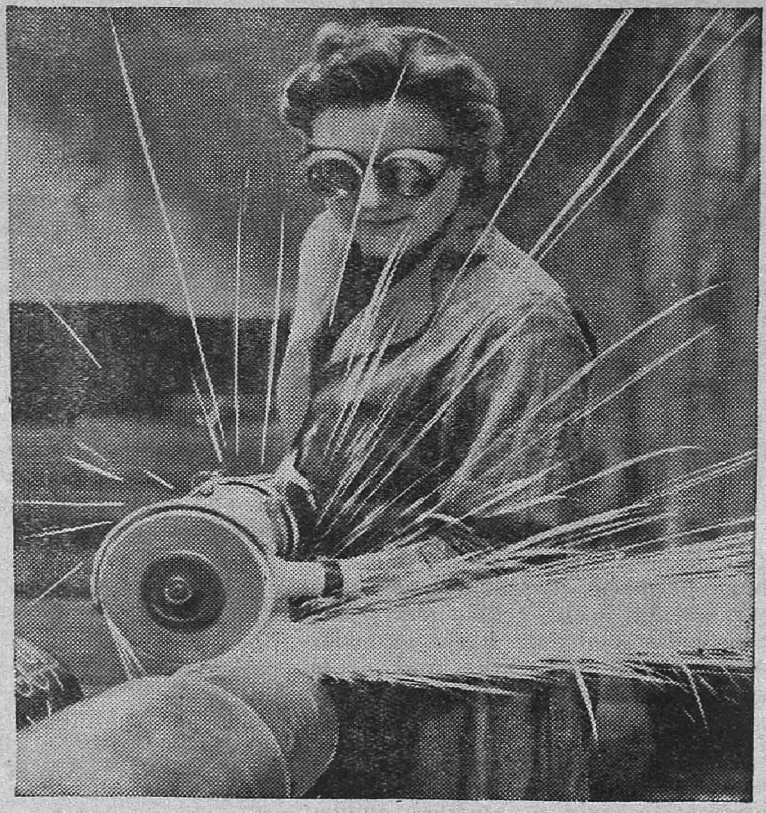
walk. Exercise is as important to the growing child as to the adult. Exercise helps to maintain our strength. This is the reason why it is necessary to have a patient first sit up in bed, then in the chair and then gradually to walk.

Water.—Every one of the billions of cells composing the body requires water, and is of itself largely made up of water. As the fluid contents of the body are diminished through various forms of elimination, the demand for more fluid is expressed in the sensation of *thirst*.

Physiologically, water is absolutely essential to life. It makes up over 80 per cent of the blood and enters the formation of all the tissues and cells of the body. In it, as a medium, the chemical process of the body occurs. Water carries food from the digestive organs to the body cells and waste material from the cells to the kidneys. Lack of water will produce a fever and soon followed by death. It is a major factor in the control of temperature, and the fever of disease can be maintained at a lower level by a copious water intake.

The morning cold bath, shower, or friction, taken in a warm room, increases the oxygen intake, stimulates the circulatory system and the nervous system, thus increasing muscle tone and power to do work and rendering mental processes more active. It also increases the number of white blood cells, the fighters of the body, and insures the body against exposures to cold which may give rise to infections of respiratory tract.

A normal person should drink seven or eight glasses of water daily, besides the liquid which is obtained in the food he eats.



Britain's Women Steelworkers

Picture shows a woman steelworker grinding a 6-pound tank gun barrel in one of Britain's largest workshops.

There are few diseases in which the use of water is not of great value either internally or externally or both-ways. The external use of water depends on the presence or absence of heat for its reaction. In acute infectious fever, water given internally aids keeping the body temperature at low levels. Externally, the cold bath, the cold sponge or the wet sheet pack lower the temperature, but what is of much more importance, they support the circulation, by their stimulating action upon the nervous system and in this way prevent circulatory failure.

Natural Food. — God has provided food for us and *hunger* is the voice of God prompting every living being to take food. We are made of what we eat. What we eat to day will be walking around and talking tomorrow. There is a constant breaking down of tissues of the body; every movement of every organ involves waste, and this waste is repaired from our food. Each organ of the body requires its share of nutrition. The brain must be supplied with its portion; the bones, muscles and nerves demand theirs. It is a wonderful process that transforms the food into blood, and uses this blood to build up the varied parts of the body, but this process is going on continually, supplying each nerve, muscle and tissue with life and strength.

According to Professor Elliot of Oxford, Professor Ami of Montreal, and other anthropologists, the first mammals, including man, obtained their substance solely from plant sources. A few animals and some men now obtain all or part of their food from secondary sources in the flesh of animals. In natural foods there is something for every need of every organ of the body. The nature is constantly supplying us with this natural food. Right here may I state that if we had never departed from the use of natural foods we would not need to study the questions of minerals, carbohydrates, proteins, cellulose, or vitamins, as these elements which carry on the life processes are all present in proper amounts in natural foods, and we would all get them automatically and instinctively without giving a thought to the matter. A food may be defined as any substance, which, when absorbed into the blood, will nourish, repair waste, and furnish force and heat to the body, without causing injury to any of its parts or loss of functional activity. Neither must it call for constantly increasing quantities of itself. There is therefore an important relationship between the composition of the body and its food requirements.

A nut or a kernel of corn or a grain of wheat, is in itself a neat little parcel in which is stored up all the different things needed to keep the human machine in good repair and lending support to all its varied activities. There is protein for the brain, nerves, glands and muscle, the active tissues, comparable to the metal repairs needed by a locomotive. Fat, starch and sugar are to supply heat and support muscle work; lime for the bones; iron, copper and manganese for the blood; iodine for the thyroid; potash, soda and other minerals are needed by the body's laboratories; vitamins to stimulate growth and repair and regulate development; and flavours to stimulate appetite and to set in operation the digestive mechanisms. By the process of digestion, circulation and assimilation, those various elements are distributed. Any surplus of fuel foods—starch, sugar or fats—may be stored for future use. A surplus of vitamins is stored in the liver. In the case of protein, however, any surplus must be eliminated at once through the kidneys since the body has no place for storing repair material.

The stomach liquefies the food, but digests and absorbs little. The small intestine is the chief digestive

laboratory and absorbs the digested food-stuffs. The colon receives the undigested remnants (in the case of meat about one seventh) and unusable parts, and ejects them. Thus, the stomach may be regarded as analogous in its work to the kitchen, the small intestine to the dining room, and colon to the garbage can or the sewers.

A POCKET

Encyclopædia of Tuberculosis

By

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In spite of the fact that the spread of tuberculosis is so extensive, the ignorance about tuberculosis among the lay public is equally appalling. In this small article, I mean to lift this veil of ignorance regarding the predisposing causes, methods of diagnosis and ultimate management of a case of tuberculosis.

Predisposing Causes. — A general lowering down of vitality and resistance is the most important of the predisposing causes. This lowered resistance may be brought about by various causes. Acute infectious diseases like pneumonia, influenza, measles, whooping cough or simple chronic malaria, have a very devitalizing influence on human constitution and hence this state of lowered resistance forms an excellent fertile ground for the growth of T. B. germs. Secondly, an irregular life, late nights, irregular meals, excessive sexual or alcoholic indulgence, over work or acute mental strain, may also put a great strain on the reserve power of an individual and contribute to the acquirement of the infection.

Main Symptoms of Tuberculosis.— Unfortunately, there is no specific symptom of tuberculosis by which one can clinch its diagnosis In the primary stage, the symptoms are so mild and varied, that a patient hardly suspects he has anything wrong with him. But the following important symptoms are generally present: (1) Wasting and persistent loss of weight. (2) Evening temperature. (3) Chronic cough. (4) Loss of appetite. (5) Anæmia and the following minor symptoms. (6) Night sweats. (7) Breathlessness on slight exertion. (8) Intense sexual disease. All these signs and symptoms are given in detail in text books on tuberculosis. So, I only make a brief mention of these. Of course, the presence of one symptom only is *not at all* suggestive of T. B., but the simultaneous presence of three or more symptoms strongly points to T. B.

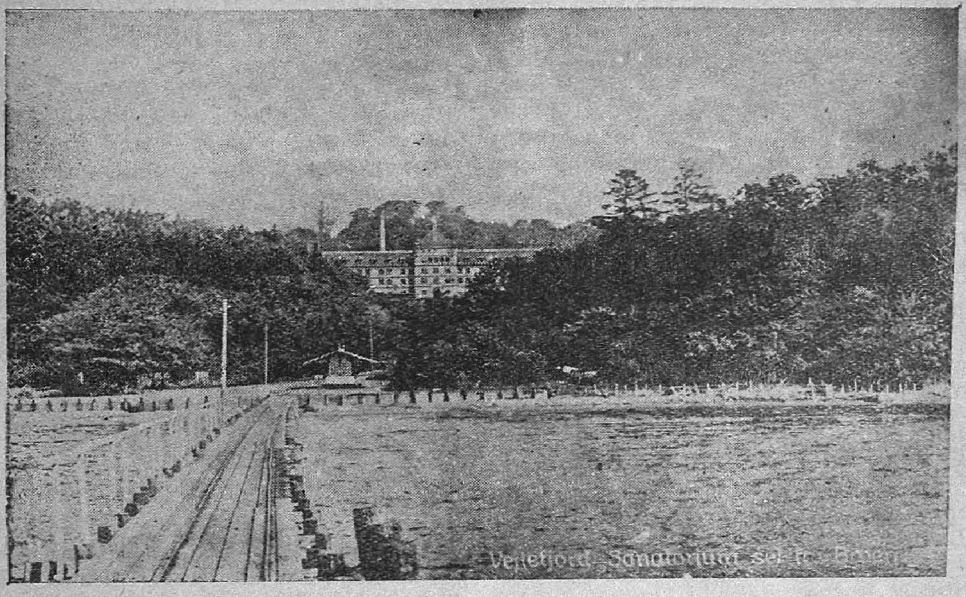
Methods of Diagnosis.— Once there is a suspicion of tuberculosis, it is always best to overhaul the patient completely by the most modern methods of diagnosis. The following are the three chief methods of diagnosis. (1) X-ray examination is the most important of all methods. By a good skiagram, it is now possible to detect even a most early lesion of tuberculosis. So, X-ray examination of a suspected case should never be postponed or ignored. (2) Sputum examination. A positive result shows a definite infection but a negative result does not preclude tuberculosis as in many advanced cases even the sputum examination is many times

negative. In negative cases, persistent daily examination or even examination of stomach wash contents may be undertaken.

3. *Blood Examination* :—A sedimentation rate of the citrated blood is taken. If it is more than 10 (which is normal), then there are strong grounds for suspicion that there may be pulmonary tuberculosis. A Schilling count of a blood slide is taken and if it shows a shift to the left, it shows the presence of tuberculosis.

the more early you start treatment, the more bright is the chance for a complete recovery. People think that a sanatorium is the last resort of a case when it cannot yield to ordinary treatment. Nothing is more wrong than this belief. An advanced case, even in a sanatorium, has very few chances of recovery. So, it is always wise to register a patient, however mild the infection, in a sanatorium.

What to do until a patient gets an admission in a Sanatorium ?— As all



An ideal Sanatorium over the Continent.

Institution of similar Sanatoria all over the country will greatly allay the distress of the suffering millions in India.

What to do if a case is diagnosed as T. B. ?—The best advice I can give a tubercular patient is *to get himself registered for admission to a sanatorium with the least possible delay.* People yet do not realize the true value of sanatorium treatment. They don't realise equally that a most primary case has the best chances of cure if sent to a sanatorium as early as possible. It cannot be over-emphasised that in tuberculosis more than in any other disease, the sanotoria are generally overfull, it will be sometime before a patient gets admission. So in order not to lose the valuable time in instituting various treatments, the following line of treatment should be adopted :

(1) Keep the patient at complete rest in bed. The rest is the sheet anchor of the treatment of T.B.

(2) Keep him in the best ventilated room. Give him nourishing food such as fresh eggs, soup, fruits,

butter and milk. Increase his resistance to the disease by these means.

(3) Ascertain from your doctor whether the case is a fit one for artificial pneumothorax treatment. The most modern treatment of T. B. is "the collapse therapy". So, if the disease is unilateral, it is best to start A. P. as soon as possible without waiting for a call from the Sanatorium. If A. P. fails, then, of course, Gold and Calcium injections may be given.

How to take temperature in T.B.? Very few people know the real use of a thermometer. In ordinary diseases, a thermometer placed under the axilla may give a tolerably good idea of a patient's temperature. But in T.B., when the variations in temperature are very minute, such rough way of taking temperature is unscientific. The most reliable and scientific method is by rectal method. Even then, one must know that the temperature of a normal individual varies from morning till evening. So, one must know correctly the limits of normal temperatures at various times. The following short table gives a correct idea of various limits when a patient is in bed and at rest.

6 A. M.	—	97° to 98.4°
9 A. M.	—	98° to 99°
3 P. M.	—	98° to 99°
6 P. M.	—	99° to 99.6°

Now, lastly for the benefit of the public, I am giving a list of sanatoria situated in various provinces. The procedure to be followed is as follows: Firstly, apply for an application form and information. Then, get it filled up by the medical attendant and remit a retaining fee. The patient's name is then registered. Never start until you get a wire or letter from the sanatorium authorities to start.

Madras Presidency: (1) U. M. T. Sanatorium at Arogyavaram near Madanapalli. This is probably the biggest sanatorium in the whole of India consisting of 100 special wards and 7 general wards. It gives the most modern lines of treatment in T. B., including thoracoplasty operation etc. (2) Perundurai Sanatorium, Coimbatore. (3)Vishrantipuram Sanatorium Rajamundri. (4) Princess Sanatorium, Mysore.

Bombay Presidency: (1) Sir William Wanless Sanatorium, Wanlesswadi, M. S. M. Ry. (2) Betair Sanatorium, Panchgani (Dist. Satara). (3) Tuberculosis Sanatorium at Talegaon, Dabhade (Dist. Poona).

C. P. and Berars: (1) Government Sanatorium, Pendra Road.

Punjab: (1) King Edward VII Sanatorium, Dharmpore (Simla Hills) (2) Lady Linlithgow Sanatorium, Kasuali.

U. P.: King Edward Sanatorium, Bhowali.

Bihar: Government Sanatorium, Itki.

In conclusion, I must again deplore the attitude of the public in not taking proper advantage of sanatoria in the treatment of tuberculosis. The modern treatment of T.B. has developed so rapidly that it can only be carried out in a well-equipped sanatorium. So, *Go to Sanatorium* should be the slogan in the treatment of tuberculosis.

A young man consulted a physician about a tobacco heart which he had contracted by excessive smoking. "Doctor", said he, "do you believe that the use of tobacco tends to shorten a man's days?" "Do I?" exclaimed the doctor. "I know it does. I tried to stop once, and the days were ninety hours long."—*The Miscellany.*

A PROGRAM OF SCHOOL HYGIENE

Adopted from "Good Health", U. S. A.

THE health of the children was of no concern in the earlier system of public education. It was in fact often harmed by long hours, improper heating and ventilation and worry about the severity of the teacher. But now, it is recognized that the schools can be made to benefit the boys and girls in ways which will show good results the rest of their lives. An exhaustive study of school hygiene has been made by Dr. Max Seham (*International Clinics*).

He considers first the question of one session a day or two. It seems to be best both for physical welfare and general proficiency. It is clear that study becomes fatiguing and less effective when long continued. After about eleven a. m., a decline sets in. The youngest show this first. It seems to be best to have the difficult studies in the morning and the manual training and gymnasium in the afternoon. Recitation periods for young children average thirty minutes in this country, with fifty for the older ones.

Change of work is also conducive to increased output if the new task is easier than the former one; it is more effective when there is little similarity between the two studies; regular change is superior to irregular. Some authorities favor a fifteen-minute recess for every forty-five minute recitation period. This rests the eyes and gives a chance to ventilate the room. In one test a recess at ten o'clock decreased the errors at eleven o'clock from 162 to 152, while recesses at nine and eleven decreased them to ninety-six.

Vacations would give more benefit if they were properly supervised. Vacation schools and vacation camps are being considered as possible school functions. Bad lighting is said to be the chief cause of eyestrain and other eye defects. The correct system of lighting includes large windows extending as high as possible to the ceiling and admitting the light from the left and rear; soft instead of glaring colors dull instead of polished wall surfaces which reflect the light.

Many studies of ventilation have been made. One observer found the classes restless, dull and incapable of continued mental effort when the temperature was eighty degrees; the dullness decreased with the temperature until at seventy degrees; the pupils were cheerful and did excellent work. The best results were obtained at sixty-eight degrees; at sixty-six, the work was still good but there were complaints of the cold. At sixty degrees the work was poor.

Window ventilation was found to reduce the number of colds when substituted for the fan-ventilated system. Lecture halls should be kept at between sixty-one and sixty-four degrees; the gymnasium at sixty.

The new physical education has a broad scope. It aims not only to increase the size and strength of the muscles but to develop the interests, capacities and abilities of the child. It should be given daily and adapted to the individual. It then balances mental employment, favors nervous and emotional stability and increases the nerve force.

Early attention to mental hygiene may prevent lasting emotional maladjustment. Children should not be classed merely by age; their individual needs should be considered. They may be affected by discord in the home or by a teacher who always scolds, nags and threatens. Such an atmosphere in the schoolroom may destroy those traits of self-reliance, confidence and determination which should be cultivated.

Treatment of Leprosy

In Ancient And Mediæval Times

By Dr. D. A. GANGOLLI, L.C.P.S.,
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LEPROSY has been known to exist in the world from the remotest times and on account of the terrible mutilations which it brings about, it has been looked upon with the greatest dread and horror, with the consequent adoption of most cruel and barbarous steps for its extinction. Almost all people and races considered leprosy as a visitation from God on account of sin, as a result of which the lepers were shunned and isolated. A leper was almost universally regarded as not human and as such deserved to be destroyed or otherwise treated with the utmost cruelty imaginable.

European towns had places where they forcibly imprisoned their lepers, and these places were shunned. There was a boundary line beyond which the lepers were forbidden to tread. In civil law, he was considered as dead, his wife was free to marry again and his property disposed off to his heirs. In France, they were most cruelly persecuted and burnt alive. All lepers were strictly enjoined to make use of an obvious sign, so that they might be distinguished. As soon as an individual was recognised to be a leper, he was treated as one dead, brought to the portal of the church, where the priest would throw on him three handfuls of earth to the accompaniment of prayers to the dead, after which he would be carried in a procession to the place of internment. There, the priest would hand over to him the leper's emblem, a white cloth for his head and a clapper. Even the missionaries working for the alleviation of the sufferings of the poor and distressed lepers, were considered as infectious and as such dangerous to the public at large. They were ordered to make use of a special emblem, the sign of letter "L", of red cloth on their left arm so that they might be distinguished and avoided by the healthier people. It is reported that in Spain even now lepers are forcibly expelled from towns and driven into mountains and desert places. In Palestine, leprosy was considered as a living death and an awful punishment from God. There the lepers had to isolate themselves from crowdy places, and while walking on the road make use of a special emblematic garment, keep their hair uncut, faces covered and shout a certain word meaning "Unclean", so that they might be avoided by healthy people. They were cruelly shunned and often stoned and were forbidden to cross the boundary line prescribed for them on the pain of inflicting forty stripes. An author says that no more pathetic cry has been heard through the ages than that of a homeless jewish leper shouting 'Unclean! Unclean'.

In Mesopotamia, a leper even today is an outcast and is made to live on the outskirts of the town or village and forbidden to communicate with anyone. In Morocco, the lepers had a special uniform; a high and pointed straw hat, faces veiled and a bell in hand to warn the passers by. In certain parts of Russia, on the very first recognition of the disease, the leper was most mercilessly cast out and driven to a most lonely spot in the forest. There, his first duty would be to prepare a cross and put it outside his miserable hut as a warning to anyone passing by.

In India, leprosy is of a very ancient origin and references to it can be had in Vedas which are believed to be 3000 years old. In the fifteenth century, it came to be considered as a special sign of divine wrath and as such was held in peculiar horror by all classes as is done even today. Agni or the god of fire came to be propitiated for the extinction of this dreadful disease, which eventually seems to have led to the custom of burning alive of lepers which was widely practised. After a time, in certain parts of India at any rate, it came to be recognised that fire was not the proper remedy as the disease was spreading unabated in leaps and bounds. It was suspected that when a leper was burnt in the open, the disease spread by fumes. This led to the custom of burying alive or drowning of lepers which remained current upto a very recent date especially in Mandi Sate. Sometimes, the poor victims themselves, in their terrible mental depression, would request that they might be disposed off by being burnt or buried alive, not only to end their miserable existence but to save their children from this dreadful scourge ; for a belief was widely prevalent that courting of a voluntary and voilent death would prevent the disease from descending to their children. In Nepal, leprosy is considered as criminal and is meted out with death penalty. Even today, in many parts of India, the lepers are relegated, to miserable huts on the barren wastes on the ourskirts of the town or village and forbidden to leave the prescribed limits. Food is supplied to these miserable wretches, tied up in dirty rags and placed within their limit by means of a long pole; for none would venture near the boundary line.

In China even to this day, lepers are disposed off by being burnt alive, for there human life is not considered to be of much value. There also, often the poor victims themselves would request to be buried alive. For this, he would take a dose of laudanum or some other opium preparation and while unconscious, his relatives would complete the scene. In Japan, the tragedy of a leper is no less painful. For, upto the present day, his lot is considered as hopeless either in this world or in the next. Even men of high social standing on the very first appearnce of this terrible disease are most cruelly cast out to lead a miserable existence by begging. The tale of Sumatra and other Dutch East Indian possessions is equally agonising. For the lepers were burnt alive together with their houses and belongings.

Turning our attention to the United States of America, which has been described as a most progressive and civilised country, we find that a leper is in the same sorry plight. His condition today is most horrible and his presence is regarded with the greatest dread. The poor victims are hounded down from town to town and from village to village and often times stoned like the worst of beasts. His presence causes such a scare that if he is in a town, the entire business of the town will be suspended during the time he is there. If he happens to board a train, he will have the entire train to himself. His presence would be notified in bold headlines in daily papers as the greatest possible piece of sensational news. Even the educated classes look upon this disease with the greatest dread as illustrated by the following recent instance. A leper was once brought into a courtroom. Everybody including the ' judice ermine' fled from the room. If this be the condition of America's lepers today, even after a study of the correct knowledge of the disease, then what amount of torture these poor victims had to suffer a hundred years back, can better be imagined than described.

Turning to Africa, we find that this loathsome disease did not fail to excite a condition of frightfulness even amongst the wild and savage tribes. The lepers there had the

usual fate of their kinsmen over the rest of the world. As soon as a leper was recognised as such, he was forcibly removed to some distance, away from the village, and forbidden to leave his prescribed limit, while care was taken to provide him with food. Amongst certain tribes, the prevalent custom was to destroy all young lepers, while, in Nyassaland, they were destroyed as soon as they developed open sores.

Thus, it is evident that almost identical methods of cruel persecution of lepers were practised all over the world with a view to completely exterminate leprosy, but inspite of this, leprosy has not only been not stamped out, but today, it has within its fold an alarming number of 3,000,000 helpless souls. An article on the 'Treatment of Leprosy in Modern Times' has been published in the Feb. '42 issue of HEALTH.

DO YOU SLEEP WELL?

If not, this Article will Help You to Secure Sound Rest

BY ELLIOT B. DEWBERRY, M.R I P.H., M.R. San.I.

SLEEP compensates for many things and replenishes and rebuilds the human mechanism. Sufficient sleep and rest are essential in all circumstances and especially so in periods of national emergency, when strength and endurance are taxed to the utmost.

Loss of sleep for any length of time is followed by more or less serious mental and physical disturbance. Irritability, pessimism, and imperfect memory are often produced. Exacting tasks which demand close application become impossible. This combination leads to a disorganization of the nervous system.

How Sleep Helps to Restore.— In sleep, respiration is deep, the pulse slower, and the blood pressure of a normal man becomes like that of women and children. The intake of oxygen and the expiration of carbon dioxide are lessened and the temperature lowered. Temperature is regulated to a great extent by muscular activity and is usually highest between 5 p. m. and 7 p. m. and lowest in the early morning—a reason why the body must be kept warm during sleep.

Exhaustion, due to the activity of the oxygen stored in the tissues of the body, produces a condition of quiescence while replenishment takes place. The digestive processes, movement of intestinal tract and absorption of food substances, proceed normally, but these are not so dependent ultimately on the nervous system as are the muscles of the body.

There is extreme lowering of the brain's activity. Scientists have suggested that the nervous tissue of the brain, like the muscles of the body, is choked or poisoned by the chemical products of the day's activities and ceases to be active until the injurious products have been carried away by the blood stream. The failure of the would-be sleeper to control the brain (owing, possibly, to unhealthy conditions) causes the most serious kind of sleeplessness. The brain works incessantly like an independent entity. Many people lie awake, listening to every sound, worrying over anything and everything because sleep will not come.

A sleeper may unconsciously make movement. American scientists have proved by means of an instrument

called the "hypnograph" that women sleep more soundly than men. They not only get to sleep quicker but rest more quickly through the night. Men are thirty per cent more restless than women.

Healthy sleep is deepest in the first hour and becomes less deep as the hours go by. Passing from the waking state to that of deep sleep, however, is not sudden but gradual and so is the process of awakening.

How Much Sleep?—The amount of sleep necessary to any individual is controlled by the actual amount of work done by body and mind, the idiosyncrasy of the constitution and the existing conditions for sleeping. John Hunter, the famous Surgeon Extraordinary to King George III gave the amusing advice: eight hours sleep for a man, nine for a woman, and ten for a fool.

Minimum Sleep Required

(Compiled by Lairs and Muller)

Age	Period of sleep needed
6-7	11 hrs. 14 mins.
8-9	10 ,, 42 ,,
10-11	9 ,, 56 ,,
12-13	9 ,, 36 ,,
14-15	9 ,, 06 ,,
16-17	8 ,, 30 ,,
18-19	8 ,, 16 ,,

As a general rule, babies should sleep the greater part of twenty-four hours, infants and children up to six years of age according to their natural requirements, school children ten hours or more, and adults from six to nine hours. Girls and boys should always have the amount of sleep necessary for their years and more in winter than in summer. Persons of sixty-five years of age or more are often unable to sleep more than four hours at nights, but they make up for this by taking one or two hours' rest during the day.

Ways of Inducing Sleep.—There is no panacea for sleeplessness. To obtain sleep naturally and easily, the first essential is to follow a consistent bedtime schedule. To calm down mentally and physically, and if possible, to forget the day's activities and worries is another. Taking a hot bath of about fifteen to thirty minutes' duration before retiring to bed, and thoroughly to relax while in the water is effective; it tends to relieve physical and emotional tension. Another useful plan on getting into bed is momentarily to stiffen the whole body and then slowly relax, starting from the head and working downwards, concentrating mentally and physically on the effort.

A popular method is to drink slowly a hot beverage such as a glass of milk. No solid food should be eaten, however, and the quantity of liquid must be limited, otherwise it may cause pressure on the bladder and subsequent wakefulness.

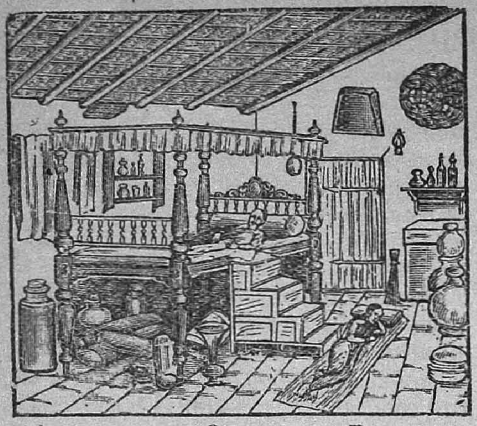
Banquets or heavy meals late in the evening are well known sleep-disturbers and produce nightmares, headaches, and digestive troubles, although such wakefulness is probably due more to excitement than to the actual food consumed.

A universal method of inducing sleep is to read some light literature in bed until complete physical and mental relaxation has the effect desired. A good reading lamp is necessary to prevent eye strain.

Drugs should never be taken as a cure for insomnia without first consulting a medical practitioner.

A comfortable bed is an important consideration, and the bed clothes should be light and warm. The height and size of the pillow is a matter of individual taste, but a large down pillow is generally the most comfortable. Pressure of a pillow against a wakeful ear may cause internal noises and rouse the sleeper.

Generally speaking, it is preferable to sleep on the right side of the body. Lying on the back induces snoring,



INSANITARY SLEEPING ROOM.

because the muscles relax and the jaw is allowed to drop. Breathing then takes place through the open mouth instead of the nose. This may keep other people awake. Corpulent persons should never sleep on their backs.

The temperature of the room should be moderate, while cool fresh air is conducive to sleep and good health. In hot weather, the air should be kept in motion, either by opening windows or by the use of an electric fan placed on a felt base to minimise sound.

Noise is the worst disturber. It raises the blood pressure without waking the individual and causes the body muscles to tighten.

Summed up briefly, perfect sleep is based on perfect health, to obtain which it behoves us to exercise our will-power in employing the mental faculties with which we are moderate in all things—in our work, in our diet, in our physical exercise, and in our general mode of life—then Nature will do the rest.—*Good Health.*

Head and Body Lice

MR. J. R. BUSVINE of the Entemological Department of the School gave an account of some applied research which has been proceeding there on methods of controlling head and body lice. He said that *Pediculus humanis* needed a constant environmental temperature of about 30° C. The eggs took nine days to develop and the louse a further nine days to reach adult stage. Compared with ticks, fleas, and bugs, it starved to death very quickly. So long as there was efficient laundering in a civilized community there was not likely to be trouble from lice, except in the case of people in casual wards or air-raid shelters. But in the event of breakdown such as would follow an invasion or widespread bombing, or crowding of refugees, a very different state of affairs would obtain. The powder known as A. L. 63, which was a great advancement on powder of the type, gave protection only for a few days. A more lasting insecticide which could be applied to clothing was needed, and this had now been found in a liquid preparation the composition of which was for the present a secret. Its effect lasted a long time and was not destroyed by perspiration. It had been tried out on the clothing of infested tramps, and they were found still protected a month after treatment. The disadvantage was that the substance was dispersed when the clothing was washed, but a device—again at present a secret one—had been invented by which most of the lice population on a person could be concentrated on a small piece of material which was impregnated with the louse poison. For head lice, the insecticide has been prepared in the form of a medicated 'brilliantine". It was understood that particulars of the new preparation could be obtained from the Ministry of Health.—*B.M.J.*

AIR RAID AND CHILDREN

WAR CONDITIONS AND THE MENTAL HEALTH OF THE CHILD

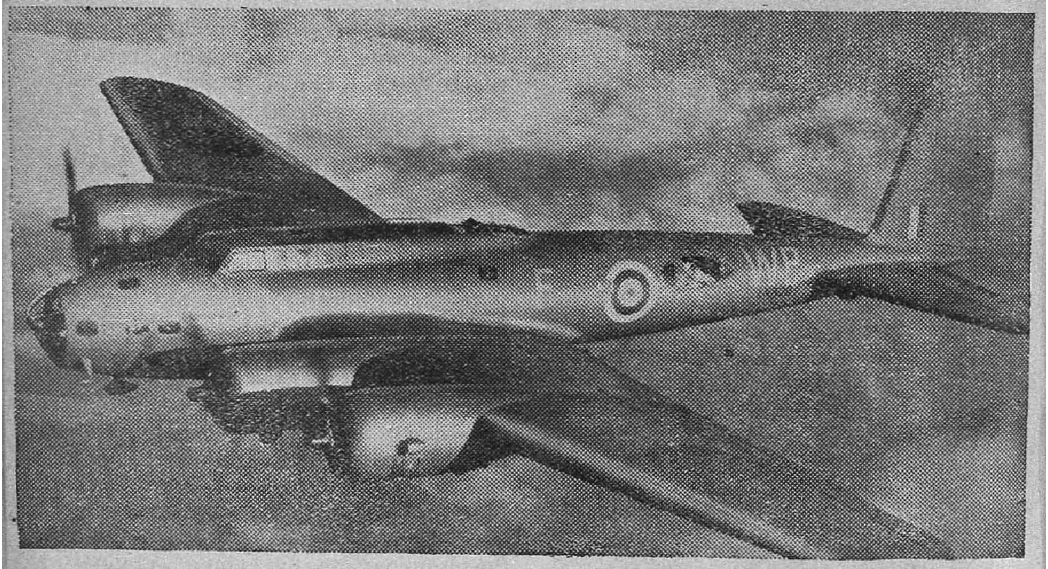
BY F. BODMAN.

LAST February Miss Dunsdon, our psychologist, made a survey of 8,000 Bristol school children to assess the incidence of strain following air raids. Her findings were that about 4% of this large sample of the school population showed some signs of strain, either purely psychological or else psychosomatic. Among the psychological symptoms noted were general nervousness, trembling, crying and aggressive behaviour. Among the psychosomatic symptoms were headache, anorexia, indigestion, enuresis, soiling, pallor, and epistaxis. Of the three hundred children showing signs of strain, 120 suffered from frankly psychological symptoms. These occurred twice as often in the 5-7 group as in the senior school group (aged 11-14). About 170 children suffered from psychosomatic disorders. These were especially frequent in the oldest group of senior school children, and this form of anxiety disguised as psychosomatic disorders. These were especially frequent in the oldest group of senior school children, and this form of anxiety disguised as physical symptoms was the characteristic reaction of the 11-14 group. This survey concerned the general school population at a time when severe raids were occurring fairly often. I thought, however, that it would be a matter of interest to try to find out how children who had suffered special stress were reacting after some months had elapsed and during a period of freedom from raids. I have therefore carried out a special survey, lasting a fortnight, of a group of children who were exposed to an air raid of maximum severity. This group were the in-patients of the Children's Hospital in Bristol at a time when the hospital was damaged by several high explosive bombs and the children were evacuated to another hospital at the height of the raid, under particularly terrifying circumstances.

On the night in question, there were 54 in-patients ranging in age from 2 months to 12 years. This was the occasion of the second severe raid on Bristol. Shortly after nine o'clock the hospital was damaged by several high-explosive bombs. The warden of the sector immediately ran to the hospital at which I was on duty, a quarter of a mile away, where a squad of regular soldiers were standing by to help deal with incendiaries. On receiving the message the soldiers immediately dashed off in an Army lorry to the Children's Hospital. The scene on arrival was extraordinary. Soldiers were crunching through a litter of broken glass, fallen plaster, and blown-in blackout material, picking children out of cots and beds and, tucking them under their arms, running down the steps and dumping them pellmell into the lorry. The hospital was in darkness, and the only light came from the fires raging in the city below. A very heavy barrage was in progress and heavy high-explosive bombs continued to fall quite close to the hospital. Most of the children were transferred by lorry to my hospital, a few babies were carried in the arms of the soldiers the quarter of a mile, while spent fragments of "flak" were buzzing down freely. All the 51 children were evacuated without a scratch, and the only serious casualty among the nursing staff was the night sister, who had been cut by glass. Here, then, was a really traumatic incident. I

still feel a little frightened myself when I recall it. I have tried in this survey to find out how this incident has been integrated in the minds of the various children. Of these 51 children, 44 were alive; 7 have died —3 of cerebrospinal fever, 1 of diphtheria, and 3 of the illness for which they were originally admitted. Of the 44 survivors, 5 still have symptoms which can be directly attributed to their experiences on the night of the raid—a percentage of 11. Parents reported that on their arrival home from hospital, generally about a week or a fortnight after the incident, 27 children (61%) showed signs of distress. But the majority were stable in a period ranging from three weeks to two months. "He sweated freely when the sirens went the first week he was home."; "She was normal in three weeks"; "She was frightened for nearly two months."

Perhaps the best example of the normal process of digestion of the experience was that of a little girl aged three years. At first on her return home Janet woke up frightened by the sirens and wouldn't say a word to the grown-ups about what had happened. But at the end of three weeks she was overheard telling her dolls about how the bombs fell and how the windows fell on us: "a man came and took me away to another hospital in a car." After this discussion of the incident with her dolls, she was much steadier; she sleeps through the sirens, and only wakes up when the barrage is particularly heavy. She has no other nervous symptoms now. All the children showing persistent signs of strain are between the ages of 1 and 5½—this confirms Miss Dunsdon's finding that the youngest age group is the most vulnerable. The youngest child is now 17 months old. She showed evidence reported in adults, and began to have screaming



R. A. F Flying Fortresses Carry War into Stratosphere

The "Flying Fortress", a four. 1200 h. p.—engined bomber has a ceiling of 40.000 feet. At this height of over 7 miles, the aircraft is inaudible, and invisible from the ground. Its long range of 2,450 miles, speed of 305 m. p. h. at 25,000 ft. and load of 4 tons of armour-piercing bombs which whistle earthwarbs at over 700 m.p.h., make the aircraft a deadly menace to the enemy.

fits and night terrors three to four weeks after her discharge from hospital. After another severe raid, in which her home was damaged, she was evacuated with her mother to South Wales, but is still very nervous, and suffers from night terrors, although she can tolerate the noise of engines.

The next natural group to be from the age of 1 to 3. There were 15 of these, one of whom died of meningitis. Of these children, 4 showed no sign of strain—most common reaction in this group was that to the noise of sirens, or to any noise. She jumped at the least little noise," "He knew what the sirens meant and was terribly anxious"; "She put her finger to her lips when the sirens went and seemed to listen, and cried." This reaction soon disappeared in spite of many subsequent alerts. These children are of an age to walk, and some of them ran for a safe person or place when the sirens went. The earliest example of this was seen at 1 year 2 months: "He came after me when the sirens went", "He runs to anybody on hearing bangs"; said "Bembs, Mummy", or "Is it all clear"? "He asked to go to shelter when the sirens went." Another reaction observed in this group was a failure to recognize the parents on return home. "She didn't know us when she came out" (1/11), "He didn't know me—he was a bit strange" (1/11).

It is not until the 3-year-olds are reached that any attempt is made by the child to describe the incident. At first the account is disjoined and fragmentary. Joyce (3) said: "They took me away; they wouldn't let Daddy come. "Brian (7/5) told his parents how his hair was full of powdered glass, how the nurses showed the soldiers where to go, and how the soldiers carried him out. In this group of children, aged 3 to 7 years (13 cases), there was a slightly earlier phase noted when the child attempted to reject or deny the experience. But, in the next group of children, aged 7 to 11 (8 cases), there was a tendency to accept the raid as an adventure. In the last group of children (11 to 12½), of whom there were 4 cases, there is an example of a sense of responsibility for the younger ones. David (11/6) would not leave his ward until all the other children had been evacuated. He asked the nurse to allow him to help them in carrying children out. Another point of interest is the reaction of these children to subsequent incidents when their homes or hospitals were again hit. Ruth (4/0), after the original raid, was evacuated from my hospital when it was severely damaged by a bomb, and a month after her return home, she saw the house on the opposite side of the road blown skyhigh in a daylight raid. Yet, I found her putting her dolls to bed on the front door-step opposite the ruins, quite friendly and charming. She had a stable father, leader of a first-aid party.

Of the children exposed to a major air raid, 61% showed signs of strain for a period of between three weeks and two months. After seven months, 11% of children still show persistent symptoms. Persistent symptoms have not occurred in children under 1 year or over 5½ years of age. The incident is assimilated in varying degrees according to the stage of development of the child's personality. The earliest reaction is that to sirens and noise in general. In the walking child there is an attempt to reject formulation of the experience, followed by an effort at describing or rehearsing the incident, the description becoming more elaborate as the child is more mature. About the age of 7½ the tendency is for the child to accept the incident as an adventure. Finally, about 11½ a sense of responsibility for others appears. The reaction to subsequent raids was on the whole remarkably slight. Out of 8 children who had severe later experiences, only 2 showed pardonable

anxiety, and they made rapid adjustment. The most striking finding of this survey is the extraordinary toughness of the child, and his flexibility in adapting to potentially threatening situations. — *B. M. J., 4213 : 486, 1941.—Indian Journal of Pediatrics.*

Topics from Medical and Health Periodicals

Keep Nature's Law

TO eat for health
Does not take wealth,
But character and brains.
To eat for taste
Makes big the waist,
Plus many aches and pains.

Man dives and flies
And thinks he's wise,
And Boss of all the earth,
But to this hour,
He's not the power
To give a life cell birth.

Keep " Nature's Law "
Eat ripe and raw,
The leaves and seeds and fruit.
Then wear the smile
That's more than style,
Gain health and wealth to boot.

—*Frank E. Baker.—Oriental Watchman.*

Ovulation and Menstruation

OVULATION occurs only once in the menstrual cycle and the ovum is fertilizable for only a few hours, probably 24 at the outside. But possible variations in the duration of the cycle render calculation of the safe period not a simple matter. The duration is commonly 28 days, but cycles as short as 25 days and as long as 35 are by no means rare. The crucial point is that whatever the duration of the cycle, the phase from the discharge of the ovum to the beginning of the next cycle is constant—14 days. It is the preceding phase which varies in length. Thus in the 28-day cycle the two phases are equal. The first phase lasts only 11 days, while in the 35-day it extends to 21 days. To find the date of ovulation the woman must count backwards 11 days from the date of her next expected menstruation. If her cycles fluctuate, she must count back both from the earliest and the latest possible dates. Fertilization is possible over the period beginning and ending in the two calculated dates, but for safety this period has to be extended. Allowing 24 hours for the survival of the ovum, she counts forward one day, and allowing time for the survival of sperms deposited before ovulation she counts backward 3 days. Thus she calculates her fertile period as extending from 3 days before the earliest possible date for ovulation to one day after the latest possible date.—*Clinical Journal, May—June, 1942.*

Cosmetic Skin Diseases

COSMETIC skin diseases may be classified into two groups: chemical and allergic. In the former case an ingredient of a cosmetic actually damages skin tissue by reasons of its chemical nature. Prolonged use results in a chronic inflammatory condition similar to eczema. Such a condition requires no latent period, but produces a progressive reaction at once.

Cosmetics falling into this category are bleach creams and freckle removers containing, for example, ammoniated mercury, resorcin, or salicylic acid, depilateries containing alkaline earth sulphides and stannites, hair dyes of the aniline types, and nail polish removers containing strong solvents. This type of dermatitis generally clears up abruptly as soon as the causative agent is removed.

Cosmetic allergy—better called cosmetic sensitization—is a condition in which a sensitivity to a certain offending substance is acquired during a latent period of sensitization. After a lapse of time, when the causative agent is again encountered, the visible reaction is observed. In the earlier stages, it may be present as "invisible dermatitis," a balanced state in which no signs of reaction are shown, but will readily become manifest at the slightest contact with the causative agent. This type of dermatitis differs from that caused by chemicals in that it involves the dermal layers, whereas in chemical dermatitis the epidermal layer is affected.

Cosmetic sensitization (allergy). as in all types of allergy, is usually a result brought about or hastened by some predisposing factors. Certain types of skin are more apt to develop cosmetic dermatitis than others, namely, that of the very young, the aged, the dry skin, or those which lack pigments. Skins exposed to physical and chemical elements are also more susceptible than usual. Particularly is this true in lipstick dermatitis where light, wind, heat, cold, moistening of the lips, mouth breathing, passage of hot and cold liquids, etc., must always be considered as contributing factors. Rises in temperature with corresponding increased perspiration, especially where the area is confined (as under the arm-pits), or the use of hot applications, both make a reaction more likely.

FACTORS AFFECTING HYPERSENSITIVITY:— The general health of the patient has a large bearing on the severity of this hypersensitiveness. At the same time climate, season,

atmosphere, temperature, altitude, humidity and geographic situations influence the production of dermatitis. Emotion, fatigue, excess irritability, menstrual difficulties, and pregnancy have a bearing on the case. Heredity is perhaps one of the most important factors, while sex, age, race and environment also play their parts in the picture.—*G. P.*

Dermatitis from Nail Varnish

H. C. Semon reports the case of a married woman aged 37 in whom 3 or 4 red patches appeared on the right side of the face. They were cleared up by some medicine, but they recurred. Before this attack completely subsided, it was followed by a third.

The rash was evidently an allergic response to some external antigen. While cross-examining her as to the use of cosmetics, he was struck by the polish on her carmine-dyed finger-nails and her tendency to rest the right cheek and chin against the dorsal surface of the right hand, held in a semi-clenched position so that the fingers and finger-nails were in direct contact with the parts primarily affected. Questioned as to her sleeping posture she immediately added the left hand to her right and tucked both dorsal surfaces over and under the right side of the chin. It then transpired that every relapse had occurred a few hours after applying a fresh coat of the paint. A fortnight later, following removal of the cosmetic with a "remover" supplied by the makers, the dermatitis cleared up.—*Clinical Journal.*

Bite of the Black Widow

SPIDERS are the serpents of the insect world, nearly all possess poison glands which excrete a venom that is injurious to insects, but only in a few species is it dangerous to man. Members of the genus lacrodectus are specially dangerous and presumably because of their black attire these sinister insects are known as widow spiders. Black widows are common throughout the United States and Canada, and have been carefully studied by American workers from whom most of our knowledge of their venom has been gleaned. It is said that some five per cent of bites by the black widow are fatal. In fatal cases, death takes place within 18 to 36 hours. Occasionally, its bite gives rise to local gangrene and formation of a dry black eschar. It is not usually painful but it is followed by a dull numbing pain which eventually becomes localised in the muscles of the chest, back and abdomen. The nerve pain is attributed to stimulation of myoneural junctions. The abdominal wall becomes rigid while respiration is impeded by the spasm of the thoracic muscles.—*Lancet.*

Occupational Treatment

LONDON doctors are today prescribing embroidery for soldiers with nervous trouble.

Knitting, explains Lady Smith-Dorrien, head of the Royal School of Needlework, is not enough to take the mind off worry.

Many women have written to her complaining that they have knitted and knitted until they can knit no longer and asking her for the best work to take up the entire attention.

To all of them Lady Smith-Dorrien recommends fine embroidery, intricate and difficult work which wholly occupies the mind.

The same principle is now being applied to the new methods in Britain's war-time hospitals. Mere amusement is not enough: the patient must be given an occupation that is difficult. Thus the needle, so long employed for putting something into him, is now being used, and with excellent results, in getting his worries out.

The Queen is so interested in the departure that when she found a soldier embroidering his regimental badge in a Red Cross Hospital she asked for a sample of his work.

When the Neck is Broken

THE neck is supported by seven vertebrae that are smaller, thinner and less protected than those of the back.

Between the tips which you can feel and the round part of the vertebra toward the front lies the spinal cord, that starts as it comes from the brain. Damage to the spinal cord in the neck means death or total paralysis of the body. It is easier to break the neck than the back.

Keep the head straight, chin up; leave 'em lie—on their backs.

How does a broken neck happen?

A sudden jerk can break a neck. a bump against the top of the car suddenly forcing the head forward is a common cause, or jamming the head against something like diving in shallow water. The injured person who complains of neck pain or that it hurts to move his head should be regarded as having a possible broken neck. If he complains of tingling or numbness in his arms or legs, the cord has been bruised but if he can't move them, it (the spinal cord) has been mashed or crushed in two. This happens when one of the vertebrae has been broken and forced backward against the spinal cord—jackknifed. This is WHY keep the head STRAIGHT because the nearer the chin is to the chest, the more likely is damage to the spinal cord. So, with the chin up and head back, cord damage may be avoided. A jackknife neck is what happens in hanging.

LEAVE 'EM LIE—ON THEIR BACK—and put a folded coat or something under the neck to *keep the head straight—chin up.*

If he has to be moved, have some one person hold the head back while he is being lifted.

NEVER try to put him in a car sitting up or folded into the back seat. That means the difference between a simple broken bone and DEATH or paralysis. Hurry and bad management by excited, anxious, ignorant friends bring grief. If he could move before you started to town and was paralyzed or dead when he got there, the chances are *you* did it, not the accident.

Wait for an ambulance: or if way out in the country get a truck, so that he can lie out flat on his back; have something under his neck and some one to hold his head straight—chin up.—*Texas, May, 42.*

Compulsory T. B. Examination for Young Women Proposed in Sweden

ALL the young women between the ages of 18 and 20 should be compelled to submit to an examination for T.B. This is the conclusion drawn by two Swedish physicians, Gunnar Berg and Helfrid Engstrom, after investigating the development of the tuberculosis death rate in Stockholm during the period 1911-1939. This investigation shows that the death rate from consumption has not diminished to the same extent for young women as for other groups, among which it has decreased very considerably, due to improved social conditions and better care of consumptives.

Some doctors ascribe this condition to silk stockings and other unsuitable clothing, it is stated in the report. Others consider that the voluntary under-nourishment by "slimming" cures or under-nourishment occasioned by low wages for certain groups of young women constitue the reason why the women in these ages have not benefited to the same extent as the men and as women in other ages from the progress made. According to the theory of the above-mentioned investigators, however, the probable reason is the large influx to the towns of women belonging to the young age-groups, who are thereby exposed to the infection to a large extent than in their original home surroundings. This is the ground on which a general examination of the young women—at least in the towns—is proposed.

Such general examination of the grown-ups—in addition to the examination of babies and schoolchildren—is at present regarded as one of the most important prophylactic measures against tuberculosis, and much attention is being paid to this subject in Sweden. Tests have been made on a big scale with X-ray examination of conscripts, and a compulsory investigation of this kind for all new conscripts, is considered desirable.

The Swedish student corps have at their own cost arranged voluntary X-ray examination of their members for some years past, and several Swedish traffic enterprises are regularly examining their personnel in the same way. The investigations have proved very valuable and often revealed cases of tuberculosis of which the bearer was entirely unaware. In this way it has been possible to get the disease under control at an early stage and to prevent the spread of infection.—*Medical World.*

Treatment of Wounds

REMEMBER that emotion, excitement and hurry increase shock.

In the treatment of wounds you have been told to control bleeding by simple pressure or by the use of a tourniquet if the bleeding is severe.

Besides this you should try to prevent or limit *infection* from unavoidable or unwarranted contamination.

Use only *clean* material with which to bind or dress the wound; a clean handkerchief or the inside of a newspaper is usually at hand. Tissue paper is splendid. But all cars can and should carry a package of *sterile* gauze and a bandage procurable for 25 c which may save many, many dollars. Cheap *insurance*—buy some.

What about antiseptics and disinfectants?

Fine—and you have the best always at hand in your car—GASOLINE.

There is nothing better: it is a powerful antiseptic (germicide), cuts out the grease and dirt—disinfects the wound and surrounding skin and does NOT burn or hurt. Bathe the wound with it freely and *allow to evaporate* and then apply the dressing DRY. Carry a can of energine or lighter fluid in your car with the gauze or tissue paper. Iodine burns, blisters and destroys tissue—gasolnie does not. Gas without lead is best.

And do NOT hurry somewhere to get the wound sewed up. The dirtiest wound will be ready to heal in two or three days if kept CLEAN AND OPEN but if it is sewed up it will be red and inflamed in two or three days and have to be opened and then take weeks to heal.

Control bleeding—be clean—wash the wound with gasoline—dress it dry—not too tight—TREAT SHOCK—LEAVE 'EM LIE till you do these things—get smart.—*Texas Journal of Medecine.*

Athletics and Youth

THE physical development of young persons is considered so important, now-a-days in France, that an adolescent desiring to take his bachelor's degree has to pass an examination that proves his athletic qualification. In the schedule of the higher schools for boys, from 5 to 25 hours have been devoted until lately to athletic persuits; for girls it has been 3 hours a week. The Commissariat's immediate programme consists in constructing numerous gymnasiums or athletic fields. This activity has been criticised sharply by French physicians because of elementary difficulties. Now-a-days, all medical problems are regarded from the point of view of the food shortage. At the Academy of Medicine, the late Professor Rathery emphasised the danger of excessive athletic activity of the young. Even if physical education of young persons is necessary for the normal development of the body, this exercise must be proportional to feeding. If there exists no possibility of providing a normal feeding, it is necessary to shorten exercise and prolong rest and sleeping. —*J. A. M. A.*

Loneliness of Infants

Mr. Harry Bakwin M.D., New York, in an article entitled "Loneliness of Infants" in the American Journal of Diseases of Children—Jany. '42, described how infants fail to thrive in hospitals and how they begin to gain and progress steadily when removed from an institution to a home enviroment. "Socialisation" he says "is a basic mammalian pattern of behaviour, and only psychotic persons are isolationists. Socialisation begins early in life. Throughout the mammalian world mother and offspring remain in close physical contact with

one another during early post-natal life. One need but observe the cat with the kittens, the bitch with her pups, the sow with her sucklings smuggling and cuddling together. Contrast this with the suggested methods for handling infants in the modern hospital. In the case of human beings one must recognise that during early life, mother and babe constitute a biologic unit and if it becomes necessary to remove the infant from his mother, a mother substitute should be supplied.

"It is not surprising therefore that young infant should suffer when deprived of the warmth and security which he derives from contact with the mother or a substitute. Nor is it to be wondered at that the younger the infant, the more important is the contact. The young infant is dependent on the environment for gratification of his psychologic needs just as he is for satisfaction of his nutritional needs.

"The infant lacks the mental equipment which permits the adult or even the older child to tide over periods of loneliness by day-dreaming and planning for future. In this respect, as in many others, he resembles the aged person for whom also loneliness may be fatal. I refer to the frequent reports of death of an aged person shortly after the death of the husband or wife."

Control of Flies

ANOTHER wartime entomological problem was mentioned by Mr. H. G. H. Kearns. After the bombing of cities, he said, it was not uncommon for food stores of all kinds to be damaged and, mixed up with building debris, to be exposed to the weather for a long time. This attracted immense population of flies. In one town, the invasion was so great that the fish market had to be closed early in the day and no food could be exposed in the shops The obvious method of control was to remove the debris, but meanwhile the most economical and successful method of dealing with the flies was by a liberal spraying of emulsified tar oil on the exposed surfaces. This acted mainly as a repellant to the egg laying females, and generally two applications were necessary before any abatement of the nuisance was noticeable. Inside the bombed buildings a portable compressor mounted on a trailer chasis and ejecting a suitable quantity of atomized insecticide might be used.—*B.M.J.*

"LIFE'S very difficult," moaned Smith. "The doctor told me the only way to get rid of my rheumatism was to avoid anything damp, especially getting wet, but I'd feel like a fool sitting in an empty bath tub washing myself with a vacuum cleaner!"—*The Medical World—September, 1941*

IN illness the physician is a father, in convalescence, a friend; when health is restored, a guardian.—*Brahmanic Proverb.—The Miscellany.*

Nutrition

Rice Problem

THE rice problem, or more accurately, the problem of the nutrition of populations whose main diet is rice, is one of the greatest importance, for rice is still the staple food of about half the human race and many millions live on it almost entirely. The chief physiological draw-back to a rice diet is calcium deficiency, which must be met by other foodstuffs. The preparation of rice to retain its food values by processes which are economically feasible is a more complicated problem than we, in this country, have imagined. It is not wholly, or even primarily, a question of raw *v.* polished rice. Rice diets are not markedly deficient in protein; the proteins of rice are of high biological value, and rice diets are not improved by the addition of pure protein such as casein, or of the vegetable proteins of pulses and soya. The addition of milk, on the other hand, raises the nutritional value of a rice diet remarkably. So also to a less extent do additions of meat, eggs or dried yeast. Addition of calcium lactate, or calcium phosphate produces a response almost equal to that of the addition of milk. Experiments have shown that the daily intake of one gramme of calcium lactate accelerates the growth and improves the well-being of rice-fed children. This is highly important, because in rice-eating countries milk is scarce and often unobtainable.—*The Medical Officer.*

Manufactured Vitamins

DAILY doses of iron or calcium lactate may have an excellent effect. Within recent years, the chemical composition of a number of vitamins has been discovered and some of them can now be manufactured cheaply and in large quantities. Vitamins produced in this way are just as valuable to the body as vitamins contained in foods.

Further developments in research or industry may make it possible to produce many vitamins in pure form at so low a cost as to make their widespread use in improving poor Indian diets a feasible proposition. This stage has not yet been reached, and meanwhile it is necessary to rely chiefly on suitable combinations of ordinary foods in devising improved diets.

But the idea of giving malnourished children a daily capsule containing more than their requirements of the various essential vitamins in concentrated form is not so outlandish as it seems.

In England, pure vitamin B. made in a factory, is being added to bread made from refined wheat flour to bring its nutritive value nearer to that of wholemeal bread. In America also, great interest is being taken in the possibility of "fortyfying" foods and diets by means of cheap manufactured vitamin preparations. The uninterrupted development of scientific research for a few decades may produce the most striking and unexpected results in this direction.

Prevention of Beriberi

"A DIET largely composed of raw milled rice contains insufficient vitamin B_1 to prevent beriberi," says Dr. W. R. Aycroyd, in Health Bulletin No. 23 published by the Government of India.

Beriberi is a disease in which there is partial or complete paralysis of the limbs due to degeneration of the nerves, which is often accompanied by dropsy and by weakness of heart muscle leading to heart failure. Its essential cause is insufficiency of the anti-beriberi vitamin in the diet. Yeast and the outer layers of cereals removed on milling (e.g. rice and wheat bran) have a high vitamin B_1 content. The richest source of vitamin B_1 among ordinary foods are unmilled cereals, pulses and nuts. Meat, fish, eggs, vegetables, fruits and milk are in general poor in the anti-beriberi vitamin. Parboiled rice even when highly milled, usually contains enough vitamin B_1 to prevent beriberi.

The greatest danger of vitamin B deficiency arises when highly milled raw rice is consumed as the main ingredient in a diet containing other foods such as pulses in small quantities. But even when this kind of rice is eaten, there is not much danger of beriberi if 3 ozs. or thereabouts of pulses are taken daily. The smaller the supply of non-cereal foods, such as pulses, vegetables and fruit, the more important it becomes to avoid a preponderance of mild raw rice in the diet.

The washing and cooking of rice cause a considerable loss of Vitamin B and other important dietary constituents. This loss is greater in the case of raw than of parboiled rice. Rice which is mouldy and full of weevils is likely to be subjected to the most washing. Such rice is often consumed by the very poor whose diet contains only small quantity of food other than rice, and who are in the greatest need of the elements lost in washing.

Milk, which is a good source of most of the essential food factors, is not rich in vitamin B_1.

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Vitamin Which Prevents Scurvy

VITAMIN C or *ascorbic acid*, the vitamin which prevents scurvy, is found in fresh fruits and vegetables. Among vegetables, the green leafy varieties are the best sources.

Pulses and cereal grains in the ordinary state contain no vitamin C. When, however, they are allowed to sprout, the vitamin is formed in the grain and in the growing green sprouts.

There is one cheap and common fruit, namely *amla* or *nellikai* (*phyllanthus embl ca Linn*), which is probably the richest natural source of vitamin C. *Amla* (gooseberry) grows abundantly in all Indian forests and is obtainable in almost unlimited quantities from January to April. The fresh juice contains nearly twenty times as much vitamin C as orange juice, and a single fruit is equivalent in vitamin C content to one or two oranges.

The heating or drying of fresh fruits or vegetables usually leads to the destruction of most of all the vitamin C originally present. *Amla* is an exception among fruits because of its high initial vitamin C content, because it contains substances which practically protect the vitamin from destruction on heating and drying, and because its juice is strongly acid. Acidity has a protective action on vitamin C. Hence it is possible to preserve *amla* without losing much of the vitamin.

Amla is included as an ingredient in many Ayurvedic medicine and tonics. Fresh *Amla* was found to be a most effective cure for scurvy when an outbreak of the disease occurred in 1940 in the Hissar famine area. Tablets made from *amla* powder contain vitamin C in concentrated form and this is convenient method of preserving this vitamin for future use.—*Calcutta Medical Review.*

URGING that dishes in public eating places be thoroughly cleansed, a public health officer declares that "the hands and mouths of previous patrons rather than the hands of food handlers, are often the chief source of danger."

THERE is more vitamin C in ripe tomatoes than in green ones; but as green peas mature they have less of this vitamin.

In Lighter Vein

A Job for a Contortionist

DOCTOR (to patient): I don't want to make you unduly anxious about your health, But you have a carbuncle coming on the back of your neck, and I should advise you to keep your eye on it.—*The Miscellany*

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Strictly Hygienic

DOCTOR: Have you taken every precaution to prevent spread of contagion in the family?

RASTUS;—Abs—lutely, doctah; we've been bought a sanitary cup an we all drinks from it!—*The Miscellany.*

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The Scotch in His Blood

A SCOTCHMAN sold blood for transfusion. The first time the recipient paid S. 25 and after the second transfusion he paid S. 15. After the third transfusion the recipient had so much of Scotch blood in him that he refused to pay anything.—*The Miscellany.*
