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Health

A Journal Devoted to Healthful Living

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EDITORIAL

Alcohol and Tobacco

Alcohol and Tobacco are twin brothers, both evil genii, playing considerable havoc on humanity. Modern civilization has considered them to be necessary evils and modern States, instead of driving these evil spirits away, try to derive revenue out of them. At one time, scientists came to regard alcohol as food. Their contention was that when alcohol was administered in small doses and at not too frequent intervals, it was oxidised and taken into the system, producing heat and energy just as real food does. But this myth has since been exploded. For, it has been discovered that while real food strengthens the body and leaves no after-effects except creating hunger at the proper hour for next meal, alcohol leaves the system in a state of depression even when but small quantities are taken. In all medical books, alcohol is described as a poison and this definition exactly suits the cases. There are antidotes for alcoholic poisoning, but there are none for milk, bread, etc. The system takes only as much of them as it wants and rejects the rest. Alcohol over-excites the heart, it stabs the kidneys; it causes the liver to enlarge, it affects the respiration and causes dimness of sight. It lessens the growth of healthy flesh, tissues and bones. It affects the joints and thus causes gout. It weakens the whole

Satan rejoices when he sees men hopelessly entangled by drink.

system and leaves it a prey to disease. In Japan, the only form of alcoholic beverage used by the people is a very mild rice-wine known as *sake*. It would require a great quantity of this beverage to intoxicate one. Beer, liquor and wines such as are known to the modern world are seldom found in Japan today, outside of a few cities where foreigners congregate and live. In our own country, in ancient times, the Aryans used the juice of the *Soma* plant as a drink. But even then certain restrictions were placed on the consumer. "He who has food enough to support his dependents for three years or more has a right to drink *Soma*." "The twice-born man who drinks *Soma* when his wealth is much less than this (amount) does not get the reward (that belongs) to it, even if he has drunk *Soma* before."—so has Manu ordained. *Soma* is drunk only at the first sacrifice and should not be repeated after it. It was a drink only for the wealthy who should perform some sacrifices before *Soma* is allowed to be taken. But to-day, the drink evil has spread to every nook and corner of the country. Temperance Propaganda and other means of checking the evil are mere eye-washes. Prohibition is the only remedy to check this vice. But prohibition in India means loss of revenue. Recently, the Hon'ble the Revenue Member of the Government of Madras deplored the fast-depleting revenues under 'Excise'. At the meeting of the Legislative Council held on the 20th October '35, the Hon'ble member observed: "It must be obvious to anyone who has studied the revenue of this Province for the last four or five years that these two departments, (Excise and Land Revenue), which, as I have said, bring in between them 80 to 85 % of our total revenues, have ceased to be expanding departments". Therefore, he thought it necessary to tap other sources of Revenue, for instance, "Tobacco".

Tobacco, though not as dangerous as alcohol, is not intended to be absorbed into the human system. The West Indian who was the grower of the weed, used it only for ceremonial purposes. It was left for the white man to discover that tobacco was to be smoked almost continuously during every day in the year. Like all true narcotics, tobacco, when used persistently seeks out the weakest portions of the body and renders them weaker. The will-power becomes less and less as the existence of the tobacco habit lengthens. The heart is affected and palpitation or worse trouble follows. One may smoke for years without discovering that he has done himself any harm. But let him try to break off the habit now. He finds that he cannot sleep; his nerves have gone to pieces, he is absolutely wretched until he takes up with tobacco again. And if he takes it up again, he shortens the distance between himself and the grave".

The evil of tobacco has spread into Eastern countries. In Japan the American Cigarette has crept in. In India, even the high caste people have begun to chew tobacco and smoke cigarette. It is all done in the name of fashion and civilization.

The Tobacco Bill recently introduced in the Madras Legislative Council, though a revenue measure, may yet prove to be a health measure. The

License fee sought to be levied on tobacco may increase its price and thereby prevent poor people from resorting to it as frequently as before. The result of the legislation, the Revenue member observed, would be that 'where now a person going into the shop might get 12 beedies, say for a pice, he will get only eleven'. This is a good gain from a health point of view, as the smoker would be freed from so much of poison that may be contained in a single beedi for his life-time. We thank the Government for this small mercy. We heartily yearn for the day when alcohol and tobacco are altogether banished from this land of sages and seers but we are afraid the day will be far remote.

Food and Health

The circumstances under which We Live

By

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(Continued from Page 194, October '35 issue.)

Vitamins and poisons in the food

IV

Vitamin A.—The influence of Vitamin A is essential for the growth of young animals. If it is deficient, then the growth is checked and the animal becomes more susceptible to infectious diseases. It has been found that those of stunted growth for deficiency of Vitamin A cannot be compensated by administration of increased dose of Vitamin A in old age. Its deficiency also produces night-blindness and many other eye diseases It helps dentition and its deficiency causes chronic enlargement of tonsils.

It is present in milk, butter, yellow of egg, green vegetables and cod-liver-oil. It is also present in meat to a little amount but is more in liver, heart etc. It is also present in certain pulses. It is destroyed if boiled more than the boiling of water but is not destroyed by the addition of Sod. Bicarb.

Vitamin B_1—The physiological importance of Vitamin B_1 which is present in rice polishings, cereals and yeasts has very commonly become known to almost all. We have said previously that Beri-beri occurs specially amongst those who are eaters of polished rice and white-bread.

It may be remembered that during the war, the troops in Dardanelles and Mesopotamia suffered much from this disease but the Indian troops who lived only on whole-wheat bread and Dhal did not have the disease. Apart from this, a paragraph may be quoted here,—"It may be regarded as firmly established that Vitamin B_1 in addition to affording protection against Beri-beri, is an essential factor for the normal growth of young rats and for the maintenance of normal weight and health of the adults." When the depletion (of Vit. B_1) is complete the animals decline in weight and symptoms of deficiency disease begin to appear.

It has been found that in advanced cases of deficiency in young rats, their hind legs are almost paralysed and they shuffle along with difficulty.

It is generally present in abundance in yeast, wheat-germ, yeast extract,

pea-nut, brans etc., and in lesser quantity in egg yolk, liver, heart, brain, whole meal wheat, whole rice, maize, whole barley, oat-meal, root vegetables etc.

Vitamin B_2—Pellagra is a disease characterised by a chronic erythematous eruption, digestive disturbances, and nervous and mental symptoms. It was mysterious until very recently.

Those yielding Vit. B_1 also contain Vit. B_2. Tomato contains a little of this vitamin.

Vitamin C.—(anti-scorbutic vitamin.) Besides losing weight the patient with deficiency of Vit. C develops pain in knee joints and gums: in advanced cases teeth fall out and bleeding is very common from gums, petechial haemorrhage around hair follicles and epistaxis etc., are also detected commonly. In bad cases there may be severe internal haemorrhage resulting in death.

It is present in abundance in orange, lemons, tomato, raw-green vegetables, grape fruits, carrots, raw liver, and in less quantity in apples, banana, vegetables cooked for a short time without Soda Bicarb, milk unboiled or boiled for a very short time.

So, it is quite clear that in the course of preparation of our daily diet, we destroy the vitamin contents of our food. Dried fruits, dried vegetables, greens cooked for a long time or doubly, or cooked with soda, jam, marmalade, fruit jellies, twice heated milk, milk boiled with soda or taken with soda citrate contain no vitamin C.

Vitamin D:—Though it resembles in every way Vit. A, still its special necessity is during the pregnancy of the mother, both for herself and the child. After the delivery also, it is required equally for both.

Vitamin E.—Itwas only in 1922 that experiment has established that a vitamin was necessary for reproduction and this was named as vitamin E. It is present in large quantities in wheat embryo. It has also been found by experiment that sterility in men is produced by the lack of this vitamin while its deficiency in women results in failure in child bearing and resorption of the fetus in uterus. Though diseases have their own responsibilities, still the lack of Vit. E is not negligible which has been proved by the fact that sterility in men produced by the deficiency of Vit. E cannot be cured by subsequent administration of the same, whereas sterility caused by any disease is curable.

V

We may now consider the question of certain dangerous poisons which may contaminate our daily food. They may mainly be classified into 4 groups *e.g.*

1. Ptomaine poisoning.
2. Botulism.
3. Foods dangerous in certain states.
4. Metallic poisons in food.

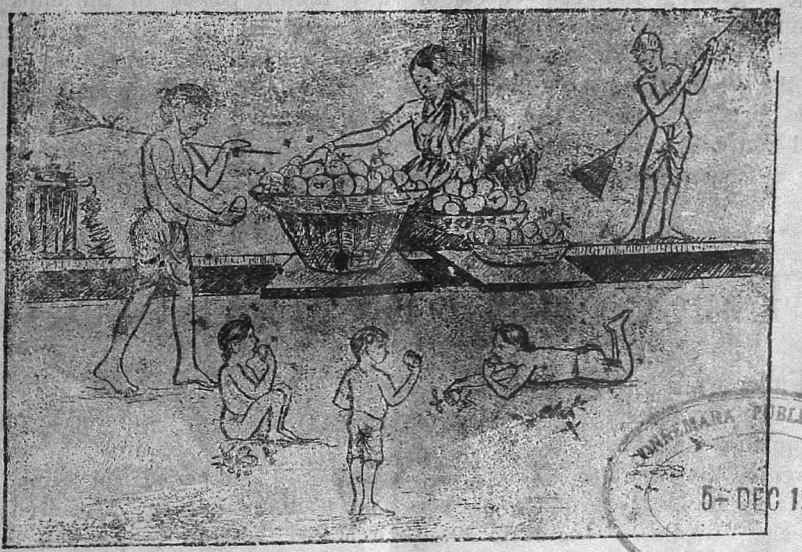
Ptomaine is a substance produced by bacteria of decay in rotting things. If food with these bacilli is cooked, the bacilli die but their toxins remain. If foods are taken uncooked which have already been infected by these poisons, a man is sure to fall a victim to them. The symptoms which are generally found resemble cholera very much. If neglected it is equally fatal like

cholera. But foods taken cooked though infected by the poison do not produce so fatal symptoms. These bacilli generally grow on meat, fish etc.; hence vegetarians are almost always safe from such infections.

Botulism is the more serious type but very fortunately it is rare. It is due to bacillus Botulinus. The toxin is so active that even if a piece of food containing this bacillus is taken in the mouth and spat out immediately, it ingests a fatal dose. An English author estimated that about sixty pounds of this toxin are enough to kill the entire human race. It is providential perhaps that these bacilli die by cooking or by coming in contact with oxygen. So, it is tinned or bottled things packed unhygienically or carelessly, which carry these toxins. The use of tinned or bottled fishes, meat etc., to simplify our process of preparing daily diet, is nothing but to invite our own ruin. Botulism has not been detected in India perhaps. In England there was only one case. It is only in America that it plays it part from time to time.

Improperly pasteurised milk may contain T. B. germs and this is one way by which the children get infected with tuberculosis. Oysters may contain Typhoid bacilli by lying in estuaries that contain human sewage. Green vegetables may carry the eggs of parasitic worms. Meat and fish and other things which are exposed to air for sale may be contaminated by flies or other bacteria. Cooked food ready for use but exposed in times of Cholera or Bacillary Dysentery or Typhoid may be contaminated by flies. So it is the safest and best method to take always fresh and early cooked things not contaminated by flies.

Metallic poisons in food may occur only by adulteration or mis-handling or inadequate hygienic preparations in preparing the food.



Food for children, exposed and unhealthy.

Then there are certain drugs which people use daily without knowing whether they are good or bad. These are smoking, drinking liquors or opium or cocaine habits. The difference between a smoker's lungs and a non-smoker's one will tell the bad effects of smoking. The frequency of liver disorders and liver abscesses and mental derangements amongst drinkers is sufficient reason for its condemnation. It is perhaps needless to say anything regarding the bad effects of opium and cocaine habits.

Tea is another thing used by almost all the civilised world. There had been much discussion regarding its good and bad effects. Tea is taken not as food generally but as a stimulating delicious drink at a certain part of the day. It has its bad effects such as loss of appetite, constipation etc., but its envigorating substance caffeine is known to the medical world as one of the many heart tonics. What is bad in tea is tannin. But if tea leaves are not allowed to infuse in hot water for more than five minutes tannin does not liberate itself from the tea; it takes only its invigorating elements thereby. Moreover, if by chance any tannin passes in the cups it is destroyed by the addition of milk, sugar or salt etc. Tea prepared at houses and taken is not really bad but that prepared in cheap hotels and restaurants are injurious to health.

Similar is the case with coffee.

Tiredness in Childhood

By

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Madras.

"TIRES so easily" is a common complaint made by parents with regard to their children. Even under 4 years of age "tiredness" begins to manifest itself as a symptom which attracts a parent's attention as some thing abnormal. Sometimes it is judged by looks: "the child looks so tired"; but more often it is from the child's own complaints. He has become listless and unwilling to make exertion, or if he makes it, complains much sooner than is natural that he wants to rest. As a normal occurrence, no doubt, tiredness is Nature's warning signal of the need for rest after fatigue from activity, and the changes in the muscle and in nerve cells which are induced by fatigue require a certain period of rest for their disappearance. If activity is repeated without proper rest, more rapid exhaustion results and eventually there may be complete exhaustion with inability to act until a proper rest has been allowed.

School in Relation to Tiredness

In 10 per cent of cases complaining "tiredness," the school life is too strenuous for the child, and before the term has progressed far, the child is already showing paleness, loss of weight, lessening of mental concentration and by the end of the term the child is definitely a less well child than at the beginning. In some

schools there is not sufficient rest between the activities in the day time; moreover the extremely important hours of sleep, the great recuperative, instead of being increased to repair the effects of a mentally and physically strenuous day, are actually too often curtailed. In day-school regime there is another factor which contributes to the daily fatigue, namely, the daily nervous excitement and fluster of going off to school, and the journey to and from school. Sometimes the walk is too long; a journey by bus or tram or train, perhaps involving a change from one vehicle to another, and often associated with an amount of flurry and nervous tension, are definitely fatiguing and contribute to the complaint of seemingly unnatural tiredness.

Nervous Temperament

A child of nervous temperament is more readily fatigued than the more stolid child. But it might be argued that indication of nervous instability may be the result rather than the cause of the repeated fatigue of which tiredness is a symptom. Undoubtedly this is so in some cases, and there may also be a vicious circle, the nervous temperament favouring quick fatigue, and the repeated fatigue increasing nervous instability. In these the sensation of "tiredness" upon seemingly slight cause is frequent.

"Toxic" Causes

The most frequent cause of morbid tiredness in children is an unhealthy gastro-intestinal condition, whether chronic indigestion or constipation or both. A simple "tonic" is not the remedy for a patient whose one need is perhaps careful modification of the details of diet, or perhaps some daily laxative. It is also a common complaint in children with unhealthy throats, particularly septic tonsils.

Anaemia

Any condition which involves a supply of blood poor in quantity would seem from clinical observation to predispose to the sensation of tiredness. A child with poor colour, "pale and dark under the eyes", suggesting anaemia, easily complains of unnatural tiredness. Sometimes it may be associated with an acute illness, *e.g.*, after an attack of pneumonia, or may be due to heart disease congenital or acquired.

Mechanical Causes

Girls at puberty sometimes complain of this symptom, due to the rapid development of puberty, the extra call upon muscular exertion, involved by the carrying of all this rapidly increased weight. To a less extent boys are similarly affected with the onset of puberty. There is rapid increase in stature and weight at puberty which involves extra exertion. Another factor which determines the symptom of tiredness is obesity. The addition of many pounds above the normal average of weight must add greatly to the work done by these children in merely walking about, and still more in any exercise, such as drill or dancing or the ordinary school games.

[From an article by G. F. Still, M.D. in *The Practitioner*, April '35.]

Decay of Teeth and its Relation to Diet

By

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No serious affection of the teeth can be described in a general article of this kind. But there are many minor points about the Decay of Teeth and its relation to Diet which can reasonably be written about with advantage.

Perhaps the most common of the trouble of the teeth is the Caries (Decay of Teeth). It is more or less a disease of civilisation. Although it existed among the ancients also, for there are traces of this disease found in ancient skulls, and mention has been made in ancient Hindu Medicine, of fillings of carious teeth with silver and gold, presumably for the decay of teeth, yet its prevalence at that distant age was nothing compared to that at the present day. It is further shown by the alarming extent of the prevalence of this disease among the American and European school children, 75—95 per cent of whom are found to be suffering from caries of the teeth.

To what extent the decay of teeth is prevalent in India could not be ascertained, for there are no records available owing to much backwardness of Dental Science in this country. As far as my experience goes in this line, I can safely put down the extent of this disease among Indian children to between 25—50 per cent.

Decay of teeth is more frequent in females than in males: and is more prevalent during the period of adolescence than in adult age.

The commencement of the process of caries makes itself manifest by the loss of polish and translucency of the enamel over the affected spot. As it advances, a white spot appears at the affected place, and then after some time a cavity appears on the spot owing to the washing away of the softened enamel—the uppermost shining layer of the tooth. Progressing still further it attacks the dentine a spungy-like substance under the enamel of the tooth—which first softens under the action of the acids (most probably Lactic Acid) and then undergoes disintegration and liquifaction, leaving a large cavity in the tooth.

The causes favouring the decay of teeth are many. Teeth with weak structure are more prone to caries than well-formed teeth. The acid and mucoid condition of the saliva due to Dyspepsia, febrile conditions and pregnancy, is a potent cause of caries.

The food which has the tendency to lodge on teeth surfaces and undergo fermentation is the kind that best promotes the inception of caries. Hence the carbohydrate food is more likely to cause caries than the proteid or meat diet.

Another fact of extreme importance is the vast amount of damage which results in the decay of teeth from the eating of too liberal quantities of manufactured sugar.

Of the three varieties (Sugar, Starch and Cellulose) of carbohydrates, sugar is the most injurious to the teeth for when acted upon by the saliva and micro-organisms of the mouth it produces acids, which are responsible for the process of caries.

Not only that it lodges there in between the teeth, but it helps other food-stuffs to lodge there and to undergo acid production. Starch though distinctly harmful is less so than sugar. Hence the diet consisting of biscuits, soft bread, porridge, cakes etc., is decidedly harmful to the teeth, especially when they form the last part of one's meal as is usually the case with fashionable dinners. Cellulose is the least harmful to the teeth of all the carbohydrates, for it is least acted upon by the saliva, and it does not stick to the teeth. In fact it exerts a beneficial effect upon the teeth for by calling forth the mechanism of mastication, it exercises the detergent or cleaning action on the teeth. Hence the fibrous and acid foodstuffs such as vegetables and fruits are beneficial to the teeth especially when they form the last part of one's meal. Acid-foods such as fruits prevent the activity of the acid-producing bacteria of the mouth. Hence fruits taken as the last part of the meals, are a great preventive against caries. Meat or proteid diet is beneficial to the teeth for by virtue of its fibrous element, it scrubs the teeth clean, and when acted upon by the saliva it produces alkalies and not acids.

The action of fat on the teeth is quite negligible, for it undergoes no change in the mouth.

From this short discussion of the diet and their influence on the welfare of the teeth and the mouth, one point stands clear, and that is "fruits must form the last part of the meals".

The preventive treatment for the decay of teeth is that one should take care in chosing a suitable diet consisting of vegetables, fruits and not carbohydrates and the sticky things. It is believed that the present day cooking and the mad rush of modern civilisation are responsible for the great prevalence of the caries of teeth. The present day culinary art needs the food stuff to be free from fibrous parts, and so prepares it that the cooked food is liable to stick on to and in between the teeth, and undergo acid fermentation in the mouth, thus starting the process of caries.

The remedial treatment of the decayed teeth is a purely Dental Treatment. This treatment consists of the application of medicines, cleaning of the cavity, devitalising the pulp of the affected tooth and then filling it with any filling material—Dental cement, silver or gold. It would be a better advice to the readers to consult any qualified and experienced Dental Surgeon to get rid of caries and other Dental diseases, if any.

Dirty teeth result in shaky health and good pearl-like teeth mean excellent health. So take care of your teeth and your health will take care of itself.

Culture of the Abdomen

By
R. RAJAGOPALAN, B.A.
Ootacamund.

ABDOMEN is the carburettor of the human motor. It contains all the subtle devices for the production of energy from food. Nature has provided a strong protective cover for the internal organs of digestion and elimination by three layers of skin and muscles—the peritoneum, abdominal, rectii and other muscles, and skins with layers of fascia in between them. In a man of average health this cover is strong enough to protect the delicate internal organs while an unhealthy one allows fat to accumulate and the abdomen to sag. A fallen belly allows the organs to hang loosely and thereby renders them susceptible to shocks and diseases.

Obesity starts in the abdomen. Accumulation of fat on the abdominal walls leads to fatty degeneration of the heart. A big paunch is unsightly and disease breeding. So careful maintenance of a perfect abdomen is as essential as life. Indians being, in large, consumers of carbohydrates easily acquire big bellies as they advance in age. Even our wrestlers while they possess steely pectorals and biceps devote very little attention to the muscles of the abdomen and the result is a rotund belly. Extra exercises for the abdomen besides toughening the abdominal rectii keep the digestive organs in position and protect them from any external injury.

There are various exercises for the upkeep of the abdomen. I will concentrate on a few that have direct influence over the abdominal rectii.

Fig. A: Lie flat on your back keeping the legs straight and stiff and the arms in parallel to the body line. Slowly rise up to a half sitting position taking care not to shfit the legs from their original position. Recover and repeat. While performing the exercise concentrate on the abdominal muscles alone.

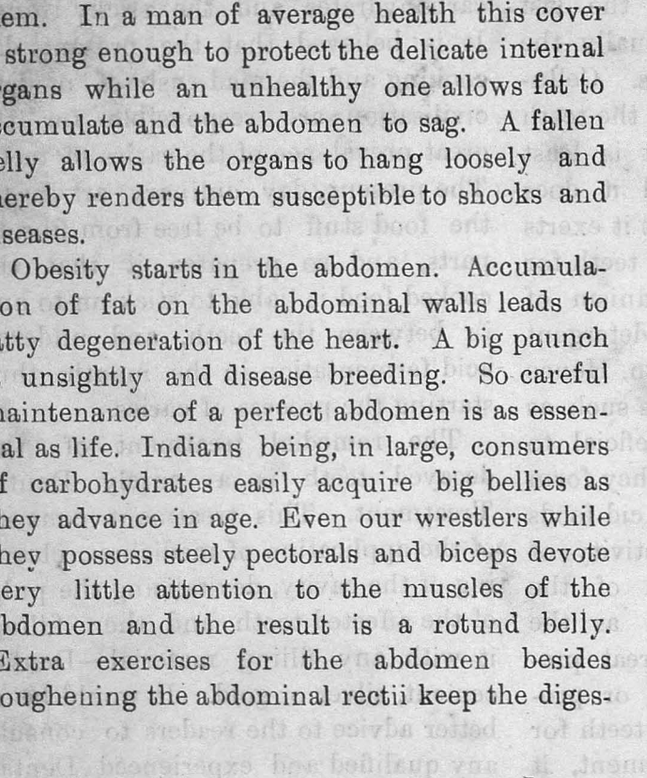

Fig. A.

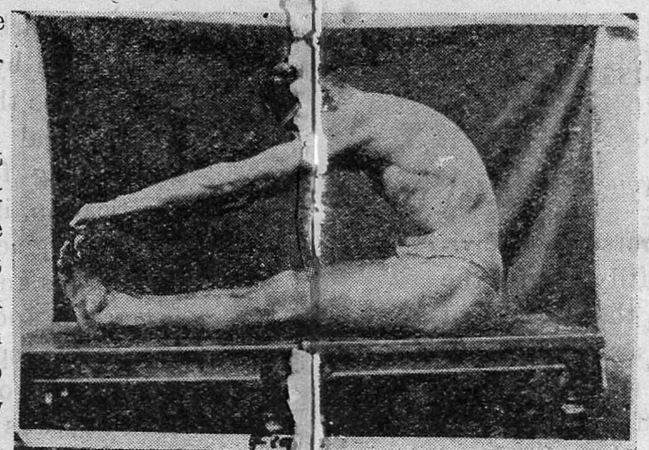

Fig. B.

This exercise does not give enough strain to the lowermost abdomen. So with a little alteration the second exercise must be performed.

Fig. B: Lying on the back as before lock up your hands just above the head and get up without moving or bending the legs, to a sitting position and touch the toes with the locked fists. Repeat a number of times.

Massage the abdomen well and softly. Then draw in the stomach wall and bulge out; draw in and bulge out a number of times.

Fig. C: Draw the stomach wall in. Concentrate on the abdominal rectii and project it as shown in the figure. Relax and contract again. Perform this three or four times.

The above three exercises added to the daily round of dhands and bai-thaks produce the most desired effect on the muscles of the body.

The effects of exercise to the abdomen are: Constipation and indigestion will vanish. The last exercise gives a thorough massage to the internal organs and glands.

Fig. C.

THE DIET OF INDIA

Major-General Sir John Megaw, K.C.I.E., I.M.S., recently Director General, Indian Medical Service, published in 1933 a brochure on "Public Health Aspects of Village Life in India," in which he said, "Taking India as a whole the dispensary doctors regard 39 per cent of the people as being well nourished, 41 per cent poorly nourished, and 20 per cent as very badly nourished...Although there are a fair number of reports of insufficiency of food it is the quality of the diet that is at fault rather than the quantities; animal proteins in the form of meat or milk are taken in very small quantities; fruits and vegetables are seriously insufficient in most villages at certain seasons of the year. The amount of milk which is consumed is surprisingly small except in the Punjab....It is evident that the supply of available proteins, fats and some of the vitamins is seriously inadequate except in a few favoured localities.

Motherhood and Health

By

DR. SHRI RAM

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1. The degradation through which the women of the human race have passed must cease.

2. The stain of that degradation must be wiped away.

3. Children must be born in joy; the mother must be surrounded with love and protection, with harmony, and beauty and with peace. She needs the best that civilization can provide for her.

4. No offering is too great, when made in recognition of the service which she renders to the race as a mother of mankind.

5. Slums and over-crowded areas, ill-ventilated rooms, ugly surroundings, vice, self indulgence, interference by the husband, and lack of cleanliness and air make motherhood a ghastly tragedy for thousands of women of our race.

6. Fit dwelling places must be prepared for the sacrament of birth.

7. If the bodies of the expectant mothers could be cleaned of latent disease, their feelings purified and their minds turned to the contemplation of the beautiful, in one generation alone, a race of men, godlike in health, in strength and in beauty, would appear.

8. All the material seeds of sickness, of misery and of shame, which develop after birth, are sown during the prenatal period.

9. If every organised society, secular and sacred, religious and profane, would devote a little of its time, energy and funds to this great cause of motherhood, the future of race would be changed as by a miracle.

10. If medical societies and philanthropic institutions could be brought to realise and recognise the urgency of this need, a magnificient future for the race could be assured. The physique of the children of the coming age would be improved beyond all imagining.

Is This Civilisation?

By

"STANLEY"

ALTHOUGH we call ourselves a civilised people and talk loftily about "the untutored savage" and the League of Nations, are we really as civilised as we like to think? If so, why have we allowed a state of affairs to develop which bristles with the kind of problems we are accustomed to ascribe to "the stress of modern competition," "living at high pressure," "industrial depression," and so on?

Is it not a fact that many of the things we like to call "advantages of civilisation" have actually brought about a mode of life which is diverging further and further as time goes on from what appears to have been intended by Nature?

Consider the invention of artificial light, for instance, and its development through the various stages from rushlight to electricity. How are we using this "boon"?

Nature has so arranged the seasons that in the summer-time the sun rises early and sets late that man may have ample time to gather the fruits of the

earth. It was obviously Nature's plan that man should get up with the sun and go to rest at sunset. These are long enough working hours, in all conscience. In the winter, with its short days, man, without the help of artificial light would rise late and retire early. This follows the natural principle of which hibernation of animals is an extreme example. Man, by means of his artificially produced light and heat, turns winter into what is called the "social season," with its dances, parties and other excitements. Thus, at the season of the year when he is intended by Nature to work shorter hours and sleep longer, he actually lives more strenuously, frequently allowing himself shorter hours for sleep than in the summer. This tends to deplete his natural energy and lower his powers of resistance to the rigours of the winter.

Again, let us take the various inventions, all of them "scientific triumphs," which have "improved our means of communication." The locomotive, the internal-combustion engine (and all its applications to land, sea and air travel), the telegraph, telephone and wireless. What has been their effect on our daily life? Are we healthier or happier? It is doubtful. Man is going about on wheels or in the air instead of on foot or horseback. The animal population is decreasing. Our grandfathers or great-grandfathers thought little of setting out on foot to do a fifty-mile walk or riding on horseback from Manchester to London. If it were not for the growing popularity of "hiking" to-day, we should be in danger of losing our legs and becoming all head and liver. It may be thought that this is putting the matter too strongly; but is it?

There is an inexorable Law which has been called "Nature's Law of Parsimony," by which an organ, limb or faculty if not used as Nature intends it to be used, begins to diminish in size and power. There are well-known examples of this in the human body in what are called "vestigial structures," vestiges of structures which are disappearing now that man walks no longer upon all-fours. Do the advantages to mankind, from being able to fly, outweigh the disadvantages? They certainly do not. Aviation is admittedly a scientific triumph, but is man the better for utilising this accomplishment so universally and intemperately? There is nothing in the human body, either anatomical in structure or physiological in function, to indicate in the very slightest that man was ever intended to fly, notwithstanding the wonderful description of an aeroplane which is found in the first chapter of the Book of Ezekiel. It may be urged that as a result of his new accomplishment a new variety of the *genus homo* will be evolved in course of time which will differ widely from *homo sapiens*, by reaction to the new environment, and that this evolution follows an immutable law. This cannot be contradicted on scientific grounds; in fact, there are reasons which make it possible. But no perceptible change in this direction could take place in a thousand years.

The diminution of the animal population of the country which has resulted from the invention of the internal-combustion engine may not at first sight seem important. In certain parts

of Central Europe there is a saying that "the wealth of a man depends upon the size of his manure-pile," meaning that a farmer with plenty of natural manure is well stocked and will be a successful farmer. Experiments in wheat-growing on soil which has been fertilised with artificial manure are said to show that the wheat may be deficient in certain vitamines which are essential for the welfare of the human body. If this be true it would suggest that there may be only a limited supply of these vitamines in the universe, and that Nature intends them to be put back into the soil as manure. Once this is proved, it would seem that the modern system of water-carriage drainage of which we are so proud is wasteful in its present form. Shortage of essential vitamines might very well be a contributory cause of race-degeneration.

During the past twenty-five years there have been some epoch-making discoveries in medical science which have conferred inestimable benefits on mankind. In some departments of medicine, however, one is tempted to ask whether we are not acting in direct opposition to Nature in the enthusiastic application of our knowledge. Is there no danger of our becoming too humane? Nature is essentially brutal, and the object of her brutality is to ensure the preservation of the species, if necessary *at the expense of the individual.* Is it not merely stupid to mobilise all the resources of medical science to prolong the lives of feeble and sickly children, who, if they ever reach adult life, are unlikely to be the progenitors of healthy stock? This is nothing less than prolonging the life of the individual *at the expense of the species.*

In the days when preventive medicine was little known, disease took a terrible toll of human life, and it was not only the weak and feeble that went under. This is happening to-day throughout the animal kingdom to insects, reptiles and animals, as well as continual warfare between individuals. Those who survive are usually the fittest, for the battle is to the strong.

It would be too great a responsibility for a doctor to have to decide to whom expert medical assistance should be given and from whom it should be withheld. There are few doctors who would deny their help, quite apart from any question of fee. Thus it is even conceivable that the performance of too many miracles upon delicate and frail subjects so that their lives are preserved might even be a subtle and unsuspected factor contributing to degeneration of the race.

And what of the untutored savage who rises with the sun and sleeps when it is dark; whose weakly children and old people die or are killed; whose women unfit for child-birth die in childbirth; whose food-stuffs grow in virgin soil or are manured with natural manure and who eats his meat nearly raw with all its vitamines, when he can get it? There can be no doubt about the excellence of his physique or his power of endurance.

Are the "civilised nations" of to-day already condemned by the spuriousness of their civilisation to degenerate and decay, or will their "superior intelligence" enable them to see the danger and find a way out?

—(*Guy's Hospital Gazette*).

Milk and Motherhood

Milk and Motherhood, from the far-off day when mammals first appeared on earth, have controlled the development and directed the destiny of mankind. They wrought together, fashioned hand and brain out of their own substance, gave men dominion over earth until now they begin to falter and we become a shrinking and a C 3 nation.

When mankind learns how to apply Nature's subtle forces his regeneration will be within his powers to accomplish. Who shall say that the energy of food—when men learn how to use it—will not be among the most potent of these forces.

The vitamins, the numerous minerals which each play a decisive part in nutrition, and endocrine glands—those delegates of the will—are already known to perform the multitudinous miracles of nutrition. When more is known of the way they work what greater miracles may they not perform.

To-day we live, as for the most part mankind and animals and plants as well have always lived, in a half-starved world; starved of nitrogen, of phosphates of potash, of lime, and periodically with the revolving seasons starved of sunshine too; a hungry world, and mean because it is hungry.

With the world well-fed, disease will be known for what it is—the consequence of malnutrition.

Microbes, now feared as the tyrants that rule mankind will be seen for what they are—puppets of their maleficent prime minister, Malnutrition

Crowd men together in dense masses, starve the land, let the children of mankind go hungry of the things they need, feed babies on dead milk instead of milk with life in it, make microbes strong by sojourning in weak bodies; in short cover the earth with a cockney civilization, and men may well chant "Microbia uber alles." The microbes will be.

They will not be when mankind learns to make the world for man and not as now for microbes.

The foundations and the guidance of the body are Motherhood and Milk.

Men who build bridges take care that the girders are up to specification. Those who build babies don't.

The house of men, with its many mansions, needs many girders to sustain it. Let one but lack or be too weak and the house cannot be built, or collapses when it is.

Among these many girders are iron and iodine, both indispensable and both strong and sufficient of the life which, flowing from the earth through green plants, gathers them on its way. At present it does not. Iron and iodine, though it is easy to make them plentiful in milk, are as a rule deficient, as are vitamins A and D.

How, then shall house be strong even though the foundations are well and truly laid? There are some twenty elements in the human body, and every one is essential for health and well being. Who, knowing this and aware of our ignorance of how best to get them, dare declare, that anybody has ever throughout his life, summer and winter, been properly fed? Yet it is already easy to supply some at least of the deficiencies from which the food of mankind suffers.

Pasture properly fed with all the minerals that were needed, caused cows to produce milk which contained enough iron to cure pernicious anæmia. Why should it not be the care of agriculture to produce pastures from which cows could get the iron which would fortify them and their milk, and fortify the human body? Another essential was iodine. Iodizing the pasture might be a means of rejuvenating mankind.

All disease was self-evidently deficiency disease. "All flesh is grass", and if the grass was not dark green the flesh would not be full-blooded and dark red, and if the flesh was weak what suffering and disease would follow!

In some parts of the world the cow is sacred; in others men worship the golden calf. If I were to bow down it would be before the cow—the foster-mother of mankind. My faith would be justified by her works, for she would prove by the milk she gave that cleanliness is indeed next to godliness, and so doing point the way to the regeneration of mankind.—*Birth Control News.*

Health News and Notes

Nursery Rhyme—1934

Mary had a little cold,
but wouldn't stay at home,
And everywhere that Mary went,
that cold was sure to roam;
It wandered into Molly's eyes,
and filled them full of tears.
It jumped from there to Bobby's nose,
and thence to Jimmie's ears.
It painted Anna's throat bright red,
and swelled poor Jennie's head.
Dora had a fever,
and a cough put Jack to bed.
The moral of this little tale
is very quickly said—
She could have saved a lot of pain
with just one day in bed!

—*Lucy Thibault, Arkansas Democrat.*

Antimony poisoning from Enamel Ware.—Owing to the use by some manufacturers of cheap enamel ware of the cheaper antimony oxides in place of the oxides of tin, the use of such enamel ware has proved poisonous on several occasions: This is due to the fact that the trioxides of antimony used as opacifying agents in the manufacture of enamel, are soluble in certain organic acids such as Citric and tartaric acids, which are often used for making lemonades and other acid drinks. When such drinks are made in such hollow enamel ware of cheap quality or stored therein, the organic acids dissolving out the trioxides of antimony, form poisonous compounds with them. These poisonous substances cause great irritation of the gastro-intestinal canal, induce severe vomiting and may even produce death. The public have therefore been warned against the use of such cheap hollow enamel ware by the Ministry of Health.—(*Journal of A. M. A.* 7th July 1934.) S. S. Malkani.

Why not remain Youthful.—"Last year we published an article from an esteemed contributor on the folly of allowing oneself to become senile. He showed how men in especial are content to neglect the physical deterioration that sets in with middle age,

being too preoccupied or indolent to take precautions against it before it is too late", says the Medical World. At the recent meeting of the British Association for the Advancement of Science, Dr. Wynn Jones as President of the Section of Psychology, opened up a similar train of thought but on the mental side. Reviewing the three conventional stages of youth, middle-age and old age, he drew a sharp line between *Yearly* and *Physiological* age, and recalling how vastly men differ from one another at the same time of life in physical power, showed that mentally the onset of age was infinitely slower. Indeed if gauged by the reaction to intelligence and other mental tests, it seems we can postpone age almost indefinitely if only we have the will and application to keep young, continuing to exercise our powers of observation and interest in new things. Without pleading for adult education, Dr. Wynn Jones was impressive that no man under 45 is too old to learn or should refrain from it through pessimism. But surely this age-limit is too youthful. We hear of men in their seventies studying new languages, taking up fresh occupations or unaccustomed interests, all because they are not too self-indulgent to break the fetters of habit, but refuse to meet death half-way by the passive acceptance of senility.

The Potato.—A Brochure issued by the Potato Marketing Board makes extensive claims for the potato as an article of food, and not one of these claims is without foundation. Compared with the cereals, potatoes owing to their high water content are a less cheap form of energy producer, but they have so many other advantages that it is unfair to make the comparison purely on the basis of energy production. The quality of potato protein is at least equal, if not superior, to that of the cereals, and in Vitamin content and salt balance it surpasses them. Potatoes supply Vitamin C and the Vitamin-B complex, and though their supply of Vitamin A as carotene is small, judicious selection and propagation of yellower varieties might be able materially to increase it. Neither Pellagra nor Beri-beri is recorded in persons subsisting mainly on potatoes, showing that the Vitamin-B complex is well supplied. The good Vitamin-C content of the potato is perhaps one of its greatest assets. The tubers are capable of storage for many months, throughout which the Vitamin-C content is well maintained; for persons on poor and monotonous diets over long winters, the potato must be one of the greatest protective factors. The occurrence of scurvy in Great Britain in the spring of 1917, when the potato supply fell short, witnessed to this. Potatoes yield an alkaline ash and are therefore preferable to cereals in diets where a preponderance of base-forming principles is desired. Some at least of the cereals appear to be actually rachitogenic and antagonistic to normal healthy tooth formation; the potato, it seems, has no such property. Whether, this property is due to a toxin or to the presence of a large proportion of the phosphorus in cereals in a non-available form, and even in a form which militates against the absorption of calcium also, is still not quite certain. The well-known and astonishingly favourable results of the survey of the teeth made

recently among the islanders of Tristan da Cunha, were a striking testimonial for the potato; for it, far more than any cereal, is the staple energy producing food of the island. There seems little doubt that a considerable proportion of the cereal in the diet of most people in Great Britain could be advantageously replaced by potato.—*From The Lancet, Oct., 12th '35, page 837.*

Apples in the Treatment of Diarrhoea.—J. E. Holst (Ugeskrift for Laeger, December 6th, 1934, P. 1335) has during the past year made extensive use of apples in the treatment of various forms of diarrhoea at his hospital in Denmark. Since this treatment began to be systematized in Germany only a few years ago, several modifications have been introduced. The most popular consists of grating ripe peeled apples and serving them raw in quantities of 500 to 1,500 grams in the twenty-four hours in five meals, at each of which 100 to 300 grams are given. This is the only food taken for a couple of days, though a little weak tea may be allowed if the patient is very thirsty. Sometimes only twenty-four hours of this treatment are sufficient, but it may have to be continued for three or four days to assure a permanent cure. The best results have been achieved in acute diarrhoea, but chronic diarrhoea also responds satisfactorily, and it is remarkable how uniformly effective this treatment is whatever the aetiology of the diarrhoea. One of the author's patients had for years been subject to recurrent attacks of diarrhoea which had necessitated prolonged dietetic treatment entailing considerable loss of weight. The action of the apple dietary was so prompt in this case that a normal dietary could be resumed after only a few days. The chronic dyspeptic whose dietetic treatment is apt to imply partial starvation reacts satisfactorily to an apple regime Its mode of action is still obscure. The tannic acid in apples has been credited with their therapeutic successes, but this explanation is not supported by the fact that many patients cured by an apple regime had previously failed to benefit from medication with tannic acid preparations.—*British Medical Journal.*

Dietetic Treatment of Obesity.—According to G. B. Harrop *J. A. M. A.* 10th June 1934) a diet having as its basis bananas and milk is an effective way of treating obesity, and is commended on the grounds of simplicity, low cost, ready availability, palatability, high satiety value and low salt content. The strict diet consists of 6 large bananas and 1000 ccm. of skimmed milk taken in 3 or 4 meals, which are spaced according to the individual preference. The caloric value of this is estimated as being 940 A salad of a quarter medium-sized head of lettuce or of an equal quantity of cabbage is a useful and valuable supplementary at one meal during the period of strict dieting. In about 10 days to a fortnight there is a loss in weight of 4 to 9 lbs. in persons who are moderately active, and who continue their usual routine. Reduction to 4 bananas daily is well tolerated by many and the results are said to be more striking. Weakness and severe physical discomfort must be avoided. Fluids without food value, including tea and coffee

but without milk or sugar, freely permitted, but salt is avoided in order to obviate retension of fluid in the body. Atleast 6 large glasses of fluid must be taken daily in addition to the milk. After about a fortnight the diet is modified by the gradual substitution of one or two bananas by one or 2 eggs and a little butter. Green vegetables may also be taken with butter poured over them, though not used in the cooking. Then lean meat fish or poultry can be added but not pork or thickened gravy. The strict and modified diets are alternated, each continuing for about a fortnight at a time, limit to which weight reduction can be continued, is given as one or 2 pounds a week or 5 to 10 pounds a month. Some hunger and weakness at the start of the treatment are not uncommon and need not be considered as deterrent, being replaced at the end of a week by a feeling of well-being. Weight loss in excess of two or three pounds a week indicates an undue loss of water except when the diet has been markedly curtailed, the larger losses at the beginning of treatment represent the displacement of water from the tissues, and this should be explained to the patient to prevent alarm. The author adds that although the nitrogen intake is low on this diet, the nitrogen balance was maintained fully in 6 cases observed and only slightly reduced in four others.—(Extract *B. M. J.* 13th Oct. 1934.)

The Danger of Sewers. — From time to time fatalities occur among men working in sewers. Some of the larger authorities issue fairly comprehensive instructions for this work, but there is a want of uniformity. As no investigation had been made by any Government department or advice issued, the Ministry of Health a year ago appointed a committee to inquire into the subject. In the report it is pointed out that the dangers to men entering sewers or sewage tanks are of two kinds (1) flooding and (2) gases As a precaution against the former bars or chains should be provided at all manholes in sewers, so that they can be fixed across the sewer below the point at which the man is working. Gases are classified as asphyxiating poisonous and inflammable. The composition of air in sewers usually differs little from that of the outside atmosphere but it may be much modified by stagnation in the sewer, due to structural defects or by admission of gases or liquids which readily vaporize. When stagnation occurs, the solid matter undergoes fermentation and absorbs oxygen from air in the sewer. If there is little ventilation the evolved gases gradually displace the air, so that the sewer atmosphere becomes irrespirable from reduction of its oxygen content. Of the gases that gain admittance to sewers, coal gas is the commonest, but acetylene from decomposition of unspent calcium carbide is occasionally found. Either may give rise to an explosive mixture. Of the vaporizable liquids that enter sewers, inflammable wastes from dry-cleaning works are occasionally encountered but gasoline is by far the commonest and may cause dangerous explosions. In sedimentation tanks, the gases to be feared are usually those produced in the early stages of fermentation carbondioxide and hydrogen sulphide,

but in septic tanks they are those produced in the later stages methane and carbon dioxide. The dangers of asphyxiation from irrespirable gases can be removed only by adequate ventilation of sewers and tanks. The greatest risk in this country is that of poisoning by hydrogen sulphide. The first and principal precaution is to prevent accumulation of sewage or sludge by cleaning out tanks and when necessary sewers at frequent intervals.

With reasonable care accidents should not occur. The test and precautions for ensuring safety are simple and should be strictly observed. Before any man enters a sewer or tank it should be ventilated. Tests must then be made for hydrogen sulphide (by exposing lead acetate paper for five minutes), for asphyxiating conditions (by a safety lamp) and for inflammable gases (by a detector lamp). All the men should be versed in the tests and a life line should be worn by the first man entering a sewer or tank until safety has been established. So long as any man is in a sewer, three manholes (the one entered and that on each side) should be kept open and two men posted at the entry manhole. Smoking and the use of naked lights should be forbidden. Rescue kits should be carried by every sewer gang and kept apart from the ordinary tools, the man in charge of the gang being responsible. It should include at least 2 life lines and one breathing apparatus.—(*J. A. M. A.* 22nd Sep. 1934)—J. M. T.

Nursery Schools for Poor Children.—Many of the poor mothers of Europe are helped by nursery schools which take care of their children aged three to six every day while the parents are searching for work. This is an educational movement which has grown out of the business depression, but will be a permanent feature even in prosperous times. In Hungary, for instance, a wealthy lady has opened several of these schools or homes. Early in the morning the small pupils arrive. Here they find a happy, carefree atmosphere, quite different from that of want and anxiety at home. They must arrive clean and tidy. In a special room each child has his toothbrush and towel which he recognizes by being marked by a picture that has been chosen for him—an animal, a bird or a flower. Then the children lay the table for breakfast, sit down and enjoy it, and then clear the table. Lessons follow throughout the morning, then dinner, when they take turns to wait at table and serve out the food. They do all these extraordinarily well, though they may be only four years old. After this there is a time for sleep, a time for play, tea-time, and at five o'clock their parents come to take them home again. The parents find their children more helpful in the home, because of what they have learned here, and know that they have been kept happy and busy while they were seeking for work. These homes are part of an organization called Save-the-Children International Union, and are doing much to preserve this generation and make it strong and healthy. Much the same programme is followed in hundreds of similar schools in England. — *The Treasure Chest.*