

small quantities, is without doubt digestively criminal: since the result of pouring cold aspersions into the stomach while it is busy with digestion is to lower its temperature at the time when heat is needed, and also to weaken and water down the digestive juices.* There is no getting over this: long drinks on hot days at lunch are not to be recommended. But even here the baffled voluptuary may find a way out which is not so disagreeable. He may by all means have his long drink half an hour before lunch, or at a rather longer interval after. If he choose after, he will find, especially if he has eaten fruit at lunch, that he does not want it, and that though the satisfaction of a real throatful of cold liquid is denied him, he will have taken during lunch quite sufficient liquid to satisfy his thirst.

THE CARE OF THE TEETH IN RELATION TO HEALTH.

BY

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NOTE.—Physical education, as the reader will have learned from the many Contributors to this Section, is not, as many have been accustomed to think, a mere training of the muscles. It covers the proper care of the whole person, and it is part of a proper Physical Education to know how to take care of one's teeth, for, as the following article shows, health, strength, and beauty depend to a very large extent upon this being done.—[C. W.]

THE teeth should be examined and thoroughly cleaned three or four times yearly. (In extreme cases even oftener.) No person is able to thoroughly cleanse his own teeth. If food is permitted to remain between or on the teeth the action of bacteria converts this débris into lactic acid and other products. This, together with the tartar (a hard bone-like substance) which is deposited about the necks of the teeth, by the action of the saliva, causes recession of the gums, and so lowers their vitality that the disease germs which are to be found in all mouths, whether healthy or otherwise, are enabled to bring about effects ranging from very slight to intensely serious conditions such as the loss of all the teeth and other evil results.

Furthermore, the lactic acid dissolves out the cement-like substance between the rods of enamel in the teeth, causing them to fall out, and allowing the various bacteria of disease or decay free access to the inner structure of the teeth. The individual then swallows increased quantities of the said bacteria. These have a directly bad action upon the general health. The white blood cells have as one of their functions the killing of disease-producing bacteria. Up to a certain

*On the excitation of the gastric juices by digestion only, see Schäfer, "Text-book of Physiology," Vol. I., page 349.

limit they can do this. If, however, the quantity of bacteria becomes too great for the white blood cells to triumph over them, diseases result.

When it is borne in mind that one of the principal bacteria concerned in the decay of teeth is the bacillus of diphtheria, the serious results that follow on neglect of the teeth may be understood. It is not the intention to convey the idea that diphtheria may result from neglect of the teeth, but it is true that a general lowering of vitality may result from this neglect, thus causing a predisposition to disease in general, and if diphtheria is contracted the disease may be worse on account of the condition of the teeth, and the presence of the additional diphtheria bacilli.

Another result of neglected teeth is that the pain incident to mastication prevents this function being perfectly performed, and indigestion and malnutrition result. Finally, where the patient has permitted his teeth to abscess, a general fever almost always results, and it has even been known to produce general blood-poisoning, and cause death. Still another fact of particular interest to the physical culturist is that pain causes nervousness, and consequent loss of vigor, and this condition is much accentuated by the general lowering of vitality which has been previously mentioned.

As has been shown then, it is extremely necessary to take proper care of the teeth. Now what is meant by this? Every person should clean his teeth at least twice daily (before retiring and after rising). For this purpose we use a brush of medium bristles, and a good tooth powder, which contains no grit. Likewise use a good mouth wash to harden the gums and keep them healthy. The following has been used successfully for years:

R Hydro-naphthol	15 gr.
Alcohol	1 oz.
Glycerol	1 oz.
Aqua Dest	1 oz.
Sig.—15 to 25 drops to a half-glass of water, used as a mouth wash from two to four times daily.	

If needful, a piece of floss silk should be used between the teeth. Never pick at the teeth with pins or other sharp instruments. If fillings or extractions are needed, they should receive attention without delay, as the pain incident to a dental operation is practically non-existent if the case is treated in time; when the patient delays his visit to the dentist until he is in pain, he cannot expect the dentist to do his work painlessly.

A great mistake, which is made by numbers of persons, is to give insufficient care to the temporary teeth of children. They should be cared for with exactly the same solicitude as the permanent set. If the temporary set is not given attention, the second set will suffer for it. Never allow a decayed temporary tooth to remain without having it filled, as the decay is very likely to travel downward and infect the permanent tooth forming below. When a tooth cannot be saved

by the dentist it should be extracted at once, but never have a tooth extracted until it is necessary, as irregularities often result from this, and mastication is made defective, causing dyspepsia and malnutrition. Because the public is more careless with the teeth of children, the latter are the greatest sufferers from toothache and the other troubles just referred to. On the other hand, if temporary teeth are allowed to stay in too long, irregular teeth are sure to result. To tell just at which age each tooth should be extracted would make this article too technical, but if the dentist is visited as often as advocated here, he can tell when this should be done.

In closing, special stress must be laid on the importance of having the teeth regulated at an early age. If the teeth are irregular, a regulating device should be made and worn not later than at the age of 13 or 14. In this way the result may be accomplished with the minimum of effort. When the patient is older the teeth are more firmly in position, and an attempt to move them is far less likely to be perfectly successful.

THE INFLUENCE OF TRAINING ON MIND AND MORALS.

BY

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IT is impossible to make the simplest movement of any kind without the conscious or unconscious direction of the mind, so inextricably are the two bound up together; and from the earliest times physicians, both spiritual, mental, and physical, have known that the soul can be reached through the "subtle gateways of the body." This aspect of training, the importance, that is, of the cleanly health of the body, and its prompt and unrebelling obedience to the will, which is concerned with this question, has been alluded to before, and is dealt with more fully here.

Many people hardly know what real attention means: there is no better way to teach it than to make rapid and correct movements, which cannot be made without it. In the same way, also, these exercises give the habit of control. A man who has brought mind and body into the relation of master and willing servant, even in so elementary a matter as this, is going on the right road to teach himself control in the largest choices and difficulties. So, too, in other points of training: a man who has made himself able to drop smoking, or abstain from stimulants, or from certain sorts of food which he likes, but which his reason tells him are bad for him, has not improved his power of self-control in that point only, but has begun, at any rate, to form a habit of it; and the exercise of self-control, in one point only, will make his power of control stronger all

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