

it would otherwise effect, I made no effort to attain its reduction by antipyretic measures.

Recognizing, therefore, the fact that in such cases a cure may be effected provided one can successfully accomplish the oxidation and removal of the fat, it remains for us to consider how this may be best accomplished. We have at present no means at our command by which we can at will produce a given rise of temperature, which shall be absolutely under our control, and by which the necessary fat combustion shall be brought about. We have at our disposal, however, a method by which, though the process be a slower and more gradual one, the same end may be obtained.

There are three objects towards which our treatment must be directed, viz:—

Firstly. To get rid of the fat already superabundantly accumulated in the tissues.

Secondly. To prevent its further deposition.

Thirdly. To improve the efficiency of the heart muscle.

These indications are accordingly to be met in the following manner:—

Firstly. By a systematic course of well-regulated exercise, which by increasing the process of oxidation shall necessitate an increased consumption of stored-up fat, and its consequent removal.

Secondly. By prescribing a dietary which shall contain a minimum of fat forming articles, and in which the amount of fluid ingested is restricted to the smallest quantity.

The third indication is met in attending to the other two, but some further assistance may be given in the careful exhibition of such heart tonics as strychnia, digitalis, and strophanthus.

Time will not permit me now to enter into the details of the above proceedings, although a few words in explanation and amplification are necessary.

Regarding the exercise, the form advocated by Oertel is the systematic practice of long walks, especially in mountainous districts, the effects of which may be briefly summarized as follows:—

1. The process of tissue oxidation is increased, and consequently accumulated fat is consumed.

2. The increased demands made upon the heart's activity, as shown in the increased number and force of its contractions, has the same effect in improving the tone and contractile power of the organ that the practice of ordinary gymnastic exercises has upon the development of voluntary muscular power.

3. The increase in the loss of water from the body, due to increased perspiration and loss through the lungs, tends to an improvement in the quality of the blood, both by diminishing its volume, and increasing its concentration. Proportionately to its bulk, it is easy to understand

that its oxygen-carrying power is likewise increased.

Regarding the dietary, in the first place it stands to reason that only the smallest quantities of fat-forming elements (fatty foods and carbohydrates) must be permitted. If under these circumstances, owing to increased muscular activity, the combustion of non-nitrogenous elements in the body exceeds the amount supplied in the form of fat and carbohydrates in the food, the increased demand must be met from the fat already stored up in the tissues: in other words, the patient's obesity will be attacked, and he will get thinner. "If the fat destruction due to severe exertion be repeated at short intervals of time, the fat stores of the body will be encroached upon more and more, and a minimum will be finally reached beyond which we cannot go."

On the other hand, the dietary must contain a large amount of nitrogenous food. This is necessary for the purpose of restoring the integrity of the muscular fibres of the heart that are already in a weak or degenerated condition, as also for meeting the demands upon the muscular system in general depending upon increased activity.

The amount of fluids ingested must be reduced to a minimum. This reduction alone exercises an influence of no considerable importance in the removal of fat. Oertel mentions two cases in which a considerable and rapid fat reduction was thus effected, no alteration whatever having been otherwise made in the patient's dietary or mode of life. Reasoning from the fact that the deposit of fat always takes place in or upon the adventitia of previously formed blood-vessels, Oertel argues that its formation in quantity is dependent upon the occurrence of local vascular dilatations in which there is a considerable retardation of circulation. Owing to the diminution of the watery constituent of the blood, the total quantity of fluid circulating becomes reduced, the circulation is quickened, venous stasis is removed, and the conditions favorable to fat accumulation being thus altered further deposition does not take place. In addition it seems probable that the inhibition of a considerable quantity of fluid favors the absorption by the lacteals of the products of digestion, and thus indirectly aids fat formation.

The strengthening of the heart muscle it is easy to understand, must necessarily follow upon the course of systematic exercise, as already explained; the improvement in the quality of the blood at the same time by increasing its nutritional value aiding in the building up of an improved quality of muscular fibre. The additional assistance to be gained by the administration of such cardiac tonics as strychnia, digitalis and strophanthus is at the same time by no means to be despised.—A. H. Weiss Clemow, M.D., in *Press and Circular*.