

in a position of strong flexion. To these may be added passive flexion and extension of the extremities, and alternate expansion and compression of the chest, very much after the manner of performing artificial respiration. The active exercises, which in all cases are gentle at first and performed by the help of the gymnast, and only by degrees increased in vigor, consist in deep breathing, in bending, pulling, lifting, etc., on a horizontal bar or ladder, or such other movements as in the judgment of the gymnast will promote respiration and venous flow and reduce the girth of the abdomen. But whatever be the kind of exercises, one essential principle underlies them all, namely, the patient must not be allowed to hold his breath, but must breathe regularly and deeply in rhythm with the movements so as to inspire or expire according as the exercises expand or contract the chest and depress or raise the diaphragm.

The purpose of these exercises is not the development of the skeletal muscles, but the restoration of the functional integrity of the myocardium, and this they accomplish more or less effectively, not only by increasing venous flow on the one side and by dilating the intermuscular arterioles on the other, but also by improving cardiac metabolism. Of course, the degree and permanence of the improvement must depend largely on the state of the heart muscle. If this is extensively degenerated, no amount or kind of treatment can be expected to achieve much, and such improvement as is gained can not last long. In such cases, therefore, if dilatation and inadequacy are pronounced, the so-called resistance exercises are preferable, although to these may be added with advantage such deep breathing movements as, with the aid of a trained attendant, can be performed without danger of strain to the heart wall. As might be expected, the most pronounced benefit has been observed in cases of early or moderate myocardial incompetence, shown by breathlessness, or palpitation on slight cause, and on examination by increased cardiac dullness, feebleness of the first tone at the apex, accentuation of the pulmonic second sound, and sometimes a faint systolic whiff in the mitral area. In most, but not all cases, the blood pressure is elevated above the normal. In such cases the first indication of improvement is shown by the greater ease of respiration and a general sense of ease or lightness. Energy is increased and fatigue comes less easily, while a better action of the bowels and a diminution of waist measure are generally observed. Babcock states that his experience with medical gymnastics in cases showing early incompetence of the myocardium warrants him in recommending