

One or more become distended, which gives the pain; so the popular expression "the heart bursting" with grief or joy is literally true. The effect of great exertion is the same; the arteries contract and the heart is overfilled. Besides the quickened pulse in these conditions there is great pain. A most common expression in these days is "heart failure," but the significance of the term is rarely considered, as in every case of death the heart has ceased to act. Death, therefore, may be said to be due to heart failure. As now employed the expression means that the heart is weak and unable to continue its work.

HEART DISEASE.

The disturbances of the heart's action which we have been considering are not due to a diseased condition of the heart, but to troubles from without, these being by far the most common ailments. Different diseases of the heart often exist for years, yes, even through one's entire life without being known or producing any very great amount of inconvenience except weakening its power, thus causing it to beat badly upon exercise and making a person short of breath. The heart is often enlarged, the usual cause being over-exertion. The blood which could not be sent speedily enough upon its circuit overcharges the heart, distending and stretching it. It may be enlarged also by increasing its muscular structure, by reason of over-exercising the heart, the enlargement from use corresponding to that of any of the muscles on the exterior of the body when trained by gymnastic exercise. The muscle of the heart may become impaired by deposits of fat, giving rise to the fatty heart. Corpulency causes this trouble, and fat is also deposited in the muscles from certain diseases. There are other degenerative changes which take place in the heart, but as they are not common the discussion of them at this time is unnecessary.

Mention has already been made of the effects of gout, neuralgia and rheumatism upon the heart, so they will be alluded to again only briefly, though rheumatism is most responsible for the crippling of the heart. It deforms the valves, rendering them unable to do their work of keeping the blood in the heart chambers and making the outflow of it continuous in the arteries. The same is true of gout. In attacks of gout and neuralgia the heart is subject to spasms of pain, which are fearful in their intensity. One feels that he must have relief at once or die.

CARE OF THE HEART.

Again it is the old story of prevention being worth more than cure, the proper care of the heart is necessary to make the engine of the body last throughout the voyage. It has been seen how susceptible the heart is to all emotion and excitement. Its relation to the brain is most intimate; it is no exaggeration to say that every thought acts upon the heart. Very clever instruments have been invented to show how the circulation of the blood is influenced by thought. Not only is the heart's action affected by thought but also by all the sights and sounds that come from without. The emotions should be restrained so that the heart will not be startled out of its rhythmical beating by unusual thoughts, sights and sounds. This can be done by self-training, and the effort is worthy of consideration. It is not necessary to be cold-blooded to do this. But the governing power of all action is in the mind and in the brain, and this power can be cultivated. A tempest of passion, be it of grief or pleasure, anxiety or enjoyment, may wrench if not wreck the heart so that it will never recover. Again I repeat, regulate and temper the emotions.

To care for the heart, in the next place, is to regulate exercise. The sudden strain of unusual exercise which makes the heart beat rapidly should be avoided. If the heart is made irritable by over-training, the result is palpitation and faintness, which incapacitates from work afterward and will result in permanent heart injury, such as muscular or valvular disease. At the same time the proper amount and kind of exercise may help in heart troubles. Some European physicians insist on their patients climbing mountains and doing that which will increase the

heart's action for the reasons already mentioned—to increase the force of the pulsation and drive the blood through the vessels and to prevent it blocking up the heart. Judgment should be used in this matter, however, as over-exercise would be worse than too little. For those afflicted with chronic heart disease the remedy *par excellence*, according to the best authorities, is life in the open air. Two or three months of tent life, they say, under suitable conditions act like magic in organic heart troubles. As little time indoors as possible should be the rule. This same idea holds good in regard to lung troubles.

The relation of the stomach to the heart has also been pointed out, the care of the diet being most essential. It is said that one of the methods used by the ancients to put an enemy to death was to make him drink a quantity of bullock's blood. This formed a clot in the stomach and so distended it that the heart was unable to act, and the result was death. Over-distension of the stomach, not by too much food but by gas, may be the cause of some of the sudden deaths which have occurred recently and have been attributed to the presence of poisonous substances generated from fish, vegetables and other foods. It is necessary to avoid those which occasion flatulency—namely, fats, farinaceous foods and sweets. Large amounts of food should not be taken at one time. It is better to increase the number of meals. It is also recommended to have the principal meal in the middle of the day and to avoid drinking too much.

HEART MEDICATION.

Very little should be done in the way of self-doctoring in heart troubles. If after attending to all the directions given herein for the care of the heart and having abandoned the use of tea and coffee, one still has a sense that something is wrong with the heart, consult a doctor, who will prescribe the right kind of a heart tonic. For the palpitation and sense of faintness that comes suddenly, when there is no one near to whom to turn for medical advice, one can make use of the aromatic spirits of ammonia, a valuable remedy that should always be at hand in every household. It is safe and simple and is the best thing for faintness which comes from any cause. The dose is half a tea-spoonful in a third of a tumblerful of water. It can be repeated again in a quarter or a half an hour. Some of the aromatic ammonia (not pure ammonia), instead of smelling salts, can be used on a handkerchief as one would use Cologne, and it is very refreshing. The ammonia is more speedy in its action than whiskey or brandy, which may also be used with a little water in two or three tea-spoonful doses.

Iron is a most useful tonic and should be freely taken in almost all the diseases of the heart, except those occasioned by indigestion. Iron aggravates this and should be given only when the stomach is in good order. Strychnine and nuxvomica are among the best heart tonics; they are not easily obtained without a physician's prescription and should be prescribed rather than taken independently. The same may be said of digitalis, the drug which is most widely used for the relief of heart troubles. Its effect in regulating the beat of the heart is most wonderful. It stimulates the contractile power of the heart muscle—and, as has been seen, most of the serious heart complications are due to the difficulty which the heart has from leaky and imperfect valves or from trouble with its muscular structure in sending the blood current on its way. The drug must be had from a reliable druggist, as it is not good unless fresh. The dose is five drops three or four times a day taken in a wineglassful of water. Its action should be carefully watched, and its use should not be continued more than ten days without interruption. Although directions have been given here for its use, I do not think that it should be a home remedy. It is so universally known for its beneficial results in heart disease and so often used, that this information is given in regard to its administration as a guide to regulate and reform what one may be already using. In late years there have been a number of heart tonics discovered and put into use to supersede digitalis, and although they cannot do this, they furnish a variety of remedies with which to alternate it.

GRACE PECKHAM MURRAY.

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