

THE COMMON ILLS OF LIFE.*

By GRACE PECKHAM MURRAY, M. D.—No. 8.—HEART TROUBLES.

Several months before a human being is ushered into the world the heart begins to beat, and it keeps up its motion until life leaves the body. Without its unceasing beat the end would come, and come quickly. The action cannot be suspended more than three or four minutes before life becomes extinct. Usually when death impends the breath stops and life will have the appearance of having departed; but still the machinery of the heart moves feebly, and it is rarely that the heart ceases its work first. The danger of chloroform as an anæsthetic is greater than that of ether for the reason that it affects the heart first and before rescue can come the patient is beyond the reach of help, while with ether the lungs are affected first, and if the patient stops breathing, the heart will continue to pulsate for some time, thus making it feasible for the doctor to administer restoratives. The great inherent strength of the heart is wonderful. It may show that it is troubled—and few spare the heart in their management of their lives—, but it keeps on beating, hour after hour, day after day, year in and year out, until death comes; though crippled by disease, poisoned by tea, coffee or tobacco, overtaxed by worry and anxiety, strained by excessive work, it keeps sentinel at its post, working, pumping—sending the life-blood on its course whether its owner is awake or asleep. The heart represents all that is vital in life, whether it is love, religion or physical welfare.

THE HEART'S BEAT.

It is the disturbance of the heart's beat that makes one aware of the heart and leads to the belief that it is diseased. The severe forms of heart trouble are not so manifest and may exist for years without one being aware of it. The beat of the heart may be quickened so that from the calm succession of the pulsations—which should be about seventy a minute in a man and five or ten beats faster in a woman—it goes up to ninety, a hundred or even higher. This is what is known as palpitation or the heart; the machinery gives the sensation of having gone all wrong, and one who has palpitation thinks he is afflicted with the most serious impairment of the heart. The trouble in ninety-nine cases out of a hundred is due to indigestion. The stomach and the heart are very close neighbors. The heart floating in its watery bag, in which it can be kept lubricated and can move easily, lies just above the stomach. The latter in its empty state does not give rise to any trouble, but when it is distended it encroaches upon the heart and presses upon it in such a way as to interfere seriously with its action, causing it to beat rapidly and giving a sense of suffocation. The distension of the stomach is caused more often by the accumulation of gases from undigested food than from overeating. Palpitation of the heart is occasioned also by over-exertion, such as climbing stairs, running or doing any unusual and taxing exercise. The heart can become accustomed to a great deal in this way, much more than one would think. The ordinary person who attempts to climb a mountain in a very short time finds himself breathless and his heart beating like a trip-hammer from the unusual exertion; but let him do the same thing day after day as the Swiss peasants are accustomed to and he would find that he could do it as well as they without increasing the heart's action by a beat. The rarefaction of the air will make the heart beat; on Pike's Peak if a person stirs, the heart will throb and hammer and go at a rate of over a hundred beats a minute. Such, however, is the adaptability of every part of the human machinery to its surroundings that in a very short time the heart accustoms itself to the high altitudes and beats normally no matter if the elevation is high.

In bringing about this adaptability it is not well to carry exercise too far, as many athletes do. By over-training they weaken the heart muscle, and many an imprudent giant finds to his cost that lack of judgment in regard to the care of the heart

in gymnastic training has left him with only the strength of a pigmy. On the other hand, many persons who have the slightest tendency to heart palpitation avoid so constantly all stairs or making any effort in climbing that by lack of use they impair the heart muscle, the same as they would any other. The elevators, which are in such general use nowadays, render climbing stairs something of a lost art. In some impairments of the heart in which its action is enfeebled and in consequence of which the blood is not propelled over the body, the doctors recommend stairs and hill climbing to strengthen the heart and thus send the blood to the remote blood vessels, with the result that the general health is very much improved.

THE IRREGULAR AND INTERMITTENT PULSE.

With the palpitating, rapidly beating heart one is sure that it means an incurable heart trouble; with the irregular and intermittent pulse one knows that he or she feels wretchedly though the cause of it is not so apparent. When the heart misses a beat every fourth or fifth pulsation, sometimes even every second one, he feels as if the machinery were all going to pieces and that he is seriously ill, though he does not always attribute it to the heart. The cause of the trouble is due in most cases to indigestion, but very often to the use of tea, coffee or tobacco. Tea takes it out of the nerves, but coffee is the most poisonous to the heart; and many a person haunted with fear that incurable heart disease was his lot has been entirely relieved and cured by giving up the use of coffee. Coffee is much more poisonous to some than to others. Its action is not felt at first, but it accumulates in the system and after a while poisons the heart, making its action irregular and intermittent. Tobacco may accelerate the heart, but after long and persistent use it slows it. I have known it to reduce the heart's beat to less than fifty. One case was the pulse of a man who was an inveterate smoker; the other was a young girl who worked in a tobacco factory. The heart may be slowed by rheumatic and gouty poison in the blood and also by the accumulation of life in the system. These heart irregularities are not dangerous; they have been known to last for years in people who have been otherwise well and who have led very active lives. Nevertheless the presence of these troubles tells that the heart is not strong, and one should be careful in regard to over-exertion in any direction which will throw stress upon it.

HEART-BREAK AND HEART STRAIN.

There is no irregularity of the heart's beat which may not be occasioned by the emotions. Nothing will cause it to beat faster than fear, surprise, joy or anger; sorrow, anxiety, care and trouble often tax the heart, making it intermit, weaken and slowing the pulse. Every emotion strikes to the heart. The broken heart is frequently spoken of, but this must not be taken literally. The muscle of the heart does not break, and heart rupture is very rare and generally due to accident. A curious structure is the heart, composed of muscle fibres which are twisted about it in every possible way. It is said that even the muscle tissue has the inherent power of muscular contraction independent of the nerves which it contains. The heart has inside this muscular structure four separate chambers or compartments. Emotion or any other influence which disturbs the normal working of the heart causes these chambers to contract irregularly and thus interfere with its action. The broken heart, while literally untrue, is by no means a myth; the heart has failed to perform its work in many instances in which the victims have been the subject of some great mental agitation. Livingston is quoted as having observed in Africa the death of a number of slaves through the grief of being torn from their homes. He said he asked them where they felt badly, and though entirely ignorant of anatomy, they placed their hands over the region of the heart and said they felt very badly there. It is supposed that the emotion causes an irregularity in the circulation which makes the arteries contract. The blood is thus forced back into the heart and the chambers of the organ

*No. 1, Catching Cold, appeared in the Number for January.
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