

confirmed by the fact that when digitalis is directly applied to the isolated frog's heart it slows and renders its movements more powerful.

The increased vigour of the contraction is due to a stimulation of the intra-cardiac motor ganglia, while the slowing is principally brought about by stimulation of the peripheral terminations of the vagus in the heart. Digitalis also has a stimulating action on the vagus centre in the medulla.

Dr. Lauder Brunton has quite recently shown that the reason the pulse of fever is not slowed by this drug is that the increased temperature has a paralyzing effect on the inhibitory influence of the vagus on the heart. The cause of the contractions of the arterioles has been a very much disputed point, and even yet it is not definitely settled. Some maintain that it is owing to stimulation of the central vaso-motor centre or centres, while others ascribe it wholly to a stimulation of the vaso-motor fibres in the blood vessels. That the latter is a factor in the production of the contraction there appears to be no doubt, but that the former is the principal agent in the causation seems very probable.

It follows as a result of the increased contractions and the marked resistance to the blood stream by the contracted arterioles, that the aortic pressure is increased.

The quickening of the pulse brought about by poisonous doses of digitalis is due to paralysis of the inhibitory fibres of the vagus and the final fall in the blood pressure is due to the arteries being imperfectly filled, owing to the contracted state of the heart allowing but little blood to get into it.

*Action on the Temperature.*—It is generally admitted that digitalis has some influence in reducing a febrile temperature. It has been experimentally shown by Ackermann, that after it raises the pressure in the arteries, it lowers the temperature in the vena cava, and at the same time raises the temperature of the external parts. It diminishes the internal temperature, and increases the external or surface temperature. It is only antipyretic from its action on the circulation. It is not antipyretic in the same sense that quinine and salicylic acid are antipyretics.