

showing that the vessels that supply the muscles of the body and limbs are capable of such extension, that when fully dilated they will allow the arterial flood to pour through them nearly as quickly as it usually does through the vessels of the skin intestines and muscles together, thus explaining the action of cold in producing increased heat by the blood being driven to the muscles from the contracted skin, when the increased oxidation leads to increased heat production, and showing that the vessels of the muscles are not controlled by the vaso motor centre in the medulla oblongata in the same way as those of the intestines and skin. The effect of sudden muscular contraction by compressing the vessels, causing increased blood pressure, is counteracted by the stimulus which is sent at the same time through the motor nerve, producing dilatation and a fall in pressure, thus showing how the blood pressure can be varied by appropriate exercises, and while the irritation of the nerve fibres in the muscles caused by exercise leads to increased action of the heart, stimulation of those of the intestine and skin tend to slow it. The pathology of angina pectoris is made clear, and the rationale of some of the modern methods of treating affections of the heart pointed out, such as absolute rest in bed, with massage for increasing the circulation; after the methods of Ling, and Weir Mitchell, the graduated movements under resistance while the patient is still, and the further stimulation of the skin by saline and effervescing baths, as practised by the brothers Schott at Nauheim, and the graduated exercises in bathing and climbing, of Oertel. Reference is also made to the disposition of chloride of sodium during digestion (the hydrochloric acid going to the stomach, and the sodium to the blood), and the zymogens; and the ferments of the pancreas. The effects of the juice of the thyroid on the blood and of the ferments derived from different organs, as modifying agents, and the recent views in regard to antitoxins as remedies are also dwelt upon. This oration should be in every physician's library, as it has compressed in a small compass information from extended sources, which will bear more than one reading, and is a valuable historical reference in one of the most interesting departments of medical research.