CHAPTER XIV.

NERVOUS POWER.

THE organs which are appropriated to the performance of the various functions conducive to nutrition, are generally designated the *vital organs*, in order to distinguish them from those which are subservient to sensation, voluntary motion, and the other functions of *animal life*. The slightest reflection on the variety and complication of actions comprised under the former class of functions in the higher animals, will convince us that they must be the result of the combined operation of several different agents; but the principal source of mechanical force required by the vital organs, is still, as in all other cases, the muscular power. The coats of the stomach and of the intestinal tube contain a large proportion of muscular fibres, the contractions of which effect the intermixture and propulsion of the contents of these cavities, in the manner best calculated to favour the chemical operations to which they are to be subjected, and to extract from them all the nourishment they may contain. In like manner, all the tubular vessels, which transmit fluids, are endowed with muscular powers adapted to the performance of that office. The heart is a strong hollow muscle, with power adequate to propel the blood, with immense force, through the arterial, and venous systems. The blood vessels, also, especially the minute, or capillary arteries, besides being elastic, are likewise endowed with muscular power, which contributes its share in forwarding the motion of the blood, and completing its circulation. The quantity of blood circulating in each part, the velocity of its motion, and the heat which it evolves, are regulated