

rial tension, pulse rate and temperature, induce degenerative changes in the capillary system by which the "internal respiration" of the tissues is interfered with, and as a result a disturbance of their function leading to the initial lesions characteristic of pulmonary consumption.

In order to show reason for the faith that is within us, recognized authorities in anatomy, physiology, pathology and therapeutics, will be laid under heavy contribution. "The cells of which the higher organisms are composed live in the inter-cellular fluid or lymph which bathes them. This nutritive fluid is continually being removed by fresh supplies exuding from the blood vessels into the lymph spaces which surround the cells, the excess being removed by absorption, either by the veins or lymphatics. Besides this, an interchange of gases and of solids (internal respiration) takes place by diffusion between lymph and blood. It is only while the blood is passing through the capillaries that this interchange between the blood and the lymph (this internal respiration) can take place."

(1) The healthy function of an organ, therefore, depends, in a great measure, upon the integrity of its capillaries."

Animal food has long been recognized by those who have given the subject their careful attention as an active agent in inducing high arterial tension and its consequent degenerative changes in the vascular system. In reference to this point, Fothergill states: (2) "Azotized foods furnish the materials for our tissues, for whose removal they are required. But this is much less than is supposed, and tissue repair requires but a comparatively small part of our plastic food. The rest of the peptones, which are produced in each act of digestion, are split up, in the liver, into glycogen and nitrogenous waste. All, or almost all, of this nitrogenous waste is superfluous. The

"consequences of the blood being highly charged with these waste products are high arterial tension, hypertrophy of the muscular walls of the arterioles and left ventricle."

In consequence of this high arterial tension the blood escapes with greater difficulty from the arteries into the veins, (3) thus interfering with the interchange of gases and solids (internal respiration) between the blood and lymph. (4)

The influence of non-nitrogenous foods in lowering blood pressure has received the attention of those high in authority. Prof. Parkes, as a result of his observations upon this subject, states: (5) "A non-nitrogenous diet is followed by a lowered blood pressure, a diminished arterial tension perceptible within twenty-four hours after commencing the diet."

The influence of animal food in increasing the heart's action is well known. Lady Paget, in her article in the *Nineteenth Century* for April, 1892, (6) states: "While the meat-eater's heart has seventy-two beats in the minute, the vegetarian's has only fifty-eight; therefore, 20,000 beats less in twenty-four hours."

That the temperature in those who abstain from meat should be lower than in the meat-eater is to be expected from the lesser frequency of the heart's action in the former. The decrease appears to correspond with the pulse rate, being from one-half to one and a half degree below the average in the meat-eater. It is a little lower in the summer than in the winter, probably on account of the diet containing a larger proportion of acid fruits during the summer months. Digestion also influences it slightly, it being about half a degree higher while the process is going on. In observations upon vegetarians extending over a period of three years, the average has been about 97° with a pulse rate of sixty. It will be seen from these facts that, from high