

kindly in nature. Physiologically, we notice that a diminution of the physical energy is accompanied by a corresponding diminution of the power to eliminate waste material from the body. Elasticity and strength give place to hardness and brittleness of nearly all the tissues of the body. The general health may be good, because there is a harmonious balance between the action of the nervous system and the circulatory system. However, the former is less responsive to external stimulation, and the latter is less vigorous in old age. The vital processes conducted by the circulation, respiration, and metabolic changes in the tissues are less active. There are diminished adaptability of the whole system to changes in the environment, and less ability to meet the requirements of emergencies, such as sudden demands of muscular and mental strain.

The senile conditions and diseases are numerous and obvious. In the first place weakened digestion and assimilation; the weakened vigor of the circulation and glandular system necessarily weakens the power of eliminating the excrementitious substances, which gives rise to pernicious nutrition, and that in turn is the cause of the tendency to develop malignant or benign growths in different parts of the body in old age. The strong tendency to over-eat and under-drink, together with the natural decline of functional power, gives rise to a condition of lithemia, which is the prime cause of the majority of deaths in old age. In the healthy state that great glandular furnace and chemical laboratory, the liver, is capable of transforming an excess of nitrogenous matter, which may result from metabolism of tissue or exist in the food consumed, into the highly soluble excrementitious substance known as urea. This excrement is eliminated from the blood mainly by the kidneys, and to a much less extent by the skin. Now, in old age,

with the functional power and natural vitality on the wane, together with the strong tendency to overtax this function of the liver, we find this waste is not converted into urea, but into uric or lithic acid, a comparatively insoluble excrementitious and toxic substance, which, if it appear in the blood in sufficient quantity and is long enough continued in circulation through the urinary tubules, sets up irritation and inflammation, which inevitably impairs the function of the renal epithelium, and we find this poisonous substance is not eliminated from the system, but accumulates in the blood. This explains why old people are almost universally troubled with disease of the liver, kidneys, bladder and prostate gland. The unstable circulation, atheromatous changes and brittleness of the walls of the blood-vessels, with the tendency to overtax the digestive apparatus, is the cause of many old people going to "that bourne from which no traveller returns," by the apoplectic route. Hereditary diseases naturally manifest themselves when the vitality is upon a low plane, when the general health is below a certain level; so we are not surprised to find certain dyscrasic and latent tendencies manifesting themselves at this period of life when the natural vitality is waning. The diseases most frequently found to be the cause of dissolution among the aged are pneumonia, diseases of the liver and urinary organs, consumption, cancer, apoplexy, gangrene.

The enemy to longevity, the author continues, is self-indulgence. People who have reached an advanced age may prolong their lives and greatly add to the comfort of their declining years by diminishing the quantity of food ingested by taking only easily digestible food; thereby avoiding too large a residue of waste matter, either in the intestinal canal or in the form of excrementitious matter in the blood. — *American Medico-Surgical Bulletin.*