

istics, each its diseases, and each its therapeutics. There are conditions of environment and climate which not only are especially adapted to the development and vigor of each, but which influence largely the immunity from those diseases liable to occur at these different periods, often arresting or curing them after their development.

Most men begin to show signs of decay between fifty and fifty-five, while the favored few retain the vigor of manhood until seventy. Original conformations, heredity, habits of life, climate, anxieties, and temperament, unquestionably influence very greatly the commencing period of old age. Some men are old at forty, while others are young at seventy.

There are certain physiological and anatomical characteristics of old age, which especially interest us in the study of those conditions which are best suited to the fuller development and prolongation of life. The more prominent of these are: defective secretions and excretions, imperfect metabolism, feeble respiration, which interfere with complete oxidation, the excretory organs being more or less weakened withdraw from the body less perfectly the results of tissue metamorphosed. The nutritive functions, digestion and assimilation, are imperfectly performed. The arterial changes give a feebleness to cell nutrition which shows itself in the visible signs of advancing age. "The bones, the cartilages, the membranes, the flesh, the skin, and every fibre of the body becomes more solid and dry." But long after the decay of corporeal vigor, the understanding and the higher powers of the mind preserve their energy and precision.

It has been said that no sooner does man arrive at his full maturity than he begins to decline. This may be true of his animal life, but not of his intellectual. It does not seem consistent with the design of the Creator that all growth in man should cease with the attainment of his maturity. It is evident that his intellectual powers do not attain their highest development with the completion of his body growth; for we often find that those qualities by which "he rules the world, as reason and judgment," are most active after his body decline has begun. Some of the most brilliant and powerful productions in literature, science, and art have been the work of old age. Disraeli claims that the age of three score and ten is a most powerful one for writing.

To one studying the physiology of old age, it becomes apparent that the gradual and progressive impairment of the functions of organic life and the anatomical changes which precede or accompany their failing activity, can only be retarded by furnishing "to each organ, or each system of organs, their appropriate and natural stimulus without undue excitement or depression." There is unquestionably a hygiene of old age, which, if carefully studied and intelligently observed, would prolong its physical vigor and mental power. I have the opportunity of daily watching and studying one who has reached the ninety-fifth year; all her physical and mental powers retain their activity, her pulse has the characteristics of youth, her skin is as fair and soft as that of a girl of eighteen; in fact, the changes of old age, as usually met with in persons from seventy to eighty, have not taken place in her. This case, as well as others of great age that have come under my observation, have taught me that the absence of senile changes is the chief reason of their age, and have convinced me that if the hygienic laws of age were more carefully studied and observed, not only would greater age be reached but they would be far more vigorous and useful.

I believe that the progressive degenerative changes in structure and failure in functional activities may so adapt themselves to each other as to produce an old age which may be as healthy as mature life. One of the most important of these hygienic laws is that the brain shall be stimulated by a pleasurable enjoyment of its faculties, care being taken that it shall not be enfeebled by prolonged and continuous labor; this, together with healthful exercise, has a salutary influence over the whole system, while idleness and listlessness lead to senile atrophy of both mind and body. It is most essential also that the diet should be simple and nutritious, as moderation in eating and drinking is indicated by the diminished capacity of the stomach, its reduced muscular power, and its declining nervous energy. So long as it can be accomplished without fatigue, exercise in the open air is another condition which promotes longevity, for it is evident that the perfect performance of respiration is stimulated by moderate exercise in a pure atmosphere and insures the highest state of oxidation, which is important to the healthful nutrition of the aged.