

medical practitioners, in Canada and the United States.

"In causing consumption, in so far as configuration and structure of the body, and the relation, and the relative size and vigor, of different organs to each other, are influenced by parentage, hereditary influence becomes a very important factor. Indeed, heredity probably has no direct influence whatever, at the periods of life above mentioned (after the period of childhood), other than in this way.

"Man is made up of the characteristics and peculiarities, physical, mental and moral, of his ancestors; more largely of those of his parents than of his grand parents. In organic life like produces like, and form, general structure, features, are, by the laws of life, man's sure inheritance—subject, to be sure, to the influences of the conditions and circumstances by which he is surrounded. We can, therefore, but expect and look for constitutional or organic defects to be transmitted from parents to offspring.

"One of the most marked features, and perhaps the most important one, brought out in the analysis of the cases, is the evidence that those who die of the disease under consideration have a small pulmonary capacity—a small, contracted chest. This is shown not only in the average of the cases, but in every case; in not one did the circumference of the chest even approximate that of a well developed individual of the same height and weight.

"According to the best authorities the circumference of the chest around or on a level with the nipples should be, for good development, equal to one-half the height, plus one-fifteenth the height, of the individual. The circumference of the chest, therefore, of one whose stature is 5 feet  $5\frac{1}{2}$  inches—the average height of the cases above reported upon—should be, according to that, at least 37 inches; whereas the average circumference of the chest in these cases was only  $31\frac{1}{2}$  inches, or only about five-sixths of that demanded

by health and good natural development.

"In about half the cases the chest was flat as well as small in circumference—a form giving still less capacity than a round chest with the same circumference. It may be fairly assumed that the average depth or length of this cavity in these cases was not greater, if so great, as the depth of it in well developed persons. True, in the larger proportion of cases the trunk seemed proportionately long, but most likely this length was owing to a long abdominal cavity, as in most of the cases the function of digestion appears to have been well performed, indicating well developed digestive organs.

"Now, as the size of the lungs is in exact relative proportion to the size of the chest, the lungs with the heart and its large trunk vessels just filling the cavity, and though it is possible that small lungs may be more highly organized than larger ones, as doubtless is the case with other organs, especially the brain—that the air cells in the smaller lungs may be, relatively, more numerous than in the larger ones, and so give a relatively greater respiratory surface, we have no evidence that this is the case, and though this condition might prevail to a certain and limited extent, there was, doubtless, in all these cases, a great want of capacity for the purposes of carrying on the important function of respiration—that by which oxygen is taken into the blood and the used up waste matters are given out. There would be, consequently, in such circumstances, besides want of stamina, a tendency to accumulations in the blood and other fluids of the body of waste, used-up matters, and frequently probably, too, of unassimilated though digested food.

"Furthermore, they had nearly all been small or moderate eaters, and had used but little fatty food except butter (most healthy people use besides butter a good deal of fat); they could not, in