

cases of true heredity are extremely rare, but that instances may occur where the mother is suffering from general miliary infection, or from definite tuberculous disease of the genital system.

In reference to acquired infection, there are three paths by which the bacilli may obtain entrance: (1) By inhalation through the respiratory tract. (2) With the food through the alimentary tract. (3) By inoculation. Of these perhaps the most important is the first—by the inhalation of dust containing the bacilli in a dried state. Shortly after his discovery Koch definitely determined that the breath of tuberculous patients contains no bacilli. They are found, however, in immense numbers in the expectoration of those suffering from tubercular disease of the air passages. According to Dr. Prudden's experiments there are about 22,000,000 in the daily sputum of a phthisical patient with an average amount of expectoration. These bacilli appear to have great powers of resistance, and are able to retain their infective powers for a long period of time. While in a moist state they do not appear to escape from the sputum, but when the sputum becomes dry it is readily converted into dust, and the bacilli are then liable to be diffused through the air. Great care should therefore be taken over the expectoration of tuberculous patients, that it be thoroughly disinfected as soon as raised and afterwards destroyed, else the apartments occupied by such patients become infective in time through such dust clinging to carpets, bedroom hangings, etc. Not only may the living apartments become infective, but business offices and railway carriages, and even the dust of the road-side become a source of contagion.

This infection of apartments is well shown by the investigation of Dr. Flick, who localized all the deaths occurring from phthisis in one of the wards of Philadelphia for a preceding period of 25 years. He showed that nearly one-third of the houses in this ward had been infected by previous cases; that in many of these houses the deaths from this disease alone had been quite numerous, and that of the total number of deaths which occurred from phthisis in this ward during the one year 1888, more than one-half occurred in these infected houses. Inasmuch as there were more than twice as many non-infected as infected houses, this proportion is remarkable.