

the living germs, are thrown off from the body in various ways. In pulmonary tuberculosis the expectoration discharges contain the germs, often in enormous numbers. It has been proved that in the course of twenty-four hours, many millions of tubercle bacilli may be discharged under certain conditions by one person suffering from tuberculosis. The germs thus thrown off do not grow outside the living body except under artificial conditions, but they may and often do retain their vitality and virulence for long periods. As tuberculosis can only result from the action of these germs, it follows, from what has been said, that when the disease is acquired it must be acquired from receiving into the body the living germs that have come from some other human being or animal affected with the disease, in other words, it cannot occur except by *direct communication* from some other individual or animal suffering from tuberculosis. While the meat and milk of tubercular cattle may be important sources of danger, yet the disease as a rule is acquired through its communication direct from man to man.

The expectoration of tubercular persons frequently lodges in places where it afterwards dries, as on handkerchiefs, clothing, carpets, floors, sidewalks or vehicles. After drying, it is very apt in one way or another to become pulverized, and then, by means of wind, trailing skirts or other causes, it floats in the air as dust.

Pulmonary tuberculosis is usually produced by breathing air in which the living germs are suspended as dust or attached to dust; such dust may retain for weeks, or even months, or longer, its power of causing the disease. It should be distinctly understood that the element of danger is the dried and pulverized sputum, and *not* the breath of tubercular patients or the moist sputum received into proper cups. The breath and moist sputum are practically free from danger, because the germs are not dislodged from the moist surface. The act of coughing or speaking may expel particles containing infective matter. If all discharges were destroyed at the time of their exit, by far the greatest danger of communication from man to man would be removed.

It is a well-known fact that some persons, and especially the members of some families, are particularly liable to tuberculosis. So marked and so frequent is the development of the disease in certain families that the affection has long been considered hereditary. We now know that the disease itself is not hereditary, but that there is inherited certain constitutional weaknesses which render the individual a more easy prey to the germs, once they have gained an entrance.