

are derived entirely from the discharges of tubercular sores, and as lung consumption is the most common form of the disease, the most prolific source of the organisms is the expectorated material from a diseased lung. This sputum or spit, as it is called, is practically the only medium through which tuberculosis can be transmitted from one person to another.

These germs gain an entrance into the body most readily through the mouth and nose during the act of breathing. Through the mouth, throat and nasal passages they are carried by the inspired air into the more distant parts of the air passages and finally into the lungs themselves. Here they lodge and all depends upon the vitality of the tissues or the resisting powers of the individual as to whether or not the disease develops. If the power of resistance is strong enough the germs can do no harm. If on the other hand the individual is weak and run-down, as we say, by overwork, worry, poor food, excesses of any kind, previous disease, or unhygienic methods of living, the germs grow and multiply, and by throwing out poisonous materials in their growth they produce the various symptoms which enable us to recognize the disease.

It is then in the first place the admission of the germs into the body which renders us liable to develop tuberculosis. And it is important to note that the danger arises from the careless and uncleanly habit, so common, of spitting upon sidewalks, roadways, floors, carpets, or mats, into dark corners, behind radiators or articles of furniture, in stores, warehouses, factories, shops, railway carriages, street cars, public halls, places of amusement, etc., all of which are being constantly contaminated by the sputum of consumptives. Once deposited it soon becomes dry and, in the form of a fine powder or dust, is blown about in the currents of the air to be inhaled by all whether they will or not. Microscopic examinations of the contents of the nasal cavities of a large number of attendants in cafes, theatres, departmental stores and other public places revealed the fact that in nearly 75 per cent. of them the germ of tuberculosis was present. And it is reasonable to suppose that nearly every individual has at some time in his life inhaled, without being aware of it, a certain number of these same bacilli.

All, however, do not contract the disease. Why? Because in all contagious diseases due to germ life, there is a second factor required in addition to the presence of the disease germ. There must be a suitable soil in which the germ may grow. This is present when there is tissue of low vitality or a constitution with a lessened power of resistance. And as a general rule it may be said that the lower the vitality of the tissue, the greater is the liability to the disease. This resisting power against disease is often lessened by (1) heredity; (2) residence in low, damp, and

badly drained localities, or in poorly lighted and badly ventilated houses; (3) occupations that necessitate the breathing of impure air and irritating dusts; (4) catarrhal affections of the respiratory tract and other diseases; (5) over-work; (6) underfeeding; (7) dissipation; (8) worry; (9) alcoholism.

And thus it is that while all are exposed to the invasion of the disease germ, all do not contract the disease. Those who are strong and vigorous, whose tissue vitality is high, and whose powers of resistance are up to the normal standard, need have no fear of the disease. And while it would be mere foolhardiness for any to unduly expose themselves, or to exhibit a reckless disregard of what are conceded to be but ordinary and reasonable precautions, the other extreme, which leads to an exaggerated fear both of consumption and of the consumptive, is just as much to be avoided.

And what of the theory that consumption is hereditary? It is readily disposed of, notwithstanding the fact that the majority of people so fondly cling to it. Paternal transmission is impossible, and while maternal transmission has been shown to be otherwise, the cases on record are so very few that this source of contagion may be disregarded. It has been frequently shown that no matter how far advanced the disease may have been in the parents, if the child was removed early and kept away from the parental home there has been no inheritance of tuberculosis. So that the so-called hereditary tuberculosis is entirely a matter of contact. Exposure to contagion takes place almost at birth, and is continued during infancy and childhood, and the children of tuberculous parents contract the disease in exactly the same manner as does any one else who is exposed to the contagion.

Tuberculosis then is a disease caused by a specific germ which has gained access to a tissue of low vitality. The germ may have been present in the system for years before the constitution became weakened to a sufficient extent to produce a favorable soil for the development of the disease. Usually the onset is insidious and no description of symptoms could be given that would be sufficiently adequate to enable the disease to be recognized by any but a physician. The point of importance is that any disturbance, such as indigestion, loss of appetite, nervousness, loss of sleep, weakness, loss of flesh, whether there be cough or any of the other usual symptoms or not, is worthy of careful attention, as it is by neglect of underlying conditions productive of such symptoms that the disease is allowed to gain a foothold.

Let the following axiom be remembered:

No tubercle germ, no consumption;
No favorable soil for the growth of
the germ, no consumption.