

charges, in the case of typhoid fever through the bowel, and sometimes the bladder, discharges. It is the escape by these channels of these germs from the body which makes these diseases "catching" or "infectious" or "communicable," for if they could not escape from the body they could not reach other persons and therefore could not be "catching." But in human tuberculosis, most of the places where it develops,—bones, glands, joints, etc.,—are not connected with any opening of the body by which the germs may leave the body. These forms of tuberculosis have no great highway to the outside lying at their doors to carry the germs out to other persons. Practically only in human tuberculosis of the lungs are such highways provided for the human tuberculosis germs, although sometimes in bladder, kidney, and intestinal tuberculosis. But in the latter forms, the germs do not, as a rule, pass out by the highways provided for them in such condition or such numbers as to be of serious importance in propagating the disease. In human lung tuberculosis, on the other hand, the windpipe, throat, and mouth form a highway, along which the germs may escape from the affected lung in such enormous numbers that twenty-four billion per day have been detected in the discharges (sputum) from the lung of a single advanced case, although the average number from the average case is usually "only" four or five billion daily.

Thus it comes about that human tuberculosis of the lungs is the only common form of human tuberculosis which is much to be feared as infectious. Practically all the other forms of human tuberculosis are derived from the sputum of cases of human lung tuberculosis, carried