

VITALITY OF TYPHOID, DIPHTHERIA AND CHOLERA BACTERIA IN MILK

THE role of milk as a carrier of the infective agents of disease is now recognized as a highly important one, but it is not the purpose of this paper to take up all the infective forms so carried further than to say that, practically with the exception of the Tubercle bacillus, all these infective agents are derived from without. We have very numerous forms of bacterial milk infection which leads to manifold disturbances in the body varying from the simple digestive disturbances of infants due to chemical poisoning to non specific and specific forms of infection. Among the specific morbid agents which may and do frequently infect through milk are the causal bacteria of typhoid fever, diphtheria, cholera and scarlet fever. Numerous outbreaks of all these diseases have been traced to an infected milk supply. At varying periods I have made experiments on the vitality of the infective agents of the three former diseases in milk. These experiments are but yet in their preliminary stages but I thought it well to place my results up to the present time before the meeting. The experiments have been carried out at the heat of the laboratory which averages 70° at times going as high as 76 to 78° rarely under 64° . This would be the average temperature range to which milk under normal conditions would be kept. Sterilized milk is an excellent culture medium for all these bacteria under consideration, viz.:—those of Enteric Fever, Diphtheria and Asiatic Cholera. They develop and retain their vitality after a lapse of from 3 to 6 months. Tubes have never been kept longer than the latter period but no doubt living bacteria, particularly of Typhoid and Diphtheria, could be obtained long after this period.

DIPHTHERIA BACILLUS.

The Diphtheria bacillus in sterilized milk at average summer temperature multiplies quite slowly. As the temperature rises so does its rapidity of multiplication. But as the room temperature is the average temperature under which milk is ordinarily kept,