

PRECAUTIONARY MEASURES NECESSARY TO PREVENT INFECTION IN TYPHOID FEVER.

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During the Spanish-American war 86.24 per cent. of the total deaths were from typhoid fever. There were 19,265 cases per 100,000 of the army. Of these cases, 1,463 died.

In 1900 there occurred in the United States 35,379 deaths from typhoid fever. This would represent approximately, taking 10 per cent. (and this is high; 7.5 per cent. is better) as the average mortality from this disease, 353,790, or one case for each 240 of the population for that year. Very few go through life without taking the disease at some time or another. There are no available statistics in this connection for us here in Canada. We probably are not very far behind, though allowance must be made in our favor for our northern situation. Three-quarters of these cases are now preventible. This disease attacks chiefly between the ages of 20 and 30 years, when the monetary value of life is greatest. Aside, then, from the suffering and the heart-pangs this disease alone, during 1900, cost the United States in money, estimating each life as averaging \$6,000, \$212,000,000. Preventive measures would have cost much less than this. Take one of the measures, water filtration, probably the most important, as an example of efficiency and cost. We may admit justly that three-fourths of the water supplies of the United States need this process. Eighty-five million people need on an average 8,500,000,000 gallons of water per day, or 100 gallons each. Taking as a basis for this calculation the estimate for the New York filtration works for 500,000,000 gallons per day as \$10,000,000 for three-fourths of the water used, it would cost approximately \$128,000,000. For the removal of the other causes much less would be required. The saving of one year would protect probably for twenty years.

This, I take it, is sufficient example to show us that this disease is important enough for our consideration. It is a preventable disease. The line of attack is fairly well understood. We know the causative agent. Eberth first isolated it in 1880. Koch and Gaffkey proved it in 1884.

The disease cannot be produced by bad air, bad water, faulty plumbing, or climatic conditions. The bacillus of Eberth alone causes typhoid fever. There are diseases resembling very closely, symptomatically, typhoid fever, and so far as the patient is concerned nearly as important. These are paratyphoid, para-