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Hamburg and Altona, though under separate governments, practically form one continuous city with a joint population of about 800,000. They both draw their water supplies from the sewage polluted Elbe River upon which they are situated. Altona is the nearest to the mouth of the river, and its water intake being three or four miles further down is below the outfall of both its own sewers and those of Hamburg. The Hamburg intake is about two miles above the city. In 1892 an epidemic of cholera occurred, during which Hamburg, with a population of 622,530, had 17,975 cases with 7,611 deaths, while Altona, with 143,000 population, had during the same time 562 cases and 328 deaths, and in many of the cases credited to Altona the disease was contracted in Hamburg. Wandsbeck (20,000), just across the river from Hamburg, enjoyed the same immunity as Altona. Both of these places purify their water supplies by sand filtration, while in Hamburg the only attempt in that direction was the employment of settling basins. A filtration plant was, however, in process of construction at that time, and was put in operation in May, 1893, since when the typhoid rate has diminished from about 30 to 6 per 100,000.

The other case is that of Lawrence, Massachusetts, which is situated on the Merrimac River a few miles below Lowell. In spite of the great dilution, the water of this river which supplies both cities is seriously polluted by the sewage draining into it from the towns built along its banks; and as a consequence the typhoid fever rates in both places were unusually high.

In Sept., 1893, a system of intermittent sand filtration was completed. The effect upon the health of the citizens is shown in the following figures:

Deaths from Typhoid	
Year.	Fever per 100,000 Population.
1887.....	114
1888	114
1889.....	127
1890.....	134
1891.....	119
1892.....	105
1893.....	80
1894.....	47 (23)
1895.....	31 (17)
1896.....	19 (4)
1897.....	16