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Mary Mallon's Trail of Typhoid

by Catherine Carey

Salmonella in eggs! Botulism from garlic-in-oil! Listeria in cheese! It seems that every day newspapers are shouting headlines about outbreaks of food-borne illnesses. But these recent outbreaks, serious as they are, can't match the 11-year reign of typhoid epidemics caused by one person at the beginning of the 20th century.

Mary Mallon, known to history as "Typhoid Mary," was born sometime around 1870. She was the first typhoid carrier identified in the United States who never displayed a single symptom of the disease herself. But before she was captured and quarantined for life, she directly infected at least 51 people, three of whom died, and indirectly infected countless others.

Typhoid, or typhoid fever, is an acute infectious disease caused by *Salmonella typhi* bacteria. The bacteria enter the body through contaminated food or water, penetrate the small intestine, and thus invade the bloodstream, where they cause blood poisoning and carry infection into other parts of the body.

Early symptoms of the disease begin suddenly with headache, general aches and restlessness, coughing, nosebleeds, bloody diarrhea or constipation, and fever. A rash on the torso appears a week or two later. If the victim manages to survive, the fever begins to decline after about four weeks and gradually returns to normal. But if complications arise, such as heart failure and ulceration or perforation of the intestinal wall, typhoid is generally fatal.

About 30 percent of people infected with typhoid remain carriers, excreting the organism in their stool or urine for weeks or months. About 5 percent are long-term carriers, like Mary Mallon, who shed the organism for years. These carriers show no apparent ill effects but harbor the bacteria in their gallbladders and bile ducts.

Mallon's case came to light in 1904 when an epidemic of typhoid spread through New York's Oyster Bay and adjacent

Reading for Information

This article describes a disease outbreak that had an impact on many lives nearly a century ago. While the scientific understanding gained about typhoid was important, the article also shows how an incident that appears isolated or unimportant can have a huge impact on the world at large.

CAUSE AND EFFECT

To appreciate the impact of an event or action, look beyond the individual event itself. Try to see how it relates to events that come before or after it. Often these events have a cause-and-effect relationship; that is, one event directly causes the other. Being aware of this can lead to new insights about what you are reading.

- A **cause** is an event or action that directly results in another event. Clue words used to indicate cause include *because*, *due to*, and *since*.
- An **effect** is the direct outcome of an event or action. Words that indicate effect include *led to*, *as a result*, *consequently*, and *therefore*.

YOUR TURN To help you recognize cause and effect in this article, use the questions and activities that follow.

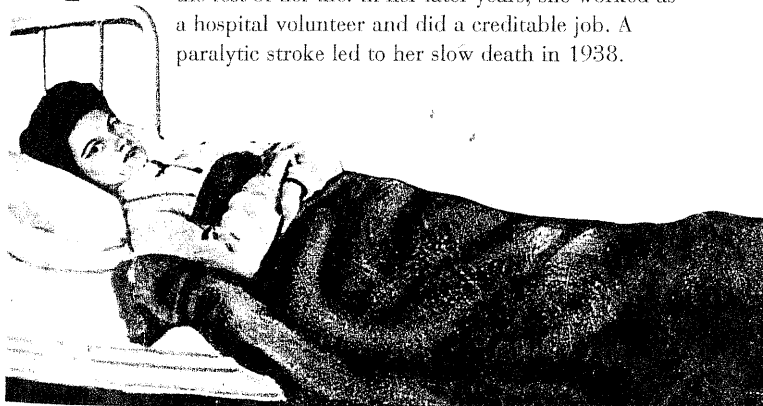
- 1 Here, the writer provides specific information about how typhoid fever spreads throughout a population and describes its devastating effects. What does this important passage suggest about Mary Mallon's role in the outbreak?

towns on Long Island. A sanitary engineer with New York City's Department of Health named George Soper was asked to investigate. He found that Mallon had been employed as a cook in each of the stricken households. When he confronted her with his suspicion and offered medical care at no charge, she vehemently refused, going so far as to threaten the investigator with a rolling pin. She then disappeared.

But a persistent Soper, convinced Mallon was a typhoid carrier, tracked her for three years. He found her again in 1907, working as a cook in a Park Avenue home in Manhattan. Mallon was brought—literally kicking and screaming—to the Riverside Hospital for Communicable Diseases on North Brother Island, where, upon examination, she was found to be, in Soper's words, "a living culture tube" of typhoid bacteria. The authorities committed her to the isolation center, and, despite a legal appeal that was ultimately denied by the U.S. Supreme Court, she stayed at the center until 1910, when she was released after promising never to work as a food handler again.

But four years later, when typhoid epidemics broke out at a sanatorium in Newfoundland, New Jersey, and Sloane Maternity Hospital in Manhattan, Soper learned that Mallon had worked as a cook at both places and the search was on again.

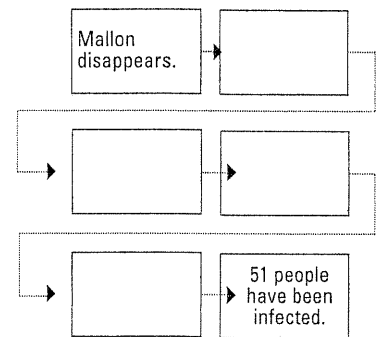
She was found at last in 1915 and arrested at a friend's home in suburban Westchester County, New York, while making dessert. She was returned to Riverside, where she remained for the rest of her life. In her later years, she worked as a hospital volunteer and did a creditable job. A paralytic stroke led to her slow death in 1938.



This old newsphoto shows Mary Mallon at the isolation center.

- 2 What caused Mary Mallon to disappear?
- 3 Review the events in these paragraphs. Use a graphic like this one to trace the pattern of events in Mary Mallon's life. Start with her disappearance and conclude with the number of infections that she is known to have directly caused. What can you infer about the "ripple" effects of Mary's actions—in other words, what impact might those 51 infected people have had on the general population?

Cause and Effect



Inquiry & Research

Activity Link: from "Angela's Ashes," p. 256 How did this article help you understand Frank McCourt's illness and treatment as described in the excerpt from *Angela's Ashes*? Write a short report explaining whether you believe the restrictions placed on Mary Mallon's activities were reasonable.