

## Topic Page: [Reed, Walter \(1851 - 1902\)](#)

Summary Article: **Reed, Walter (1851–1902)**

From *Encyclopedia of Epidemiology*

Walter Reed was a surgeon in the U.S. Army who significantly contributed to knowledge of the etiology and epidemiology of yellow fever. Reed's work is significant in that he focused on the means of disease transmission rather than a specific disease agent and, in doing so, greatly reduced infection rates. His yellow fever experiments also established the important role of the "healthy volunteer" in epidemiologic research and contributed greatly to the formalization and documentation of informed consent. Reed was born in Belroi, Virginia, and became a medical officer in the U.S. Army after graduating from the University of Virginia medical school. He remained in the military for the remainder of his life.

During the Spanish-American War, yellow fever killed thousands of soldiers in Cuba—more than died in battle—and continued to threaten troops occupying the island as well as individuals throughout North and South America. For several decades, scientists and local physicians had proposed that yellow fever was mosquito borne, but the insect's exact role was unclear. In 1900, Surgeon General George Sternberg established the Yellow Fever Commission under Reed's direction, and Reed went to Cuba.

Because there was no animal model in which to study yellow fever, identifying the exact mode and source of transmission required humans. Reed and his colleagues designed an experiment in which common house mosquitoes (now known as *Aedes aegypti*) that had fed on yellow fever patients were allowed to bite noninfected individuals. Reed's colleague suggested that the research team serve as the first group of subjects; after two physicians became ill (and one eventually died), Reed decided to forego self-experimentation. Instead, healthy volunteers (primarily soldiers and native Cubans) were recruited and separated into two groups—those who would be bitten and those who would be exposed to soiled bedding from patients (another potential suspect). The theory that yellow fever is transmitted by mosquitoes and not direct contact with an infected individual was confirmed.

Reed's research was recognized by Congress, and his reputation as a heroic researcher and the bravery of his colleagues were celebrated for decades. After conducting malaria research in Cuba, he returned to Washington, D.C., to teach pathology and bacteriology at the Army Medical School and the George Washington University Medical School. Reed's health began to decline following an appendectomy; in 1902, he died of peritonitis and was buried in Arlington National Cemetery. Named in his honor, Walter Reed General Hospital in Washington, D.C., opened on May 1, 1909. In 1951, the hospital was renamed the Walter Reed Army Medical Center, now the premier military medical facility in the eastern United States.

### *See also*

Ethics in Human Subjects Research; Informed Consent; Insect-Borne Disease; Yellow Fever

### **Further Readings**

- Bean, W. B. (1982). *Walter Reed: A biography*. Charlottesville, VA: University of Virginia Press.
- Pierce, J. R.; Writer, J. (2005). *Yellow Jack: How yellow fever ravaged America and Walter Reed discovered its deadly secrets*. Hoboken, NJ: Wiley.
- Reed, W.; Agramonte, A. Landmark article. February 16, 1901: The etiology of yellow fever. An

additional note. *Journal of the American Medical Association*, 250(5), (1983). 649-658.

### *Web Sites*

- Walter Reed Army Medical Center. <http://www.wramc.amedd.army.mil>.

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### **APA**

### Chicago

### Harvard

### MLA

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Anderson, E. E. (2008). Reed, Walter (1851--1902). In S. Boslaugh, *Encyclopedia of epidemiology*. Thousand Oaks, CA: Sage Publications. Retrieved from [https://search.credoreference.com/content/topic/reed\\_walter\\_1851\\_1902](https://search.credoreference.com/content/topic/reed_walter_1851_1902)

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## Chicago

Anderson, Emily E. "Reed, Walter (1851–1902)." In *Encyclopedia of Epidemiology*, by Sarah Boslaugh. Sage Publications, 2008. [https://search.credoreference.com/content/topic/reed\\_walter\\_1851\\_1902](https://search.credoreference.com/content/topic/reed_walter_1851_1902)

## Harvard

Anderson, E.E. (2008). Reed, Walter (1851--1902). In S. Boslaugh, *Encyclopedia of epidemiology*. [Online]. Thousand Oaks: Sage Publications. Available from: [https://search.credoreference.com/content/topic/reed\\_walter\\_1851\\_1902](https://search.credoreference.com/content/topic/reed_walter_1851_1902) [Accessed 17 October 2019].

## MLA

Anderson, Emily E. "Reed, Walter (1851–1902)." *Encyclopedia of Epidemiology*, Sarah Boslaugh, Sage Publications, 1st edition, 2008. *Credo Reference*, [https://search.credoreference.com/content/topic/reed\\_walter\\_1851\\_1902](https://search.credoreference.com/content/topic/reed_walter_1851_1902). Accessed 17 Oct. 2019.