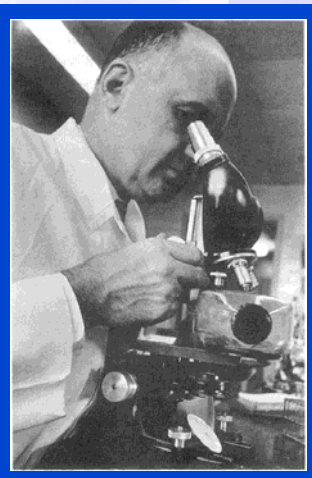


## Vaccine Usage in Military Medicine: The forefront of disease prevention



- George Washington protected his troops from smallpox in 1777 using a forerunner of vaccination called “variolation” after Americans suffered 5,500 smallpox casualties, including the task force commander, Major General John Thomas.

- Typhoid vaccine reduced typhoid cases from 20,000 in the Spanish-American War of 1898 to just 1,500 in World War I.
- In 1898, MAJ Walter Reed isolated the source of yellow fever virus, which would eventually lead to the development of a vaccine that was administered 7 million times by 1942.
- In 1909, the first American typhoid vaccine was developed at the US Army Medical School by CPT Frederick Russell.
- During World War II, only 12 cases of tetanus occurred among vaccinated U.S. troops, but numerous tetanus deaths occurred among the unvaccinated Germany Army (Wehrmacht).



- In 1963, Dr. Maurice Hilleman, formerly of the Walter Reed Army Institute of Research, isolated mumps from his 5-year-old daughter and used it to create the first-ever live mumps vaccine, which led to the near-eradication of the disease. Dr. Hilleman created nearly three dozen vaccines over a 60-year career.
- In 1985, COL Leonard Binn and colleagues tested a formalin-inactivated Hepatitis A vaccine at the Walter Reed Army Institute of Research, and conducted pivotal efficacy studies in 1991. Their efforts led to the 1995 licensure of a Hepatitis A vaccine to combat the most common vaccine-preventable infection among international travelers.
- By 2006, the morbidity of nine major vaccine-preventable diseases had fallen an average of 98.8 percent from the height of 20th century cases.
- DoD surveillance assets in 2009 identified some of the initial cases of H1N1 influenza infection in the U.S., leading to a highly successful vaccination campaign.
- A live, oral vaccine against adenovirus types 4 and 7 was licensed in 2011 specifically for the U.S. military recruit population. Within two years, adenovirus-associated disease burden was reduced 100-fold among recruits.