



## Biological Weapons

Biological weapons (BW) are disease-causing organisms and toxins that are designed to harm or kill humans, livestock or crops. Naturally occurring biological agents, like the organisms that cause [anthrax](#), [bubonic plague](#), and [smallpox](#), are manipulated for use in weapons. These weapons can be disseminated in various ways, including through traditional military platforms and tools available on the open market. In some circumstances, the effects of an attack are not [immediately detectable](#), because the infection needs time to cause illness.

### History of Biological Weapons

The military use of biological agents can be [traced back to the 12<sup>th</sup> century](#), but massive BW programs did not appear until the 20<sup>th</sup> century. While the use of BW over the past century was relatively infrequent compared to the capacity available, there were devastating incidents. From 1932 through 1945, Japan built an enormous program called [Unit 731](#). In addition to notorious experimentation, the Japanese conducted multiple plague attacks on [Chinese cities](#). During the Cold War, the United States [developed biological weapons](#) based on lethal, incapacitating, and anti-crops agents. In 1969, the United States abandoned its BW program and unilaterally renounced the use of these weapons. In the 1970s, the Soviet Union secretly created [Biopreparat](#), a massive civilian organization that supported Soviet BW research, development, and production. While a large-scale exchange of BW was averted during the Cold War, there have been two major [incidents of bioterrorism](#) in the United States. In 1984, a religious cult [disseminated](#) salmonella in 10 restaurants in Oregon. In 2001, anthrax was sent to news organizations and Members of Congress, [infecting 22 people](#) and killing five.

### Biological Weapons Convention

Opened for signature in 1972, the [Biological Weapons Convention](#) (BWC) was agreed upon in the Conference on Disarmament and entered into force March 26, 1975. The [1925 Geneva Protocol](#) already banned the use of biological weapons, but the BWC bans the production, acquisition, and stockpiling of BW. There are [183 States Parties](#) and upon accession, each was required to destroy any existing BW. Countries not party to the BWC [include](#) Chad, Comoros, Djibouti, Eritrea, Israel, Kiribati, Micronesia, Namibia, South Sudan and Tuvalu. The BWC does not have any verification mechanism to guarantee compliance. In fact, almost as soon as the ink was dry on their signature to the BWC, the Soviet Union vastly expanded their BW program with the creation of Biopreparat. Learning from that mistake, international parties created an extensive and intrusive verification mechanism in the Chemical Weapons Convention. Attempts to add a verification regime to the BWC have been [unsuccessful](#), due to political and technical concerns, but [efforts](#) to strengthen the BWC do [continue](#). There is also an ad hoc institution called the Australia Group that promotes best practices for controlling biological agents.

### Who Has Biological Weapons?

[17 countries](#) have had BW programs. Recent advances in technology could increase the likelihood that BW could be acquired or produced by non-state actors. Synthetic biology and gene-editing technologies such as CRISPR could lead to new types of BW through the creation of [pathogenic](#) viruses, bacteria engineered to be more dangerous, and microbes engineered to produce and release toxic biochemicals.