

## 5 Deadliest Diseases in Human History; 1 Eradicated

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### AIDS

Acquired Immunodeficiency Syndrome (AIDS), which gradually interferes with the immune system and makes a person more prone to infection and tumours, was first recognised in 1981. Since then, it has led to the deaths of more than 25 million people.

According to the United Nations Report on the [Global AIDS Epidemic 2013](#), an estimated 33 million people are infected with HIV worldwide.

The human immunodeficiency virus (HIV) is transferred mainly through unprotected sexual intercourse, contaminated blood transfusions, shared hypodermic needles and from mother to child.

There is currently no cure or effective vaccine for HIV, so treatment consists of highly active antiretroviral therapy (HAART) which slows down progression of the disease in those who have access to the medication.

Excess mortality among people with AIDS was nearly halved through use of HAART, but it remains approximately 5 times higher in patients with AIDS than in those infected with HIV that have not yet progressed to AIDS ([Puhan et al. 2010](#)). Treatment also includes preventive and active treatment of opportunistic infections.

### Malaria

The [Global Technical Strategy for Malaria 2016–2030](#) has set targets which include: global reduction of malaria incidence and mortality rates by at least 90%; elimination of the disease from at least 35 countries in which it spread in 2015; and prevention of the disease being re-established in malaria free countries.

According to the [World Malaria Report 2016](#), 17 countries eliminated malaria between 2000 and 2015, and six of these have been certified by the WHO as malaria free.

One approach to dealing with malaria is to either kill the mosquitoes that spread it with insecticides or to drain the bodies of stagnant water that their larvae live in.

Another approach is the use of a drug to attack not the mosquito, but the disease-causing parasite itself. Humans are the only known host for malaria, so if applied, this drug could make them hostile territory for the pathogen.

Although the drug—a combination of artemisinin and piperaquine—was effective at first, its efficacy decreased, according to Malaria World. The WHO believes that these treatment failures are most probably due to piperaquine resistance.

### Spanish Flu

In the short period from 1918 to 1919, between 50 and 100 million people died of Spanish influenza, and many of these were previously healthy young adults.

Symptoms of the disease included chills and fluid in the lungs, which can cause patients to drown or to develop infections such as bacterial pneumonia.

The name Spanish flu comes from the misleading impression that the flu epidemic was worse in Spain than in other countries. This falsehood was spread due to wartime censors minimising early reports of illness and mortality in Germany, Britain, France, and the United States as a way to maintain morale. Meanwhile, newspapers were free to report effects of the outbreak in neutral Spain, thus creating the false impression and popular term for the outbreak.

## Bubonic Plague

Plague is a zoonotic disease, meaning it can be transferred from animals to humans. It circulates in fleas that are carried by small rodents, and without treatment, the disease kills around two thirds of infected humans within four days.

The word bubonic comes from the Greek word meaning groin. The plague took this name because of the swollen lymph nodes (buboes) that typically occur with the disease, particularly in the armpit and groin of those infected.

The bubonic plague is commonly believed to have caused the Black Death, which devastated parts of Europe in the 14th century, killing an estimated 25 million people.

## Smallpox

Smallpox is an acute contagious disease caused by the variola virus, which caused an estimated 300 to 500 million deaths in the 20th century.

Transmission of the disease occurs through inhalation of the airborne virus, usually via droplets expressed from the oral, nasal, or pharyngeal mucosa of an infected person. Symptoms of smallpox include a blistered rash on the skin and a fever.

Since humans are the only host for smallpox, a vaccine was discovered and used to make humans hostile territory for the pathogen. After successful vaccination campaigns throughout the 19th and 20th centuries, the World Health Organisation (WHO) certified in 1979 that [smallpox](#) was eradicated.

Only 12 years earlier, in 1967, the WHO stated that around 15 million people contracted smallpox and two million had died that year alone. So swift eradication of the disease was a monumental achievement.

To this day, smallpox is the only human infectious disease to have been completely eradicated.

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