



FACT SHEET Smallpox

What is Smallpox?

Smallpox is caused by the variola virus that emerged in human populations thousands of years ago. Smallpox infects only humans, and the last naturally acquired case of smallpox in the world occurred in 1977. Except for laboratory stockpiles, smallpox has been eliminated. There is concern that the smallpox virus could be used as an agent of bioterrorism.

How do people get smallpox?

Generally, direct and fairly prolonged face-to-face contact is required to spread smallpox from one person to another. A person with smallpox is sometimes contagious with onset of fever but the person becomes most contagious when the rash appears. Once the rash appears, the person is usually very sick and not able to move around in the community. The infected person is contagious until the last smallpox scab falls off.

Contaminated clothing or bed linen can also spread the virus. Special precautions need to be taken to ensure that all bedding, clothing, and contaminated surfaces of patients are cleaned with disinfectants like bleach and quaternary ammonia. Smallpox is not known to spread by insects or animals. It is rare for smallpox to be spread by virus carried in the air in enclosed settings, such as buildings, busses, and trains.

What are the signs and symptoms of smallpox?

The symptoms of smallpox begin with high fever (101-104°F), head and body aches, and sometimes vomiting. These symptoms generally appear 7 to 17 days following exposure. A rash, most prominent on the face, arms, and legs, follows in two to three days and will usually spread to all parts of the body within 24 hours. As the rash appears, the fever usually falls and the person may start to feel better. The rash starts with flat red bumps that evolve at the same rate. The raised bumps become pus-filled blisters that crust early in the second week. Scabs develop and fall off after about three weeks, leaving pitted scars. The majority of patients who contract smallpox recover but death can occur in up to 30% of cases.

How is Smallpox treated?

There is no proven treatment for smallpox, but research is ongoing to evaluate new antiviral medications. Vaccine administered after exposure has been shown to provide significant protection against death from smallpox. Getting the vaccine within a few days of exposure may lessen the severity or prevent the disease. As smallpox is caused by a virus, antibiotics will not fight the disease. Patients with smallpox can benefit from supportive therapy, such as intravenous fluids, and medicine to control fever or pain.

What should you do when you have been exposed to smallpox?

Your doctor or the public health department will instruct you to minimize contact with others. If you have contracted the disease, symptoms will appear in 7-12 days after exposure. Individuals should stay at home and monitor themselves daily for the development of a temperature higher than 101°F (38°C). Immediately contact your local health department to receive guidance on how to isolate yourself (either at home or a designated care site) to minimize the risk of exposure to others. Public health authorities will discuss with you the need for vaccination.