

Smallpox

What is smallpox?

Smallpox is an acute, contagious, and sometimes fatal disease caused by the variola virus. Smallpox outbreaks have occurred from time to time for thousands of years, but the disease is now eradicated after a successful worldwide vaccination program.

How is smallpox spread?

Smallpox is spread from person to person by coughing and sneezing. Generally this means that there is direct and fairly prolonged face-to-face contact with a sick person.

Persons with smallpox are most likely to spread the disease during the first week of illness. However, it may be contagious until all scabs have fallen off (approximately three weeks).

Smallpox can also be spread through direct contact with infected body fluids or contaminated objects, such as bedding or clothing. This indirect spread is less common. Rarely, smallpox has been spread by virus carried in the air in enclosed settings, such as buildings, buses, etc. Smallpox is not known to be transmitted by insects or animals.

What are the symptoms of smallpox?

Symptoms of smallpox appear between seven and seventeen days after exposure. During this time, people are not contagious.

The initial symptoms of smallpox appear to be flu-like with high fever, headaches, tiredness, and backaches. About two to four days following the appearance of these symptoms, a rash that looks like small red spots appears on the mouth and tongue. These spots develop into sores that break open. At this time a rash will develop on the face, and spread to the arms, legs, hands, and feet. Initially the rash is red and flat, then it progresses to a raised rash and forms a blister filled with a yellowish-white fluid and a depression in the center that will begin to crust over early in the second week. About three to four weeks later, scabs develop, separate, and fall off. The person is contagious until the scabs fall off.

What is the treatment for smallpox?

There is no proven treatment for smallpox, but research is being conducted on new antiviral agents. Strict isolation of persons with smallpox must be done to prevent the spread of the disease.

Patients with smallpox can benefit from supportive therapy (e.g., intravenous fluids, medicine to control fever or pain) and antibiotics for any secondary bacterial infections that may occur.

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Are there complications from smallpox?

The majority of persons with smallpox recover. Complications of smallpox may be the following: encephalitis (infection of brain tissue), keratitis (inflammation of the cornea of the eye), and blindness in about 1% of the cases. Many survivors have permanent scars over large areas of their body, especially their face. Death occurs in up to 30% of the cases.

How can smallpox be prevented?

The only way to prevent smallpox is the use of the smallpox vaccine. Routine vaccination of the American public against smallpox ended in 1972 after the disease was eradicated in the United States.

The vaccine can lessen the severity of, or even prevent, illness if given within 3 days of exposure to the disease. Vaccination 4 to 7 days after exposure likely offers some protection and could lessen the severity of disease.

Can smallpox be used as a bioweapon?

Smallpox could be released in aerosol form, however the virus is fragile. In laboratory experiments, 90% of aerosolized smallpox virus dies within 24 hours. If an aerosol release of smallpox occurs, 90% of virus matter will be inactivated or dissipated in about 24 hours. Since September 2001, the U.S. has developed a national smallpox response plan designed to quickly vaccinate people exposed to the virus.

How do I get more information on smallpox?

Calhoun County Public Health Department
Phone: (269) 969-6383

Centers for Disease Control and Prevention
Web Site: <http://www.bt.cdc.gov/agent/smallpox/index.asp>

World Health Organization
Web Site: http://www.who.int/health_topics/smallpox/en/

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This fact sheet is meant to provide general health information and is not intended to be medical advice or otherwise take the place of your doctor's orders or to diagnose your specific health problems. Check with your doctor if you have any questions or concerns about your health.

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