

Smallpox

Fact Sheet

What is Smallpox?

Smallpox is a serious, contagious, and sometimes fatal infectious disease. There is no specific treatment for smallpox disease, and the only prevention is vaccination.

There are two clinical forms of smallpox. Variola major is the severe and most common form of smallpox, with a more extensive rash and higher fever. There are four types of variola major smallpox: ordinary (the most frequent type, accounting for 90% or more of cases); modified (mild and occurring in previously vaccinated persons); flat; and hemorrhagic (both rare and very severe). Historically, variola major has an overall fatality rate of about 30%; however, flat and hemorrhagic smallpox usually are fatal. Variola minor is a less common presentation of smallpox, and a much less severe disease, with death rates historically of 1% or less.

Smallpox outbreaks have occurred from time to time for thousands of years, but the disease is now eradicated after a successful worldwide vaccination program. The last case of smallpox in the United States was in 1949. The last naturally occurring case in the world was in Somalia in 1977. After the disease was eliminated from the world, routine vaccination against smallpox among the general public was stopped because it was no longer necessary for prevention.

What are Possible Ways of Contracting Smallpox?

- **Prolonged face-to-face contact with someone who has smallpox** (usually someone who already has a smallpox rash). This was how most people became infected with smallpox in the past. However, a person can be exposed to someone who has smallpox and not become infected.
- **Direct contact with infected bodily fluids or an object such as bedding or clothing** that has the virus on it.
- **Exposure to an aerosol release of smallpox (the virus is put in the air)**. On rare occasions in the past, smallpox was spread by virus carried in the air in enclosed places such as buildings, buses, and trains. The smallpox virus is not strong and is killed by sunlight and heat. In lab experiments, 90% of aerosolized smallpox virus dies within 24 hours; in the presence of sunlight, this percentage would be even greater.

What are Signs and Symptoms of Smallpox?

- For the first 7 to 17 days after exposure, the infected person feels fine and is not contagious (cannot spread the disease).
- After 7-17 days, the first symptoms of smallpox appear. These include fever, tiredness, head and body aches, and sometimes vomiting. The fever is usually high, in the range of 101 to 104 degrees Fahrenheit. At this time, people are usually too sick to carry on their normal activities. This stage may last for 2 to 4 days.

If you have any questions, please contact Allen County Public Health at 419-228-4457. Health Department staff members are available to answer your questions Monday to Friday from 8:00a.m. to 4:30 p.m. You can also visit www.allencountypublichealth.org and the Centers for Disease Control and Prevention's Web site at www.bt.cdc.gov for additional information.

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- Next, a rash appears first as small red spots on the tongue and in the mouth. A rash then appears on the skin, starting on the face and spreading to the arms and legs and then to the hands and feet. Usually the rash spreads to all parts of the body within 24 hours.
- The rash becomes raised bumps and the bumps become “pustules”, which are raised, usually round and firm to the touch as if there’s a small round object under the skin.
- The pustules begin to form a crust and then scab. By the end of the second week after the rash appears, most of the sores have scabbed over.
- The scabs begin to fall off, leaving scars. Most scabs will have fallen off three weeks after the rash first appears.

A person with smallpox is sometimes contagious when they get a fever, but the person becomes most contagious when they get a rash. The infected person is contagious until their last scab falls off. In the past, most people recovered from smallpox, but three out of every ten smallpox patients died.

How Do You Prevent and Treat Smallpox?

There is no proven treatment for smallpox. Scientists are currently researching new treatments. Patients with smallpox may be helped by intravenous fluids, medicine to control fever or pain, and antibiotics for any secondary bacterial infections that may occur.

One of the best ways to prevent smallpox is through vaccination. If given to a person before exposure to smallpox, the vaccine can completely protect them. Vaccination within 3 days after exposure will prevent or greatly lessen the severity of smallpox in most people. Vaccination 4 to 7 days after exposure likely offers some protection from disease or may decrease the severity of disease. Vaccination will not protect smallpox patients who already have a rash.

Currently, the smallpox vaccine is not widely available to the general public. However, there is enough smallpox vaccine to vaccinate every person in the United States in the event of a smallpox emergency.

How Can I Protect My Family During a Smallpox Outbreak?

- **Stay informed. Listen to the news to learn how the outbreak is affecting your community.** Public health officials will share important information including areas where smallpox cases have been found and who to call and where to go if you think you have been exposed to smallpox.
- **Follow the instructions of public health authorities.**
- **Stay away from, and keep your children away from, anyone who might have smallpox.** This is especially important if you or your children have not been vaccinated.
- **If you think you have been exposed to smallpox, stay away from others and call your health department or health care provider immediately;** they will tell you where to go.

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