

Smallpox – Frequently Asked Questions

(Revised 01/09/02)

What is smallpox?

Smallpox is a virus (germ) that causes a high fever and a rash over the whole body. No person in the world has been diagnosed with smallpox since 1978. For that reason, routine vaccination programs were discontinued in all countries including the US during the period from 1972 to 1986.

How is smallpox spread?

In the majority of cases, smallpox is spread from one person to another by infected saliva droplets that expose a susceptible person having face-to-face contact with the ill person. People with smallpox are most infectious during the first week of illness, because that is when the largest amount of virus is present in saliva. Less commonly, smallpox can be spread from person to person by skin-to-skin contact with the ill person. Some risk of transmission lasts until all scabs have fallen off.

Contaminated clothing or bed linen could also spread the virus. Special precautions need to be taken to ensure that all bedding and clothing of patients are cleaned appropriately with bleach and hot water. Disinfectants such as bleach and quaternary ammonia can be used for cleaning contaminated surfaces.

I was exposed to someone with smallpox, can I spread the disease to my family?

If you were exposed to a smallpox patient, you could spread the disease to your family if you became infected with smallpox. However, being exposed to a smallpox patient does not mean that you were necessarily infected with smallpox. If you were infected, symptoms would be expected to start within 7-17 days after exposure, starting with fever and malaise followed by a rash 2-4 days later. (See "What are the symptoms of the infection?" for details.) You would not be able to spread the disease during the incubation period but you would be able to spread the disease after the fever appears. If you don't develop symptoms after 17 days, then you can be reassured that you most likely have not been infected with smallpox in which case you would not be able to spread smallpox to other people.

How soon will the symptoms develop (incubation period)?

The symptoms may start within 7-17 days after exposure. Smallpox cannot be spread to other people until after the fever has begun.

What are the symptoms of the infection?

The infected person will begin to feel very sick with a fever, severe tiredness, headache, backache, stomachache, and vomiting. Over the next several days, the fever may increase and the person may become confused and disoriented. As the fever increases, a rash (raised, discolored spots) may be seen on the face. The rash will then spread to the neck, arms, legs and the soles of the feet and palms of the hands. The rash will progress from fluid-filled vesicles to pus-filled pustules. Scabs will begin to form on the skin about 8-9 days after the onset of the rash. Smallpox is no longer infectious once all the scabs have fallen off the skin.

Is there any treatment for smallpox?

There is no proven treatment for smallpox, but research to evaluate new antiviral agents is ongoing. 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. The majority of patients with smallpox recover.

How can we stop the spread of smallpox after someone comes down with it?

Symptomatic patients with suspected or confirmed smallpox are capable of spreading the virus. Patients should be placed in medical isolation so that they will not continue to spread the virus. In addition, people who have come into close contact with smallpox patients should be vaccinated immediately and closely watched for symptoms of smallpox. Vaccine and isolation are the strategies for stopping the spread of smallpox.

What should I know about smallpox vaccination?

In the absence of a confirmed case of smallpox anywhere in the world, there is no need to be vaccinated against smallpox. In the event of an outbreak, the CDC has clear guidelines to swiftly provide vaccine to people exposed to this disease. The vaccine is securely stored for use in the case of an outbreak. In addition, Secretary of Health and Human Services Tommy Thompson recently announced plans to accelerate production of a new smallpox vaccine.

If people got the vaccination in the past when it was used routinely, will they be immune?

Not necessarily. In the US, routine vaccination against smallpox ended in 1972. The level of immunity among persons who were vaccinated before 1972 is uncertain; therefore, these persons are assumed to be susceptible. Most likely, these people will have some level of protection against the worst effects of the disease but will not likely have full immunity against smallpox. Immunity can be boosted effectively with a single revaccination. Prior infection with the disease usually grants lifelong immunity.

How many people have not had the vaccination?

Approximately half of the US population has never been vaccinated.

If someone is exposed to smallpox, is it too late to get a vaccination?

If the vaccine is given within 4 days after exposure to smallpox, it can lessen the severity of illness or even prevent it.

Who should not receive the smallpox vaccine?

Some people with preexisting conditions such as eczema or immune system disorders have a higher risk for having complications from the vaccine. Adverse reactions have been known to occur that range from mild rashes to rare fatal encephalitis and disseminated vaccinia. Smallpox vaccine should not be administered to persons with a history or presence of eczema or other skin conditions, pregnant women, or persons with immunodeficiency diseases and among those with suppressed immune systems as occurs with leukemia, lymphoma, generalized malignancy, or solid organ transplantation.

How will I know if I need to be vaccinated?

If you are exposed to a person who develops the symptoms of smallpox, you will be offered the vaccination. You will be contacted by health department officials.

Where can I get more information?

For additional information, please view [FAQ's about Smallpox](#) from the Centers for Disease Control and Prevention (CDC) or view [Frequently Asked Questions and Answers on Smallpox](#) from the World Health Organization.

References:

CDC Website: [FAQ's about Smallpox](#)

Cahill, Christine K., MS, RN, CIC, Infection Control Consultant, California Department of Health Services. Licensing & Certification Program. [California Hospital Bioterrorism Response Planning Guide](#).

Primary Author: Madison, Sasha, MPH, CIC, Manager, Infection Control & Epidemiology Department, Stanford Hospital and Clinics.