

Smallpox Fact Sheet

1. What should I know about Smallpox? - Smallpox is a serious contagious and sometimes fatal disease caused by the variola virus, and marked by fever and a distinctive progressive skin rash. Smallpox is a vaccine-preventable disease. In 1980, smallpox was declared eradicated following worldwide vaccination programs, and the live-virus vaccine is no longer routinely administered to the general public anywhere in the world. However, in the aftermath of the terrorist attacks on September 11, 2001 and subsequent dispersal of anthrax spores via US mail, additional precautions have been taken to deal with a bioterrorist attack using smallpox as a bioweapon.

2. How serious is the smallpox threat? – Although the likelihood of a bioterrorist attack using smallpox is low, the consequences would be highly significant. As a result:

- a. There is a detailed nationwide smallpox preparedness program to protect Americans.
- b. There is enough smallpox vaccine stockpiled to vaccinate everyone who would need it in the event of a declared emergency.

3. How dangerous is the smallpox threat? - Smallpox is classified as a Category A agent by the Centers for Disease Control and Prevention. Category A agents are believed to pose the greatest potential threat for adverse public health impact and have a moderate to high potential for large-scale dissemination. Other Category A agents are anthrax, plague, botulism, tularemia and viral hemorrhagic fevers.

4. If I am concerned about a smallpox attack, can I go to my doctor and get the vaccine? - At the moment, the smallpox vaccine is not available to the general public.

5. What are the symptoms of smallpox? - The symptoms of smallpox begin with high fever, head and body aches, and sometimes vomiting. The fever is usually high, (101 to 104oF). A rash follows the fever and spreads and progresses to raised

bumps and pus-filled blisters that crust, scab, and fall off after about three weeks, leaving a pitted scar.

6. How long does it take to show symptoms? - After exposure to the smallpox virus (variola), it takes between 7 and 17 days for symptoms of smallpox to appear. During this time, the infected person feels fine and is not contagious. A person with smallpox is sometimes contagious with onset of fever, but the person becomes most contagious with the onset of rash. The infected person is contagious until the last smallpox scab falls off.

7. Is smallpox fatal? - The majority of patients with smallpox recover, but death may occur in up to 30% of cases. Many smallpox survivors have permanent scars over large areas of their body, especially their face. Some survivors are left blind.

8. How is smallpox spread? - Smallpox normally spreads from direct and fairly prolonged face-to-face contact with infected persons. Smallpox also can be spread through direct contact with infected bodily fluids or contaminated objects such as bedding or clothing. Indirect spread is less common. Rarely, smallpox has been spread by virus carried in the air in enclosed settings such as buildings, buses, and trains. Smallpox is not known to be transmitted by insects or animals.

9. If Smallpox is released in aerosol form, how long does the virus survive? The smallpox virus is fragile. In laboratory experiments, 90% of aerosolized smallpox virus dies within 24 hours; in the presence of ultraviolet (UV) light, this percentage would be even greater.

10. How many people would have to get smallpox before it is considered an outbreak? One confirmed case of smallpox is considered a public health emergency.

11. 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. Many observational studies during the smallpox eradication program showed that vaccination within 3 or 4 days of exposure could abort or significantly reduce the severity of smallpox disease.

12. **How is smallpox diagnosed?** – There are several ways to diagnose smallpox in a specialized laboratory. These include growing the virus, looking for the genetic signature of the virus in the sores, or staining for the virus in slides of the affected tissues.

13. **Why is the smallpox vaccine no longer given?** – Once smallpox was eradicated, there was no longer a need to continue to give the vaccine. In addition, the vaccine is difficult to administer, as it requires a special needle and multiple pricks of the skin. The vaccine has also been associated with a number of serious side effects.

14. **For more information about Smallpox:**

<http://www.bt.cdc.gov/agent/smallpox/index.asp>

This fact sheet provides general information. Please contact your physician for specific clinical information.

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