

## **What is smallpox?**

The variola virus causes smallpox symptoms to appear about 12 days (range: 7 to 17 days) following exposure. Symptoms include high fever, fatigue, and head and backaches which are followed in two to three days by the rash. Approximately one to 30% of cases die, during the first or second week of illness.

## **How is smallpox spread?**

Smallpox is spread, most often, by an ill person releasing virus infected saliva droplets from their mouth into the air that are inhaled by a susceptible person in close contact with the ill person (face-to-face contact). Because virus titers in saliva are highest during the first week of illness, this is when people are the most infectious.

Disease is most often transmitted from the time the ill person first develops the rash throughout the first week of illness, however, the person is still infectious until the rash has resolved (all scabs have fallen off). Virus is also present in the scabs that separate from the skin but these are much less infectious than saliva.

## **What can be done to prevent smallpox?**

Vaccine against smallpox is a live virus vaccine, made with a related virus called vaccinia virus. It does not contain smallpox virus.

The United States currently has a limited supply of smallpox vaccine (approximately 15 million doses) available for emergency use, if needed. New methods for the production of additional smallpox vaccine in large quantities are being explored.

Smallpox vaccine is very effective and can lessen the severity or even prevent illness in people exposed to smallpox if given up to four days after exposure.

## **What is the treatment for smallpox?**

At this time, there is no proven treatment for smallpox. Patients with the illness would be given supportive therapy as needed and antibiotics for any secondary bacterial infections that occur. No antiviral medications have yet proved effective for treating smallpox.

A smallpox outbreak would spread unless checked by vaccination and monitoring of contacts to smallpox patients and isolation of infectious smallpox patients. People with smallpox must avoid contact with unvaccinated individuals in order to prevent transmitting the disease to them. All individuals in who smallpox is suspected would be placed under health monitoring.

## **Can smallpox be used as a biological weapon?**

Smallpox was eradicated from the world in 1977. In 1980, the World Health Assembly recommended that all countries cease vaccination and that all laboratories destroy their stocks of variola (smallpox) virus or transfer them to one of two World Health Organization reference labs.

Routine vaccination against smallpox stopped in 1972 and few persons younger than 27 years of age have been vaccinated. Also, the level of immunity among persons older than 27 in the United States is uncertain. The duration of immunity has not been well measured. It must be assumed that the population at large is susceptible to infection.

Because this virus is relatively stable (not easily destroyed in the environment) and the infectious dose is small, an aerosol release of variola virus could disseminate widely.

OSDH 05/01

