Smallpox

What is smallpox?

- Smallpox is a severe viral infection caused by the variola virus. Smallpox infection was eliminated from the world in the late 1970s. However, because the security of the virus is uncertain, there is a remote risk that smallpox could be used as a weapon.

- Routine vaccination against smallpox in the United States ended in 1972, because the risk associated with the vaccine was greater than the risk of getting the disease. However, in 2003, some members of the military, public health and health care workforce were vaccinated against smallpox as part of bioterrorism preparedness.

How is smallpox spread? What are the symptoms?

- Smallpox is extremely infectious and is spread from one person to another by infected saliva droplets. Exposure may come from face-to-face contact, airborne spread (coughing or sneezing) or through direct contact with contaminated materials. 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. However, some risk of transmission lasts until all scabs have fallen off.

- The incubation period for the disease ranges from about seven to 17 days following exposure. Initial symptoms include high fever, fatigue, headache and backache. A rash — most prominent on the face, arms and legs — follows in two to three days. The rash starts with flat red lesions that evolve at the same rate. Lesions become pus-filled and begin to crust early in the second week. Scabs develop, and then separate and fall off after about three to four weeks. The majority of patients with smallpox recover, but death occurs in up to 30 percent of cases.
Preventive measures

- If you have symptoms, consult a health care provider as soon as possible. There is no evidence of increased risk of smallpox outbreak or bioterrorism attack using smallpox, but the United States does maintain an emergency supply of smallpox vaccine. The vaccine is not currently available to the public because it can have severe side effects.

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, such as intravenous fluids and medicine to control fever or pain, and antibiotics for any secondary bacterial infections.

- If the vaccine is given to a person within four days of exposure to smallpox, it may lessen the severity of — or possibly prevent — illness. Vaccine against smallpox contains a live virus called vaccinia; it does not contain the smallpox virus.

- The vaccine is stored and distributed by the Centers for Disease Control and Prevention through the Strategic National Stockpile of pharmaceutical supplies. In the event smallpox is used as a weapon, the distribution of vaccine would be coordinated by the Centers for Disease Control and Prevention with state and local health departments.