

Biothreat: Smallpox

What You Need to Know

SAMPLE COPY

A microscopic view of smallpox virus

Diseases as Weapons

Many diseases could be used as weapons, but most are hard to obtain, preserve, and spread.

Terrorists first have to buy or steal a sample of the disease.

This alone can be difficult and expensive.

Terrorists must protect themselves from the disease, which can require complex, expensive equipment.

Changing a test tube sample of a disease into a form that can be spread easily is hard to do. Terrorists need large amounts of the disease to hurt many people.

A laboratory version of a disease is usually fragile. Outside of a test tube, it would die quickly. For a disease to be spread, it has to be "weaponized," which is a complicated scientific task.



Smallpox as a Weapon

Russia and the U.S. kept two stocks of smallpox virus for research purposes. Both countries promised not to try to weaponize the disease. However, Russia weaponized it anyway. It is not known if the virus was ever given illegally to other countries or terrorist groups.

Isolated cases of smallpox could likely be controlled before the disease became widespread. On the other hand, if terrorists spread it over a wide area in an aerosol (mist) form, it would infect many people at once. Those people would infect many others. It would be difficult to vaccinate all of those people in time.

Is Smallpox a Serious Threat?

A terrorist release of smallpox would be a serious health emergency.

Smallpox is highly contagious. Long ago, before a vaccine was developed, almost everyone caught some form of the disease in their lifetime.

Smallpox is incurable, but people who survive the infection cannot get it again.

A vaccine for smallpox exists.

However, most people born since 1972 have never been vaccinated.

Even though older people did receive the vaccine, doctors do not know if it is effective after ten years.



SAMPLE COPY

Symptoms and Spread of Smallpox

The first symptoms of smallpox are similar to many other diseases. The patient has a high fever, no energy, severe headache and backache, and possible abdominal pain. During this period, the person cannot pass the disease to others.

After 2 or 3 days, a rash of red spots develops in the mouth, on the face, and on the forearms. The rash later spreads to the body and the legs. By about the seventh day, the spots are raised and filled with pus. Later, the pustules (pus-filled spots) turn into scabs, which eventually dry up and fall off.

During the three or four weeks that a person has a rash, pustules, or scabs, he or she can spread the disease.

The people infected by a smallpox patient usually have been family members or caregivers because people sick with smallpox cannot leave the bed. Someone would have to get within about 6 feet of a sick person in order to catch the disease.

Smallpox leaves survivors with terrible scars, especially on the face. The scars are deep, round pits where scabs had been.



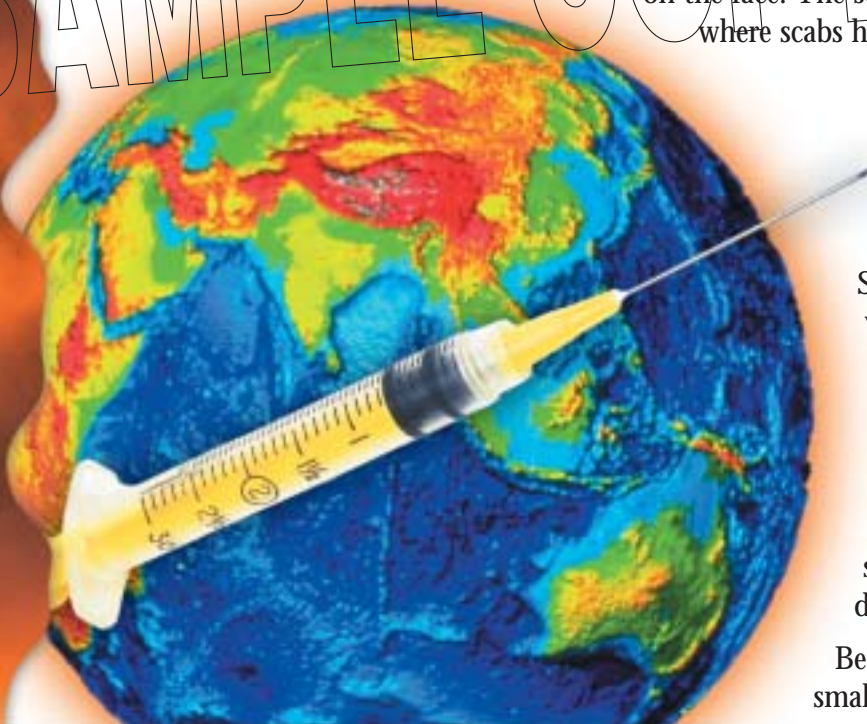
Natural Spread of The Disease

Smallpox is caused by the virus *Variola major*. Viruses use a victim's own cell structures to help them infect the victim. This makes viruses harder than bacteria to kill with drugs.

Smallpox is easily spread from person to person. The most common way for it to spread is for a healthy person to breathe in droplets of infected saliva from an infected person. The bedding or clothing used by a smallpox patient can also spread the disease.

Babies all over the world used to be vaccinated against smallpox routinely. Smallpox vaccination ended in the U.S. in 1972. The last natural case of smallpox occurred in 1977 in Somalia. By 1980, the disease was considered eradicated (wiped out).

Before it was wiped out, three or four out of every ten smallpox patients died.



If You Have Symptoms

If you or someone in your family has these symptoms, see a doctor immediately.

Early symptoms include:

- High fever.
- Possible delirium (lost touch with reality).
- Total lack of energy; unable to get out of bed.
- Severe headache.
- Severe backache.
- Possible abdominal (belly) pain.



Smallpox pustules

“A person with smallpox must be kept away from others to prevent the spread.”

Many doctors would not immediately think of smallpox if they saw these symptoms.

Before a rash develops, smallpox can look like other common illnesses. Smallpox is easy to diagnose when the rash with pustules develops, but then the patient can spread

the disease to others. If smallpox is diagnosed before the rash appears, the person can be quarantined (kept away from others) to prevent the spread of the disease.

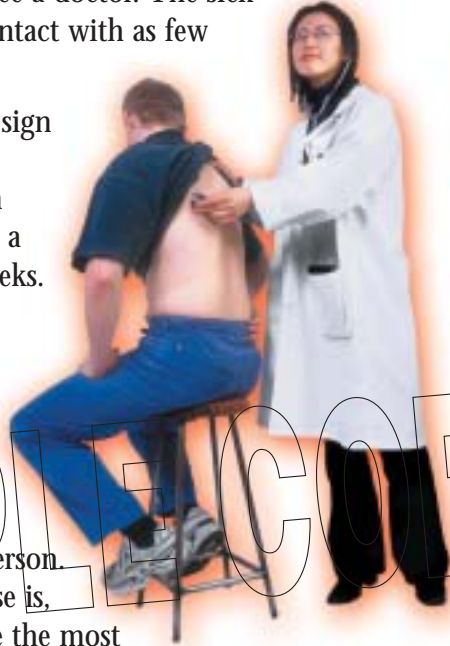


If Someone You Know Has Symptoms

If someone you know has early symptoms of smallpox, encourage him or her to see a doctor. The sick person should come in contact with as few people as possible.

Remember, from the first sign of rash until the last scab disappears, the person can spread the disease. That is a period of three to four weeks.

Small children, the elderly, anyone with a weakened immune system (like someone with HIV/AIDS), and pregnant women should stay away from the sick person. No matter what the disease is, people in those groups are the most at-risk of serious complications if infected.



Treatment

Smallpox cannot be cured. All that can be done for someone infected with the disease is to make him or her as comfortable as possible. Once someone has the disease, it is a matter of waiting to see how the disease progresses. Smallpox kills about 30% of those infected.

**“Smallpox kills about 30%
of those infected”**

Keep in Mind

No one knows for sure whether or not smallpox is available to terrorists. Although there is no cure for smallpox, a vaccine does exist. Remain calm and talk with your doctor if you are concerned about any illness.

For More Information:

Online Terrorism Resource Site

www.syndistar.com/terrorism

Centers for Disease Control and Prevention (CDC)

1-800-311-3435 www.cdc.gov

U.S. Department of Health and Human Services (DHHS)

1-877-696-6775 www.os.dhhs.gov

SAMPLE COPY

