

## Facts you should know about bioterrorism

Recent events concern many workers on the Hanford Site. Until the terrorist attacks of Sept. 11, dealing with the idea of receiving a potentially life-threatening disease by exposure through the mail was unfathomable.

The government has been concerned about biological warfare for many years, and has continued research in counter-measures. The Centers for Disease Control and Prevention has been instrumental in developing responses to bioterrorism.

The CDC has identified four agents most likely to be used in a bioterrorist attack — anthrax, botulism, plague and smallpox. Here are some of the facts about each agent.

### Anthrax

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Three diseases are caused by anthrax: inhalational (lung), cutaneous (skin), and intestinal anthrax. Symptoms of the disease usually occur within two to seven days after exposure to the bacteria.

- Inhalation symptoms are initially similar to the common cold or flu, but then in time lead to severe respiratory problems.
- Cutaneous anthrax causes skin lesions.
- Intestinal symptoms include nausea, loss of appetite, vomiting and fever.

Infection can be prevented with antibiotics; however, the treatment must begin as soon as possible. The lung, or inhalational, form is the most likely result of a bioterrorist exposure. Anthrax is not spread from person to person.

### Botulism

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There are three main types of botulism: foodborne, infant and wound. Symptoms begin within six hours to two weeks (most commonly 12 to 36 hours), and include:

- Double vision, blurred vision, drooping eyelids
- Slurred speech, difficulty swallowing, dry mouth
- Muscle weakness that spreads from the top down through the body.

The CDC maintains a supply of antitoxin; however, treatment should begin as soon as possible. Botulism also is not spread from person-to-person contact.

### Plague

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Pneumonic (lung) plague is the most common type of plague, and is found in rodents and fleas. The onset of symptoms is fairly rapid and includes:

- Fever
- Headache
- Weakness
- Bloody cough or watery sputum.

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## Facts you should know about bioterrorism, cont.

Early treatment with antibiotics is essential. Plague can be spread from one person to another through respiratory droplets (i.e., face-to-face contact with the ill patient must occur).

### Smallpox

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Smallpox is a viral disease that has been eradicated, but some countries have maintained cultures of smallpox to be used as a bioterrorism agent. Symptoms usually begin between seven and 17 days following exposure, and include:

- High fever
- Fatigue
- Head and back aches
- A characteristic rash on the face, arms and legs which results in scabs that dry up and fall off.

There is no proven treatment, although 70 percent of those infected do recover. For those who have received smallpox vaccinations (routine vaccinations ended in 1972), the immunity has probably not remained effective. Work is in progress to produce a new smallpox vaccine.

Smallpox can spread through person-to-person contact. The first week of illness is the most infectious period; however, risk of transmission remains until all the scabs have fallen off.

To learn more about the efforts of the CDC or for more information on the diseases discussed in this article, visit the CDC Web site at [www.cdc.gov](http://www.cdc.gov). ♦

## Protect yourself

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A simple technique to minimize exposure to any infectious agent is to wash your hands with soap and water several times each day. Be aware of your environment. If something or someone looks out of place, unusual or suspicious, call 9-1-1 immediately. Never attempt to move or handle any item that is deemed suspicious.

If you are handling mail, remember that the following are characteristics of suspicious packages and letters:

- Excessive postage
- Oily stains, discoloration or odor
- No return address
- Excessive weight
- Uneven envelope
- Excessive tape, string or other bindings
- Postmark and return address cities that do not match.

The Centers for Disease Control and Prevention also offers advice on how to handle suspicious packages:

- **Unopened packages with threatening markings** — do not open. Place in a plastic bag or cover the package, leave the room and close off the area. List everyone in the area and call 9-1-1.
- **Envelopes with visible powder** — do not attempt to clean or remove powder. Cover the package, leave the room, remove contaminated clothing, shower, list everyone in the room and call 9-1-1.
- **Aerosols** — turn off vents and fans if possible. Leave the area, close the door, section off the area, list everyone present and call 9-1-1.

With any potential health risk, apply caution when working. If there is any doubt, contact 9-1-1 or your law enforcement professionals. For health concerns, contact Hanford Environmental Health Foundation or the Benton-Franklin County Public Health District. ♦