

# ANTHRAX



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**T**he naturally occurring bacterium that causes anthrax has plagued animals and humans for thousands of years. Recent threats, however, involve the element of bioterrorism—the use, or threatened use, of biological agents, such as anthrax, to promote or spread fear or intimidation among a population.

Anxiety about the use of anthrax as a biological weapon spread throughout the country, when it was confirmed that a Florida photo editor had contracted the disease. He became the first American in 25 years to die from inhalation anthrax. Since then, incidences of potential anthrax exposure have widened to several places across the country, and people are asking how they can protect themselves.

To help allay the country's fears, the American Red Cross has compiled information from a variety of sources (see references at the end of this brochure) to answer commonly asked questions.

## Q. What is anthrax?

**A.** Anthrax is an acute, infectious disease caused by the spore-forming bacterium *Bacillus anthracis*. The cutaneous form (contracted through the skin) is the most common and is less deadly than the inhalation, or pulmonary, form (contracted through inhaling the spores).

## Q. How do I get it?

**A.** It is transmitted by humans handling products from infected animals or contaminated materials, or by inhaling anthrax spores.

## Q. Is anthrax contagious?

**A.** There is no evidence of direct person-to-person spread of anthrax.

## Q. What are the symptoms of anthrax infection?

**A.** Symptoms of the disease vary depending on how the disease was contracted.

**Cutaneous:** Most (about 95 percent) anthrax infections occur when the bacterium enters a cut or abrasion on the skin, or when handling contaminated wool, hides, leather or hair products of infected animals. Skin infections begin as a raised itchy bump that resembles an insect bite but within 1 to 2 days develops into a blister and then a painless ulcer. Lymph glands in adjacent areas may swell.

**Inhalation:** Initial symptoms may resemble the common cold. After several days, the symptoms may progress to severe breathing problems and shock.

**Gastrointestinal:** Infection may follow the consumption of contaminated meat and is characterized by an acute inflammation of

the intestinal tract. Initial signs of nausea, loss of appetite, vomiting and fever, are followed by abdominal pain and severe diarrhea.

## Q. When do symptoms appear?

**A.** Symptoms usually appear within seven days of exposure to the anthrax bacteria.

## Q. How common is anthrax?

**A.** Anthrax is most common in agricultural regions, where it occurs in animals. These include South and Central America, Southern and Eastern Europe, Asia, Africa, the Caribbean and the Middle East. When anthrax affects humans, it is usually due to an occupational exposure to infected animals or their products. Anthrax in wild livestock has occurred in the United States, but it is rare.

## Q. Can the disease be treated?

**A.** Yes. Treatment with appropriate antibiotics is effective, but timing is crucial: a delay of even hours can inhibit effectiveness. There are three types of approved antibiotics for anthrax: ciprofloxacin (Cipro®), tetracyclines (including doxycycline) and penicillins. People who have been exposed to anthrax but do not have symptoms should consult with a medical professional who will determine the best course of action for recovery.

## Q. Should I ask my doctor to write a prescription for antibiotics so that I can take them as a precautionary measure?

**A.** No. The Red Cross supports the Center for Disease Control and Prevention's (CDC) recommendation against taking unnecessary antibiotics for possible anthrax exposure. Taking antibiotics will not make you immune to the disease and could lower your ability

to fight other illnesses. Widespread use of antibiotics could also lead to organisms developing resistance to these drugs, making them ineffective. Federal health officials have ample supplies of needed drugs and medical supplies they can deliver anywhere in the United States within 12 hours of a request for assistance.

**Q. Is a vaccine available?**

**A.** An anthrax vaccine was licensed by the Food and Drug Administration (FDA) in 1970 for at-risk veterinary and laboratory workers and livestock handlers. The Department of Defense also reserves a stockpile of the vaccine for military use and for some anthrax researchers. The vaccine is in short supply and not available to the general public.

**Q. Is anthrax easy to use as a biological weapon?**

**A.** The spores have to be turned into a microscopically fine powder of a certain size to be absorbed by the lungs and released in a certain way in order to be effective. This is difficult to do.

**Q. Does the government have a plan in place to make antibiotics available in the event of mass exposure?**

**A.** Yes. The CDC's National Pharmaceutical Stockpile is available to any community in need of additional medicinal support in response to an event involving any biological agent. It consists of several tons of the necessary pharmaceutical supplies and equipment, strategically located throughout the United States, that will be delivered to the local community within 12 hours of an event taking place. The Federal Response Plan does not

need to be activated in order for the stockpile to be utilized by a local community.

**Q. Are blood or blood products used as a treatment for anthrax infection?**

**A.** Antibiotics are the primary treatment for an anthrax infection. Neither blood nor blood products are used in a case of anthrax infection unless the patient has another condition requiring blood or blood products.

**Q. Can anthrax affect donated blood?**

**A.** The FDA issued guidance on October 17, 2001, stating that there is no known risk of transmission of anthrax from blood collected from donors who might have been exposed to the anthrax bacterium but were still in good health. The appearance of anthrax bacteria in the blood of an infected person is thought to coincide very closely with the onset of fever and other symptoms of a serious illness. Thus, standard blood donation screening procedures that exclude sick persons from donating blood are expected to result in deferral of donors who otherwise might transmit the disease. However, if a blood donor later reports a confirmed medical diagnosis of anthrax around the time of the donation, the American Red Cross will withdraw that person's donation and remove it from use.

**Q. What should I do if I receive a suspicious unopened letter or package with a threatening message such as "Anthrax"?**

**A.** You should:

1. Not open, shake or empty the contents of any suspicious envelope or package.
2. Place the envelope or package in a plastic bag or other container to prevent leakage of contents.

3. Cover the envelope or package with anything (e.g., clothing, paper, trash can), if you do not have a container, and do not remove this cover. Then leave the room and close the door, or section off the area to prevent others from entering.
4. Wash your hands with soap and water to prevent spreading any powder to your face.
5. Next...
  - If you are at **home**, report the incident to local police.
  - If you are at **work**, report the incident to local police, and notify your building security official or an available supervisor.
6. List all people who were in the room or area when the suspicious letter or package was recognized. Give this list to both the local public health authorities and law enforcement officials for follow-up investigations and advice.

**Q.** What should I do if I open an envelope or package and powder spills out?

**A.** You should:

1. Not try to clean up the powder. Cover the spilled contents immediately with anything (e.g., clothing, paper, trash can) and do not remove this cover!
2. Leave the room and close the door, or section off the area to prevent others from entering.
3. Wash your hands with soap and water to prevent spreading any powder to your face.
4. Next...
  - If you are at **home**, report the incident to local police.
  - If you are at **work**, report the incident to local police, and notify your building security official or an available supervisor.

5. Remove contaminated clothing as soon as possible and place in a plastic bag, or some other container that can be sealed. This clothing bag should be given to the emergency responders for proper handling.
6. Shower with soap and water as soon as possible. Do not use bleach or other disinfectant on your skin.
7. If possible, list all people who were in the room or area, especially those who had actual contact with the powder. Give this list to both the local public health authorities so that proper instructions can be given for medical follow-up, and to law enforcement officials for further investigation.

**Q.** How can I identify a suspicious package or letter?

**A.** According to the U.S. Postal Service, typical characteristics of suspicious letters or parcels include those that—

- Have any powdery substance on the outside.
- Are unexpected or from someone unfamiliar to you.
- Have excessive postage, handwritten or poorly typed address, incorrect titles or titles with no name, or misspellings of common words.
- Are addressed to someone no longer with your organization or are otherwise outdated.
- Have no return address, or have one that can't be verified as legitimate.
- Are of unusual weight, given their size, or are lopsided or oddly shaped.
- Have an unusual amount of tape.
- Are marked with restrictive endorsements, such as "Personal" or "Confidential."
- Have strange odors or stains.

**Q.** What should I do if I suspect that a biological agent has been released into the air?

**A.** You should:

1. Turn off fans or ventilation units in the area.
2. Leave the area immediately.
3. Close the door, or section off the area to prevent others from entering.
4. Next...
  - If you are at **home**, call 9-1-1 or your local emergency number to report the incident to local police. They will notify the FBI and other appropriate authorities.
  - If you are at **work**, call 9-1-1 or your local emergency number to report the incident to local police who in turn will notify the FBI and other appropriate authorities. Also, notify your building security official or an available supervisor.
5. Shut down the air handling system in the building, if possible.
6. If possible, list all the people who were in the room or area. Give this list to both the local public health authorities so that proper instructions can be given for medical follow-up, and to law enforcement officials for further investigation.

**Q.** Should I buy a gas mask?

**A.** No. The Red Cross supports the CDC's recommendation that it is not necessary to purchase a gas mask. In the event of a public health emergency, local and state health departments will inform the public about the actions individuals need to take.

**Q.** I haven't opened a suspicious letter and have no evidence of an aerial release of an agent but am still worried about possible infection. Who should I contact in my local area if I'm still worried?

**A.** Contact your local health department, or your doctor, for more information if you are worried about anthrax exposure. Don't start taking antibiotics unless advised to do so by your doctor or by health authorities.

## REFERENCES

Information compiled from the Centers for Disease Control and Prevention, the Center for Civilian Biodefense at Johns Hopkins University, the U.S. Department of Health and Human Services and the U.S. Postal Service.

## FOR FURTHER INFORMATION

**Centers for Disease Control and Prevention**  
(800) 311-3435  
[www.cdc.gov](http://www.cdc.gov)

**Johns Hopkins University Center for Civilian Biodefense**  
(410) 223-1667  
[www.hopkins-biodefense.org](http://www.hopkins-biodefense.org)

**United States Postal Service**  
(800) ASK-USPS  
[www.usps.gov](http://www.usps.gov)