



Anthrax—What is the threat?

Because anthrax has been used as a bioterror agent, now is a good time to ensure you are prepared to prevent and mitigate exposures in the unlikely event you or your employees encounter the agent.

Anthrax is a term used for the disease caused by the bacterium *Bacillus anthracis*, which can infect the skin, lungs, or intestinal tract. Anthrax is a potentially deadly disease. In the traditional sense, it is usually spread from animals, particularly cows, goats, and sheep. Dormant bacteria (spores) can live in the soil and in animal products (such as wool) for decades. Although infection in people is usually through the skin, it can also occur from eating contaminated meat or inhaling spores or bacteria.

In the unlikely event someone is exposed to the bacteria, the symptoms may appear 12 hours to 5 days after exposure. A skin infection begins as a red-brown bump resembling a pimple or insect bite that enlarges with considerable swelling at the edges. The bump blisters and hardens, then the center breaks open and oozes a clear fluid before forming a black scab, termed eschar. Lymph nodes in the affected area may swell, and the infected person may feel ill, sometimes experiencing muscle aches, headache, fever, nausea, and vomiting. Treatment with antibiotics will virtually eliminate fatalities.

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S-876

last updated

November 2006

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Note: The information in this publication is time sensitive. Do not rely upon this document if its publication date is more than three years old. Please check the Employer Guide "Safety" section of our web site at www.saif.com/employer for a more recent, printable copy. You'll also find a variety of other valuable safety information designed to help your business prevent injuries and control costs.

Pulmonary anthrax (wool sorter's disease) results from inhaling the spores of the anthrax bacterium. The spores multiply in the lymph nodes near the lung. The lymph nodes then start to break down and bleed, spreading the infection to nearby structures in the chest. Infected fluid builds up in the lungs and in the space between the lungs and chest wall. At first the symptoms are vague and similar to those of influenza. However, the fever worsens, and in a few days severe breathing difficulties develop, followed by shock and coma. Infection of the brain may also occur. Even with early treatment, this form of anthrax is almost always fatal.

Gastrointestinal anthrax is rare. The bacteria can grow into the wall of the intestine and release a toxin that causes extensive bleeding and tissue death. The infection can be fatal if it spreads into the bloodstream.

People at high risk of contracting anthrax—such as veterinarians, laboratory technicians, and employees of textile mills that process animal hair—can be vaccinated. Anthrax skin infections can be treated with oral antibiotics. Lung infections require intravenous antibiotics. Corticosteroids may also be used to reduce lung inflammation. For the inhalation exposure, prompt medical attention is absolutely essential or death is likely.

The following information has been taken from the Centers for Disease Control and Prevention in Atlanta. **This information is intended to supplement emergency procedures already in place.** For further information including a copy of the visual poster developed by the Federal Bureau of Investigation on how to handle suspicious mail, refer to the web sites provided at the end of this article.

How to Handle Anthrax and Other Biological Agent Threats

Many facilities in communities around the country have received anthrax threat letters. Most were empty envelopes; some have contained powdery substances. The purpose of these guidelines is to recommend procedures for handling such incidents.

Do Not Panic

1. Anthrax organisms can cause infection in the skin, gastrointestinal system, or the lungs. To do, so the organism must be rubbed into abraded skin, swallowed, or inhaled as a fine, aerosolized mist. Disease can be prevented after exposure to the anthrax spores by early treatment with the appropriate antibiotics. Anthrax is not spread from one person to another person.
2. For anthrax to be effective as a covert agent, it must be aerosolized into very small particles. This is difficult to do, and requires a great deal of technical skill and special equipment. If these small particles are inhaled, life-threatening lung infection can occur, but prompt recognition and treatment are effective.

Suspicious unopened letter or package marked with threatening message such as “anthrax”:

1. Do not shake or empty the contents of any suspicious envelope or package.
2. PLACE the envelope or package in a plastic bag or some other type of container to prevent leakage of contents.
3. If you do not have any container, then COVER the envelope or package with anything (e.g., clothing, paper, trash can, etc.) and do not remove this cover.
4. Then LEAVE the room and CLOSE the door, or section off the area to prevent others from entering (i.e., keep others away).
5. WASH your hands with soap and water to prevent spreading any powder to your face.
6. What to do next:
 - If you are at **HOME**, then report the incident to local police.
 - If you are at **WORK**, then report the incident to local police, **and** notify your building security official or an available supervisor.
7. LIST all people who were in the room or area when this 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.

Envelope with powder and powder spills out onto surface:

1. DO NOT try to CLEAN UP the powder. COVER the spilled contents immediately with anything (e.g., clothing, paper, trash can, etc.) and do not remove this cover!
2. Then LEAVE the room and CLOSE the door, or section off the area to prevent others from entering (i.e., keep others away).
3. WASH your hands with **soap and water** to prevent spreading any powder to your face.
4. What to do next:
 - If you are at **HOME**, then report the incident to local police.
 - If you are at **WORK**, then report the incident to local police, and notify your building security official or an available supervisor.
5. REMOVE heavily 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.

Question of room contamination by aerosolization:

*For example: **A small device has been triggered, or a warning has been received that the air handling system is contaminated, or there is a warning that a biological agent released in a public space.***

1. Turn off local fans or ventilation units in the area.
2. LEAVE area immediately.
3. CLOSE the door, or section off the area to prevent others from entering (i.e., keep others away).
4. What to do next:
 - If you are at **HOME**, then **dial "911"** to report the incident to local police and the local FBI field office.
 - If you are at **WORK**, then **dial "911"** to report the incident to local police and the local FBI field office, **and** notify your building security official or an available supervisor.
5. SHUT down air handling system in the building, if possible.
6. If possible, list all 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.

How to identify suspicious packages and letters

Some characteristics of suspicious packages and letters include the following:

- Excessive postage
- Handwritten or poorly typed addresses
- Incorrect titles
- Title, but no name
- Misspellings of common words
- Oily stains, discolorations or odor
- No return address
- Excessive weight

- Lopsided or uneven envelope
- Protruding wires or aluminum foil
- Excessive security material such as masking tape, string, etc.
- Visual distractions
- Ticking sound
- Marked with restrictive endorsements, such as "Personal" or "Confidential"
- Shows a city or state in the postmark that does not match the return address

Additional information:

Poster on how to handle suspicious mail items

<http://www.fbi.gov/pressrel/pressrel01/mail3.pdf>

Centers for Disease Control & Prevention

<http://www.bt.cdc.gov>

U.S. Postal Service

http://www.usps.gov/news/2001/press/pr01_1010tips.htm