

ANTHRAX Fact Sheet



The Disease

Anthrax is a serious disease caused by *Bacillus anthracis*, a bacterium that forms spores. Bacteria are germs that can make you sick. A spore is a cell that is dormant (asleep) but may come to life with the right conditions.

Anthrax is most common in South and Central America, Southern and Eastern Europe, Asia, Africa, the Caribbean, and the Middle East.

There are three types of anthrax: skin (cutaneous), lungs (inhalation), and digestive (gastrointestinal).

Transmission

Anthrax is not known to spread from one person to another. Humans can become infected with anthrax by handling products from infected animals or by breathing in anthrax spores from infected animal products (like wool, for example). People also can become infected with digestive anthrax by eating meat from infected animals that is not well-cooked.

Anthrax also can be used as a weapon. In 2001, it was used as a weapon in the United States. Anthrax was spread through the postal system on purpose by sending letters with powder containing anthrax. This act caused 22 cases of anthrax infection.

Symptoms

Symptoms can appear within seven days of coming in contact with the bacterium for all three types of anthrax. For inhalation anthrax, symptoms can appear within a week or can take up to 42 days to appear. The symptoms of anthrax are different depending on the type of the disease:

Cutaneous: The first symptom is a small sore that develops into a blister. The blister then turns into a skin ulcer with a black area in the center. The sore, blister and ulcer do not hurt.

Gastrointestinal: The first symptoms are nausea, loss of appetite, bloody diarrhea, and fever, followed by bad stomach pain.

Inhalation: The first symptoms of inhalation anthrax are like cold or flu symptoms and can include a sore throat, mild fever and muscle aches. Later symptoms include cough, chest discomfort, shortness of breath, tiredness and muscle aches. (Important: Do not assume that just because a person has cold or flu symptoms that they have inhalation anthrax.)

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Treatment

Antibiotics are used to treat all three types of anthrax. It is important that the infection is found and treated early.

Prevention after exposure. Treatment is different for a person who is exposed to anthrax, but is not yet sick. Healthcare providers will use antibiotics (such as *ciprofloxacin*, *levofloxacin*, *doxycycline*, or *penicillin*) combined with the anthrax vaccine to prevent anthrax infection.

Treatment after infection. Treatment is usually a 60-day course of antibiotics. Success depends on the type of anthrax and how soon treatment begins.

Prevention

In countries where anthrax is common and vaccination levels of animal herds are low, humans should avoid contact with livestock and animal products and avoid eating meat that has not been properly slaughtered and cooked.

Vaccine

An anthrax vaccine has been licensed for use in humans. The vaccine is reported to be 93% effective in protecting against anthrax. The vaccination is made up of three shots given 2 weeks apart, followed by three additional shots given 6, 12, and 18 months after the initial three shots. Booster shots are recommended every year.

The vaccine is primarily given to people in the military. It is recommended for those at high risk for exposure to anthrax such as workers in a research laboratory that handle anthrax bacteria regularly, people who work with imported animal hides or furs or who handle potentially infected animal products, and veterinarians who travel to work in other countries where anthrax is common.

Mild reactions occur in 30% of those who are vaccinated and consist of slight tenderness and redness at the injection site.