



CALHOUN COUNTY

Public Health Department

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Fact Sheet

Anthrax

What is anthrax?

Anthrax is an infectious disease caused by the bacteria, *Bacillus anthracis*. It occurs naturally in soil and commonly affects domestic and wild animals around the world. Anthrax most commonly occurs in hoofed mammals but can also infect humans.

What are the types of anthrax?

There are 4 forms of anthrax

- Cutaneous: When anthrax spores get into the skin, usually through a cut or scrape. This can happen when a person handles infected animals or contaminated animals or contaminated animal products. Cutaneous anthrax is the most common form but is the least dangerous. Infection develops 1 to 7 days after exposure.
- Gastrointestinal: When a person eats raw or undercooked meat from an animal infected with anthrax, they can develop gastrointestinal anthrax. Gastrointestinal anthrax is rarely reported in the United States. Infection develops 1 to 7 days after exposure.
- Inhalation: When a person breathes in anthrax spores, they can develop inhalation anthrax. People who work in places such as wool mills, slaughterhouses, and tanneries may breathe in the spores when working with infected animals or contaminated animal products from infected animals. Inhalation anthrax is the deadliest form. Infection can develop between 7 days to 2 months.
- Injection: Recently, another type of anthrax infection has been identified in heroin-injecting drug users in northern Europe but has never been reported in the United States.

Who can get anthrax?

Most individuals will never be exposed to anthrax. However, laboratory workers who handle anthrax, individuals who handle infected animals or animal products, or inhaling anthrax spores from contaminated bone meal used in home gardening can increase the chance of anthrax infection. Additionally, certain workers could be exposed to anthrax in the event of a bioterrorist attack.

How is anthrax diagnosed?

Doctors in the United States rarely see a patient with anthrax. If inhalation anthrax is suspected, doctors will order a chest X-ray or CT scan to examine the lung area.

The only ways to confirm an anthrax diagnosis are:

- To measure antibodies or toxins in the blood
- To test directly for *Bacillus anthracis* in a sample
 - blood
 - skin lesion swab
 - spinal fluid
 - respiratory secretions

Samples must be taken before the patient begins taking antibiotics for treatment.

What are the symptoms of anthrax?

Symptoms of disease vary depending on how the disease was contracted, but usually occur within seven days of exposure.

Cutaneous (skin): The first sign is a pimple that could contain fluid, progressing to a depressed black ulcer. The area is red, swollen, and often painless. The most common locations for sores are the face, neck, arms, or hands. About 20% of untreated cases of cutaneous anthrax will result in death. Deaths are rare with appropriate treatment.

Intestinal: Initial signs may include nausea, painful swallowing, hoarseness, headaches, stomach pain, vomiting, and fever, followed by severe abdominal pain, vomiting of blood, and severe, bloody diarrhea. Symptoms may also include swollen glands or swelling of the abdomen (stomach). Without treatment, more than half of patients with gastrointestinal anthrax die. 60% of patients survive with proper treatment.

Inhalation (lung): Initial symptoms of infection may resemble a cold or flu – mild fever and chills, muscle aches, shortness of breath, chest discomfort, cough, headache, sweats, extreme tiredness, and/or nausea, vomiting, or stomach pains. After several days, the symptoms may progress to severe breathing problems and shock. Inhalation anthrax is often fatal. 55% of patients survive with aggressive treatment.

Injection: Symptoms may be similar to those of cutaneous anthrax, but there may be infection deep under the skin or in the muscle where the drug was injected. Injection anthrax can spread throughout the body faster and be harder to recognize and treat.

How is anthrax spread?

People get anthrax by:

- Breathing in spores,
- Eating food or drinking water that is contaminated with spores, or
- Getting spores in a cut or scrape in the skin.

Cutaneous (skin) anthrax is caused by contact with tissues of animals dying of the disease; or by contact with hair, wool, hides, or products made from them. Contact with soil associated with infected animals or contaminated bone meal used in gardening is also a source of infection.

Intestinal anthrax comes from ingesting contaminated undercooked meat. There is no evidence that milk from infected animals transmits anthrax.

Inhalation anthrax results from inhaling spores of the anthrax bacteria. The anthrax bacteria can be found in industrial processes such as tanning hides and processing wool or bone.

Anthrax is NOT contagious. You cannot catch anthrax from another person the way you might catch a cold or the flu. In rare cases, person-to-person transmission has been reported with cutaneous anthrax, where discharges from skin lesions might be infectious.

How common is anthrax?

Anthrax is extremely rare in humans and is mostly found in animals in agricultural regions of the world. Between 1988 and 2001 there were only 6 cases of animal to human transmission in the United States.

This fact sheet is meant to provide general health information and is not intended to be medical advice or otherwise take the place of your doctor's orders or to diagnose your specific health problems. Check with your doctor if you have any questions or concerns about your health.

What is the treatment for anthrax?

In people exposed to anthrax, illness can be prevented with antibiotic treatment. Early antibiotic treatment of anthrax is important. Waiting to be treated lessens your chances of survival.

After anthrax toxins have been released into the body, one possible treatment is antitoxin. Antitoxins target anthrax toxins in the body. Doctors must use antitoxin together with other treatment options.

Are there complications from anthrax?

If untreated, anthrax in all forms can lead to septicemia and death.

How can anthrax be prevented?

Travelers to agricultural regions of Central and South America, Sub-Saharan Africa, Central and southwestern Asia, Southern and Eastern Europe, and the Caribbean should be mindful of what they eat and handle.

- Avoid eating raw or undercooked meat
- Avoid contact with livestock, animal products, and animal carcasses

An anthrax vaccine can prevent infection; however, it is not available to the general public. Anthrax vaccine is approved for use in three groups of adults 18 to 65 years of age who may be at risk of coming in contact with anthrax because of their job.

- Certain laboratory workers who work with anthrax
- Some people who handle animals or animal products, such as veterinarians
- Some members of the United States military

How do I get more information on anthrax?

Calhoun County Public Health Department

Phone: 269-969-6383

 www.facebook.com/CCPublicHealthDepartment/

Centers for Disease Control and Prevention

Phone: 800-232-4636 (800-CDC-INFO)

Website: <https://www.cdc.gov/anthrax/index.html>

Spanish: <https://www.cdc.gov/anthrax/es/index.html>

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