

# Anthrax

## What is anthrax and what causes it?

Anthrax is a bacterial disease caused by *Bacillus anthracis* (ba-SIL-us an-THRAY-sis). These bacteria release highly resistant spores, which contaminate the environment and help to spread the disease. Anthrax causes sudden death in cattle, sheep, and goats and can severely affect humans. Outbreaks of anthrax occur occasionally in certain areas of the United States.

Anthrax has been used as a biological weapon. In 2001, anthrax was deliberately spread in the United States through letters containing a powder with anthrax spores. As a result, 22 people were infected with anthrax; 5 died.

## What animals get anthrax?

Cattle, sheep, and goats are most at risk for anthrax. Other animals, including horses, pigs, dogs, cats, and wildlife can also get anthrax.

## How can my animal get anthrax?

Most animals get anthrax **orally** through soil contaminated with anthrax spores while grazing. The organism is very hardy, resistant to most disinfectants and can survive for long periods in the environment. Carnivores can get the disease by eating animals infected with anthrax.

## How does anthrax affect my animal?

The most common sign of anthrax infection in animals is sudden death. Prior to death, animals may have a fever, muscle tremors, and difficulty breathing. There may be bleeding from the mouth, nose, and anus after death.

## Can I get anthrax?

Yes. Anthrax can enter through a break or abrasion in the skin after **direct contact** with infected animals or their products, such as blood, wool or hides. Anthrax may also be transferred by biting flies. Within a few days, redness, and swelling occur followed by a black scab at the site of infection. This cutaneous (skin) form is most commonly seen with natural infections of anthrax.

Anthrax can also be inhaled (**aerosol**) in contaminated dust from the environment or animal products (e.g., hides, wool). This form of the disease is the most severe and can lead to death. Fever, coughing, severe chest pain and difficulty breathing may occur. Early treatment with antibiotics is important.

People can become infected **orally** by eating undercooked meat of infected animals. Nausea, vomiting, abdominal pain and severe, bloody diarrhea may occur.

## Who should I contact if I suspect anthrax?

**In Animals** – Contact your veterinarian immediately.

**In Humans** – Contact your physician immediately.

## How can I protect my animal from anthrax?

If you live in an area where anthrax naturally occurs, vaccination may help to protect your animals. A vaccine is available in the U.S. for use in livestock.

To avoid spread to carnivores, animals that have died of anthrax should be burned or buried; if allowed, burning is preferred, but must be done according to State regulations. Burial requires decontamination of the areas since the spores can continue to survive in the soil for decades and infect other animals.

## How can I protect myself from anthrax?

Avoid contact with animals you suspect might have anthrax. Do not butcher animals you think might have died from anthrax. A vaccine is available for those with increased risk of exposure to anthrax because of their occupation (e.g., veterinarians, laboratory and military personnel, animal handlers).

## For More Information

CFSPH Technical Fact Sheets. Anthrax at <http://www.cfsph.iastate.edu/DiseaseInfo/>

Centers for Disease Control and Prevention (CDC) website. Anthrax at <http://www.bt.cdc.gov/agent/anthrax/>

