

10 Things You Need to Know About Anthrax

1. What is anthrax?

Anthrax is an acute infectious disease caused by the spore-forming bacterium *Bacillus anthracis*. It most commonly occurs in mammals such as cattle, sheep, goats, camels and antelopes, but can also occur in humans when they are exposed to infected animals or tissue from infected animals. Anthrax is a **colorless, tasteless** bacterium that protects itself from sunlight, heat and disinfectant by forming a protective coat. With this coat, the bacterium is called a “spore.” The spores are so small that even an infectious dose—between 8,000 and 10,000 spores – is smaller than a speck of dust.

2. How common is anthrax and who can get it?

Anthrax is most common in agricultural regions where it occurs in animals. Humans infected with anthrax usually have been exposed to infected animals or their products through their occupations. Workers who are exposed to dead animals and animal products from other countries where anthrax is more common may become infected with *Bacillus anthracis*.

3. How is anthrax transmitted?

Anthrax infection can occur in three forms: cutaneous (skin), inhalations, and gastrointestinal. Spores can live in soil for years, and humans can become infected with anthrax by handling products from infected animals or by inhaling anthrax spores from contaminated animal products. Eating undercooked meat from infected animals also can spread the disease. It is rare to find infected animals in the United States.

4. What are the symptoms of anthrax?

They vary depending on how the disease was contracted, but symptoms usually occur within seven days.

- **Cutaneous:** About 95 percent of anthrax infections occur when the bacterium enters a cut or abrasion on the skin, such as when handling contaminated wool, hides, leather or hair products of infected animals. It begins as a raised itchy bump that resembles an insect bite, but soon turns into a painless ulcer, usually one to three centimeters in diameter, usually with a black center in the middle. Lymph glands in the adjacent area may swell. About 20 percent of untreated cases results in death. The employee at NBC who contracted anthrax has cutaneous anthrax.
- **Inhalation:** Initial symptoms may resemble a common cold, but lead to severe breathing problems and shock after several days. Inhalation anthrax is usually fatal. An employee of a Florida tabloid publishing company contracted inhalation anthrax and died.
- **Intestinal:** This form of anthrax may follow the consumption of contaminated meat and is characterized by an acute inflammation of the intestinal tract. Initial signs include

nausea, loss of appetite, vomiting and fever, followed by abdominal pain, vomiting blood and severe diarrhea. Between 25 percent and 60 percent of cases are fatal.

5. Where is anthrax usually found?

Anthrax is global. It is more common in developing countries or countries without veterinary public health programs. Certain regions of the world (South and Central America, Southern and Eastern Europe, Asia, Africa, the Caribbean, and the Middle East) report more anthrax in animals than elsewhere.

6. Can anthrax be spread from person to person?

Direct, person-to-person spread of anthrax is extremely unlikely. It is not contagious.

7. Is there a treatment for anthrax?

Doctors can prescribe effective antibiotics. To be effective, treatment should be initiated early. If left untreated, the disease can be fatal.

8. Is there a way to prevent infection?

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

9. What is the anthrax vaccine?

It is manufactured and distributed by BioPort Corp. of Lansing, Michigan. It is a cell-free filtrate vaccine, which means it contains no dead or live bacteria in the preparation. Anthrax vaccines intended for animals should not be used in humans.

10. Who should get vaccinated against anthrax?

The Center of Disease Control and Prevention's advisory committee on immunization practices recommends vaccination for the following:

- People who work directly with the organism in the laboratory
- People who work with imported animal hides or furs in areas where standards are insufficient to prevent exposure to anthrax spores.
- People who handle potentially infected animal products in high-incidence areas. (incidence is low in the United States, but veterinarians who travel to work in other countries where incidence is higher should consider getting vaccinated.)
- Military personnel deployed to areas with high risk for exposure to the organism (as when it is used as a biological warfare weapon).
- Pregnant women should be vaccinated only if absolutely necessary.

Re: CNN.com