

ADDITIONAL INFORMATION ON ANTHRAX

What is anthrax?

Anthrax is an acute disease caused by a spore-forming bacterium (*Bacillus anthracis*). Anthrax most commonly occurs in hoofed mammals (cattle and sheep) in agricultural regions but can also infect humans. It is important to note however, that anthrax is **not** spread from person to person.

How common is anthrax and who can get it?

Anthrax is most common in undeveloped agricultural regions outside of the United States including South and Central America, Southern and Eastern Europe, Asia, Africa, the Caribbean, and the Middle East where it occurs in animals. When anthrax affects humans, it is usually due to an occupational exposure to infected animals or their products. Anthrax infection can occur in three ways:

- (1) through breaks/cuts in the skin (cutaneous),
- (2) inhalation of spores (pulmonary), and
- (3) ingestion (intestinal).

What are the symptoms of anthrax?

Symptoms of disease vary depending on how the disease was contracted, but symptoms usually occur within 7 days.

Cutaneous: Most (about 95%) 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 (especially goat hair) of infected animals. Skin infection begins as a raised itchy bump that resembles an insect bite but within 1-2 days develops into a vesicle and then a painless ulcer, usually ½ to 1 ½ inches in diameter, with a characteristic black area in the center. If left untreated, other symptoms such as swollen glands, fever and malaise often develop after several days. About 20% of untreated cases of cutaneous anthrax will result in death, but deaths are rare with appropriate antibiotics.

Inhalation: Initial symptoms may resemble a common cold and include a cough, chills and aches. After several days however, the symptoms may progress to severe breathing problems and shock. Left untreated, inhalation anthrax is usually fatal.

Intestinal: The intestinal disease form of anthrax may follow the consumption of undercooked, contaminated meat, and is characterized by an acute inflammation of the intestinal tract. Initial signs of nausea, loss of appetite, vomiting, and fever are followed by abdominal pain, vomiting of blood, and severe diarrhea. Intestinal anthrax can result in death in 25% to 60% of cases.

Can anthrax be spread from person-to-person?

Infection with anthrax requires direct contact with the bacterial spores. Person-to-person spread of anthrax has not been known to occur and is extremely unlikely. Communicability is not a concern in managing or visiting with patients with pulmonary (inhaled) anthrax.

How is anthrax diagnosed?

Anthrax is diagnosed by isolating *B. anthracis* from the blood, skin lesions, or respiratory secretions or by measuring specific antibodies in the blood of persons with suspected cases.

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.

Is there a way to prevent infection?

Avoiding contact of contaminated animals or other items containing the bacterial spores can prevent infection. Avoid eating meat that has not been properly slaughtered and cooked. If a **documented exposure** to anthrax has occurred, early treatment with antibiotics can prevent the development of symptoms and the disease.

What about the anthrax vaccine?

An anthrax vaccine has been licensed for use in humans. However it is currently only available to persons who work directly with the organism in the laboratory and military personnel deployed to areas with high risk for exposure to the organism.