

Anthrax

FACTS ON BIOLOGICAL AGENTS

The intentional release of biological agents — viruses, bacteria or their toxins (poisons) — in order to terrorize a population or manipulate a government is referred to as bioterrorism. While the risk of being a target of bioterrorism is low for the average person, you should become aware of some basic information about the four most serious biological agents. Should you have concerns of a possible illness, as always, discuss this with your physician or local health department immediately.

This acute infectious disease is caused by the spore-forming bacterium *Bacillus anthracis*. It is not spread from person to person and antibiotics can prevent disease or treat the infections once established. There is no need to immunize or treat persons who have come into contact with an anthrax patient, unless they were also exposed to the same source of infection. Being exposed doesn't mean a person will develop the disease. Disease occurs in three common forms: skin (cutaneous anthrax), gastrointestinal (intestinal anthrax), and respiratory (inhalational anthrax).

Cutaneous anthrax: Occurs when the bacteria enters the body through open cuts or scrapes.

Symptoms: Usually occur within 12 days of exposure. Initially, the sore may resemble an insect bite, but eventually it forms an ulcer with a black center. May be accompanied by fever, headache and general tiredness. A patient with cutaneous anthrax clearly feels very sick.

Treatment: Responds well to commonly used antibiotics. Less than 1% of persons with cutaneous anthrax who receive proper antibiotic treatment die.

Intestinal anthrax: May follow the consumption of contaminated food.

Symptoms: 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. Treatment: Responds well to commonly used antibiotics. If the disease is not treated with antibiotics, the fatality rate is estimated at 25% to 60%.

Inhalation anthrax: Spores, a resting form of the bacterium, are inhaled deep into the lungs, where, once embedded, they change into the active form of the bacterium and release harmful poisons.

Symptoms: Usually occur within 6 days of exposure, but can occur as late as 60 days after exposure, depending on the amount of exposure. Initial symptoms of infection are fever, muscle aches, and feeling bad. All patients have had fever, chills, and/or sweats and some have had nausea and vomiting. After several days, the symptoms progress to severe breathing problems and shock.

Treatment: Without treatment almost all patients die. If proper antibiotics are given in the early stages of disease and proper supportive medical care is available, the majority of patients will probably survive.