

ANTHRAX (*Bacillus anthracis*) FACT SHEET

1. **WHAT IS ANTHRAX?** Anthrax is an acute, infectious disease caused by the bacterium *Bacillus anthracis*. In the past, humans would become infected through skin contact, ingestion or inhalation of the organism from infected animals (most frequently sheep, goats and cattle) or animal products (as in "wool sorter's disease" from exposure to goat hair). Person-to-person transmission of inhalational disease DOES NOT occur. Direct exposure to fluids from skin lesions may result in a secondary cutaneous (skin) infection. In a bioterrorism situation, the organism would most likely be aerosolized to deliver the organism through the inhalation route.
2. **WHAT ARE THE SYMPTOMS OF ANTHRAX?** There are three forms of Anthrax: pulmonary, cutaneous (skin), or gastrointestinal, depending on the route of exposure. The symptoms of each are:
 - a. **Pulmonary-**
 - 2-60 day incubation period
 - Non-specific flu-like symptoms with brief interim improvement
 - 2-4 days after initial symptoms, abrupt onset of respiratory failure and circulatory collapse
 - Treatable in early stage. Mortality high if treatment initiated after onset of respiratory collapse.
 - b. **Cutaneous (skin)-**
 - 1-7 day incubation period
 - Local skin involvement after direct contact with organism.
 - Commonly seen on head, forearm or hands
 - Localized itching, followed by papular lesion that turn vesicular and within 2-6 days develop into a depressed black eschar
 - Usually non-fatal if treated with antibiotics
 - c. **Gastrointestinal-**
 - 1-7 day incubation period
 - Abdominal pain, nausea, vomiting and fever following ingestion of contaminated food, usually meat.
 - Bloody diarrhea, vomiting blood
 - Usually fatal after progression to toxemia and sepsis
3. **HOW IS ANTHRAX DIAGNOSED?** Physical findings are typically non-specific. A widened mediastinum may be seen on CXR in later stages of illness. Pneumonia generally does not occur. *Bacillus anthracis* is detectable by Gram stain of blood and blood culture late in the course of illness. Hemorrhagic meningitis may occur in up to 50% of cases, and the organism may also be found in CSF.
4. **CAN ANTHRAX BE SPREAD FROM PERSON TO PERSON?** Transmission of Anthrax from person to person is unlikely. Airborne transmission does NOT occur, but direct contact with skin lesions may result in a cutaneous infection. Special precautions should be taken to avoid aerosolization of spores during laboratory procedures and autopsy. Needlestick injuries from a bacteremic person would require treatment.
5. **WHAT MEDICAL TREATMENT WOULD BE GIVEN TO A PATIENT WITH ANTHRAX?** Antibiotics (Ciprofloxacin, Doxycycline) would be given for 4-8 weeks along with the Anthrax vaccine, if available, at 0, 2 and 4 weeks after exposure.
6. **DO YOU NEED TO ISOLATE A PATIENT WITH ANTHRAX?** No, a patient with Anthrax will be treated with Standard Precautions. Standard Precautions include wearing gloves for contact with nonintact skin, including rashes and skin lesions.
7. **IF A PATIENT IS DISCHARGED WITH A DIAGNOSIS OF ANTHRAX, ARE SPECIAL PRECAUTIONS NEEDED TO KEEP OTHER FAMILY MEMBERS SAFE?** If the patient was involved in a gross exposure to the bacterium, cleansing of the skin and potentially contaminated objects (clothes, environmental surfaces) should be undertaken. Decontamination would include:
 - Remove contaminated clothing and store in labeled, plastic bag. Handle clothes minimally to avoid agitation.
 - Shower thoroughly with soap and water.
 - Wear gloves and appropriate barriers (e.g., gowns, masks) when handling contaminated clothing or environmental objects.
 - Decontaminate environmental surfaces using an EPA registered sporicidal/germicidal agent or 10% hypochlorite solution (one part household bleach to 9 parts water). Do not use bleach on skin or hair.
8. **WHAT OTHER INSTRUCTIONS DO I NEED TO KNOW ABOUT AN ANTHRAX EXPOSURE?**
 - Make sure you understand the dosage and side effects of any medications that are prescribed for you or your family members.
 - People recently exposed to Anthrax are not contagious to others.