

# *Bacillus anthracis*

Anthrax is a serious infectious disease caused by gram-positive, rod-shaped bacteria known as *Bacillus anthracis*. Contact with anthrax can cause severe illness in humans. Anthrax is not contagious. The bacteria produce toxins that cause severe illness.

**Risk Assessment:** Anthrax can be contracted through aerosol particles, ingestion, skin contact or injection. *Bacillus anthracis* usually enters the body in endospore form.

- **Cutaneous anthrax** symptoms can include: A group of small blisters or bumps that may itch, a painless skin sore (ulcer) with a black center (eschar) that appears after the small blisters or bumps. Most often the sore will be on the face, neck, arms or hands. Swelling can occur around the sore.
- **Inhalation anthrax** symptoms can include: Fever and chills, chest discomfort, shortness of breath, confusion or dizziness, cough, nausea, vomiting, stomach pains, headache, sweats (often drenching), extreme tiredness, body aches.
- **Gastrointestinal anthrax** symptoms can include: Fever and chills; swelling of neck or neck glands; sore throat; painful swallowing; hoarseness; nausea and vomiting, especially bloody vomiting; diarrhea or bloody diarrhea; headache; flushing (red face) and red eyes; stomach pain; fainting; swelling of abdomen (stomach).
- **Parenteral (Injection) anthrax** symptoms can include: Fever and chills; a group of small blisters or bumps that may itch, appearing where the drug was injected; a painless skin sore with a black center that appears after the blisters or bumps; swelling around the sore; abscesses deep under the skin or in the muscle where the drug was injected. Symptoms are similar to those of cutaneous anthrax, but injection anthrax can spread throughout the body more quickly and be harder to recognize and treat than cutaneous anthrax.

**Laboratory employees may be exposed to aerosols and infectious droplets if using automated biochemical systems, manual multi-test kits, or single biochemical tests for identifications outside of a bio-safety cabinet.**

**If an employee may have been exposed, seek immediate medical attention.**

**Treatment:** <http://www.cdc.gov/anthrax/medicalcare/index.html>

**References:** <http://www.cdc.gov/anthrax/basics/> <http://www.cdc.gov/anthrax/basics/symptoms.html>

**Referred cultures that are confirmed by the Illinois Department of Public Health (IDPH) laboratories must be reported to the U.S. Centers for Disease Control and Prevention (CDC) by IDPH and by the submitting laboratory.**

- Each facility will complete APHIS/CDC Form 4, which is to be sent to CDC within seven calendar days of the identification of the select agent.
- If an exposure has occurred, the facility must complete APHIS/CDC Form 3. Form 3 must be sent to CDC within seven calendar days of the identification of the select agent.
- Forms and instructions are available at [www.selectagents.gov](http://www.selectagents.gov).

For questions concerning testing or reporting, contact the Illinois Department of Public Health Division of Laboratories.

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IDPH Chicago Laboratory, Clinical Microbiology, 312-793-4760  
IDPH Carbondale Laboratory, Clinical Microbiology, 618-457-5131