

Anthrax

Anthrax is a disease caused by the bacteria *Bacillus anthracis* that can infect all warm-blooded animals, including humans. Anthrax can be found naturally in soil and affects domestic and wild animals around the world. Anthrax is rare in the United States, but sporadic outbreaks do occur in wild and domestic grazing animals such as cattle or deer. Anthrax disease in people primarily affects those who work certain jobs, such as those exposed to dead animals and animal products such as wool, hides, and hair.

Transmission

Anthrax bacteria can live in the soil for many years in the form of a spore. A spore is a bacterium that is dormant because its environment is not good for growth and/or reproduction. People may become infected with anthrax by:

- **Environment to person** by inhaling anthrax spores.
- **Animal to person** by handling hair, hides, or wool from diseased animals or eating undercooked meat from diseased animals.

Anthrax is not contagious, which means you can't catch it from another person like the cold or flu. It is unknown if anthrax infection provides immunity; however, reinfections of this disease are rare.

Symptoms

The symptoms will vary depending on how a person was exposed to the bacteria.

- **Respiratory exposure** may include fever, chills, cough, shortness of breath, nausea, vomiting, headache, sweats, confusion, dizziness, extreme tiredness, or body aches. Illness may progress to severe breathing problems and even death.
- **Gastrointestinal exposure** may include abdominal cramps, nausea, vomiting, sore throat, painful swallowing, headache, swelling of neck or neck glands, hoarseness, fever, diarrhea, stomach pain, and can progress to sepsis, or death.
- **Skin exposure (cutaneous)** may include a boil-like sore may appear that eventually forms a black center. Swelling of the lymph glands under the arm and fever also may occur.

Diagnosis

Diagnosis will depend on the type of anthrax infection a person has. Laboratory tests can be done on blood, spinal fluid, skin biopsies, etc., and are available to help aid a healthcare professional with the diagnosis.

Treatment

Anthrax can be treated with antibiotics. Make sure to follow all directions when taking antibiotics to reduce the chance of relapse and developing antibiotic-resistant strains. Antitoxin may also be used for treating severe anthrax illness. For more information about the treatment of anthrax, contact your healthcare provider or visit www.cdc.gov/anthrax/treatment/index.html.

Prevention

The best way to reduce their risk of getting anthrax is to

- **Handle dead animals suspected of having anthrax carefully.**
- **Always work in an area that has good ventilation**, when processing or working with animal hides and other animal products,
- **Vaccinating livestock will further reduce the risk of exposure** to infected animals and animal products; check with a licensed veterinarian regarding animal vaccinations.

The anthrax vaccine is not available to the public. However, it is available to those in high-risk occupations, such as **people who work directly with, handle, or are:**

- **anthrax bacteria** in the laboratory.
- **imported animal hides or furs** in areas where work standards are insufficient to prevent exposure to anthrax spores.
- **potentially infected animal products** in high-incidence areas; while incidence is low in the United States, veterinarians who travel to work in other countries where incidence is higher should consider being vaccinated.
- **Military personnel deployed to high-risk** areas for exposure to anthrax bacteria.

Exclusion Guidance

People should not be excluded from child care, school, work, or other activities unless the [general exclusions apply](#).

For additional information about anthrax or anthrax exposures, contact the North Dakota Department of Health and Human Services, Public Health Division, at 800.427.2180.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health and Human Services.

Resources:

1. Kimberlin, D. W., Barnett, E. D., Lynfield, R., Sawyer, M. H. (2021) Red Book: 2021-2024 Report of the Committee on Infectious Diseases. 32nd ed. American Academy of Pediatrics. [Management and Prevention of Infectious Diseases] [pages 196-202].
2. Centers for Disease Control and Prevention. (2020, November 20). *CDC - anthrax*. Centers for Disease Control and Prevention. Retrieved May 09, 2023, from <https://www.cdc.gov/anthrax/index.html>



Report Immediately: 800.472.2180 or 701.328.2378



Possible Bioterrorism Agents (CDC classified A, B or C Agent)

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Public Health Division

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