

# FACTS

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## Anthrax

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### What is it?

Anthrax is an acute infectious disease caused by the spore-forming bacterium *Bacillus anthracis*. Anthrax most commonly occurs in wild and domestic animals, such as cattle, sheep, goats, antelopes, bison, and swine. Anthrax is found globally, most often in agricultural regions where it occurs in animals. Disease outbreaks in Canada have occurred in specific wildlife groups, such as bison, in Wood Buffalo National Park. Anthrax bacteria grow in conditions without oxygen and have the ability to form spores when exposed to air and warm temperatures. These spores are resistant to destruction and may survive in the environment for many years.

Anthrax is a rare disease in humans. The last diagnosed case in Ontario was in 1961. Humans can become infected with anthrax by handling products (wool or hides) from infected animals and by inhaling anthrax spores from contaminated animal products. Eating undercooked meat from infected animals can also spread anthrax.

Anthrax infection can occur in three forms: cutaneous (skin), which is the most common form, inhalation, and gastrointestinal. Anthrax is not spread from person to person.

Anthrax spores are also a potential agent of bioterrorism.

### What are the symptoms?

Symptoms usually occur within 7 days but can vary from 1-60 days depending on how the disease was contracted.

- **Cutaneous** anthrax infection is acquired when the spores enter the body through an open wound on the skin, such as a cut or abrasion, after handling contaminated tissues of infected animals, especially the wool, hides or other products. Skin infection begins as a raised itchy bump resembling an insect bite that develops into a blister within 1-2 days and then a painless sore that is usually 1-3 cm in diameter with a characteristic black coloured centre. Lymph glands in the adjacent area may swell. Death is rare with appropriate treatment.
- **Inhalation** anthrax occurs when the spores are inhaled through the nose or mouth. Initial symptoms may resemble a common cold and after several days the symptoms may progress to severe breathing problems and shock. Inhalation anthrax kills more than 90% of cases unless they are promptly treated with antibiotics.

# — *Health & Environment Facts* —

- **Intestinal** anthrax may occur after eating undercooked meat from infected animals. Initial symptoms, such as nausea, loss of appetite, vomiting, and fever, are followed by abdominal pain, vomiting of blood and severe diarrhea. This form of anthrax can also lead to death in a number of cases.

## **How is it diagnosed and treated?**

Anthrax is diagnosed by isolating the bacteria from the blood, skin lesions or respiratory secretions or by measuring specific antibodies in the blood of a person suspected with the disease. Anthrax can be successfully treated with antibiotics; however, indiscriminate use of antibiotics can lead to serious side effects and resistance. Health Canada, in partnership with provincial and territorial governments, has been stock piling a significant amount of antibiotics in the event of an anthrax outbreak. A vaccine against anthrax is available for people with a high likelihood of occupational exposure, such as veterinarians. The vaccine is not available to the public. The likelihood of being exposed to anthrax in Grey Bruce remains low.

If you have any questions, contact Public Health or your doctor.

*Ontario Ministry of Health and Long-Term Care  
Health Canada  
Canadian Food Inspection Agency  
CDC*