

Anthrax

What is anthrax?

Anthrax is a disease of animals most commonly affecting cattle, sheep, goats and some wild animals such as bison and antelope. It's caused by spore-forming bacteria. Anthrax is a zoonotic disease, meaning it may spread from animals to humans, but it is unusual for that to happen in North America. It cannot be transmitted from person to person.

Is there a human health risk?

The major sources of human anthrax infections are direct or indirect contact with infected animals or occupational exposure to contaminated animal fleece, hides and skins. Infection in humans can occur when the anthrax bacteria enters the skin through existing cuts and abrasions, by ingestion of the bacteria, or by inhaling the spores. Most anthrax infections (95 per cent) occur when the bacterium enters a cut or abrasion on the skin (known as cutaneous anthrax). Human anthrax is uncommon in North America.

How common is anthrax in livestock in Canada?

Anthrax occurs worldwide but is most common in temperate regions, like Africa and southern India. Anthrax is present in Canada. According to the Canadian Food Inspection Agency (CFIA), cases have occurred from Alberta through to western Ontario, with repeated outbreaks in the Mackenzie Bison Range in the Northwest Territories and in Wood Buffalo National Park in northern Alberta. In the summer of 2006 Manitoba and Saskatchewan experienced a major Anthrax outbreak. Anthrax is a reportable disease, which means that it must be reported, by law, to the Federal Government through the CFIA, or to a local veterinarian.

What causes an outbreak in livestock?

Anthrax bacteria form spores under dry conditions. These spores can survive in the soil for decades until they're exposed to moist conditions, such as when they're ingested by an animal. The spores then revert to active, infective bacteria.

Weather conditions can lead to an outbreak of anthrax, for example when drought causes animals to graze close to the ground and they ingest soil while grazing. Evaporating floodwaters can also leave spores behind, which may later be ingested by grazing animals.

Is anthrax treatable?

Anthrax is treatable with antibiotics in both humans and animals. A vaccine to prevent anthrax infections is also available. In livestock the vaccine is only given in areas where anthrax is known to have recently occurred. Anthrax vaccine for humans is generally given only to those who work with infected animals or with the bacteria in a laboratory setting.

If I hear that anthrax has been found in my province, is my beef safe to eat?

Canadian beef is safe to eat. Canada's food safety system protects the safety of Canadian beef, through our meat inspection system in which all animals are examined by trained meat inspectors for any sign of disease. In most of cases of livestock anthrax the animal dies a sudden death and there is no possibility that it would be processed into beef.

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Once anthrax is found in cattle, what is done to stop the spread of the disease?

The CFIA takes strong measures when a case of anthrax is found:

- The carcass is properly destroyed by incineration or deep burial.
- All contaminated materials are disinfected, decontaminated and disposed of properly.
- All animals that are susceptible to the disease are vaccinated.
- The remaining animals from the herd where the original animal died are checked at least three times a day for two weeks for signs of illness.
- Any animal showing clinical symptoms of anthrax is separated from the herd and treated with antibiotics.
- Affected herds are placed under quarantine until either 21 days have elapsed since the last case of anthrax, or 21 days have elapsed since an initial anthrax vaccination, whichever comes later.

Why is anthrax connected to terrorism?

In the United States during the fall of 2001, an unidentified person or persons circulated laboratory-grade anthrax spores through the mail. These anthrax spores were highly refined and much more potent than those that affect livestock in the wild. Ultimately 22 persons in the United States were infected by anthrax through the mail and five died of the disease.