



# Anthrax in Animals - Human Precautions

## What You Need To Know

(To be used in conjunction with the information from Canadian Food Inspection Agency (CFIA) – “Information for Producers” available at:

<http://www.inspection.gc.ca/english/anima/disemala/anthchar/farenge.shtml>

- Anthrax is caused by the bacteria *Bacillus anthracis*, which is found naturally in the soil.
- In animals, the most common means of infection is ingestion of spores from contaminated soil.
- The first sign of an outbreak is often one or more sudden deaths in affected livestock.
- Most animals infected with Anthrax will die suddenly. Symptoms, when seen in animals may include:
  - appearing distressed;
  - difficulty breathing;
  - not eating and drinking;
  - swelling (i.e. under the jaw and lower abdominal areas);
  - after death, the animal carcass may leak bloody fluids from body openings (rectum, nostrils, mouth, etc.) and bloat rapidly.
- Risk of human infection is very low provided appropriate precautions are taken during handling/disposal of affected animals/carcasses.
- There are three kinds of Anthrax infection in humans, all of which are treatable with antibiotics:
  - 1) Skin (cutaneous) Anthrax
  - 2) Inhalation (pulmonary) Anthrax
  - 3) Stomach (gastrointestinal) Anthrax
- Skin Anthrax in farm settings is likely acquired from direct skin contact with infected animals.
- Anthrax is not transmitted person-to-person.
- People who have handled animals with Anthrax must seek medical attention immediately if they develop signs and symptoms.

## Signs & Symptoms of Anthrax in Humans

### Skin (cutaneous) Anthrax:

- Most common type of human Anthrax infection, it accounts for more than 95% of human cases worldwide;
- Anthrax bacteria enters cut or other abrasion in skin;
- Incubation period of 1 to 12 days, commonly 7 days;
- Development of a small, painless sore that becomes a blister;
- 1 to 2 days later a black scab will develop in the center of the blister;
- Other symptoms may include fever, headache and feeling unwell.

### Inhalation (pulmonary) Anthrax:

- Most serious form of Anthrax infection;
- There are usually two stages of inhalation anthrax:
  - Stage one can last from hours to a few days. Symptoms may resemble a cold or the flu;
  - Stage two often develops suddenly. Symptoms include fever, severe shortness of breath, and shock.

### Stomach (gastrointestinal) Anthrax:

- Least common type of Anthrax infection;
- Usually the result of eating meat contaminated with Anthrax spores;
- Symptoms include nausea, vomiting, diarrhea, weakness, loss of appetite, fever, and severe abdominal pain.

## Treatment

- All forms of Anthrax infection can be treated effectively with antibiotics (i.e. penicillin). Treatment should be prompt, as all forms of Anthrax infection can be fatal if left untreated.
- Vaccine is not available for routine use in humans. The CFIA makes recommendations for vaccinating animals.

## How to Protect Yourself when Handling, Disposing & Cleaning:

Disposal and decontamination is done under the direction and supervision of a CFIA inspector.

- Extreme caution is required to avoid contact with or spread of infected materials when handling carcasses or cleaning contaminated sites. The riskiest materials are the blood and body fluids.
  - Precautions are needed when spraying disinfectants such as formaldehyde and bleach. Check labels and material data sheets for information on the ingredients, hazards and safe work practices.
  - Employees handling or disposing of infected carcasses must be made aware of the hazards and safe work practices, including the use of Personal Protective Equipment (PPE).
  - The PPE listed below will prevent exposure to Anthrax and to the chemicals in the decontaminating/cleaning solutions. This includes:
    - Nitrile gloves;
    - disposable Tyvek coveralls;
    - Boot covers or Rubber boots (Do not wear leather footwear as it can not be cleaned easily);
    - Full-face reusable masks with a combination or separate cartridges that will remove particulates (N95 or better) and formaldehyde or chlorine (depending on which ingredient is present in the cleaning solution). Alternatively a half face mask respirator with the above cartridge(s) can be used in conjunction with goggles with closed side shields.
- This equipment can be purchased at local safety supply stores.
- Bloody fluids are often found near the animal's mouth, nostrils, and anus. Wear PPE to avoid getting any fluids on skin when handling carcasses. Avoid touching your eyes, mouth, nose and other areas where transfer of infection can occur. If skin contact occurs wash with soap and water as soon as possible.

- Always spray disinfectants such as Formalin or bleach downwind to prevent inhalation/contact with chemicals or dusts.
- Disposable materials (i.e. boot covers, and gloves) can be left on site and burned or buried with the carcass; otherwise, materials can be disposed of via bio-hazardous waste disposal sites.
- When Anthrax in an animal is suspected, contaminated clothing and items should be minimally handled (to avoid agitation) and stored in labelled double plastic bags until exposure to anthrax has been confirmed.
- Washable clothing that is contaminated with blood or body fluids of the animal must be burned or disposed of via a biohazardous waste disposal site. Other clothing should be washed separately from other household laundry.
- Avoid any contact with other persons (family included) without first changing clothing, washing hands, and taking appropriate disinfection measures.
- Reusable materials (tools/equipment) should be disinfected after use to prevent re-exposure to Anthrax spores later.

## Important Contact Information

### For information on anthrax contact:

Canadian Food Inspection Agency

### For information on human health issues contact:

Your local Public Health Office

### For Information on Disinfectants and Safe Work Practices:

Health Services, Occupational Health and Safety Division  
Ministry of Labour Relations and Workplace Safety  
1-800-567-7233



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