

What is Anthrax?

Anthrax is an infection caused by the bacterium *Bacillus anthracis*. It is a disease normally associated with grazing animals (sheep, goats, cattle and, to a lesser extent, swine).

International events over recent years have generated public concern regarding the potential for biological terrorist attacks involving anthrax or other potential biological and chemical hazards.

There are three types of anthrax infection:

- Cutaneous (skin)
- Inhalation (lungs)
- Gastrointestinal (digestive)

How is anthrax spread?

Humans can become infected with anthrax through cuts and abrasions when in contact with contaminated soil; by inhaling anthrax spores (especially from contaminated animal products such as hides); or by handling products from infected animals. Eating undercooked meat from infected animals can also transmit anthrax. Anthrax is not known to spread from one person to another. Anthrax spores can survive for long periods of time in certain soils, in animal products (such as hair, wool and hides) and in feeds and fertilisers prepared from animals infected with anthrax.

Who is at risk?

Anthrax is primarily an occupational hazard for handlers of processed hides, goat hair, bone products, wool and infected wildlife. It can also be contracted by contact with infected meat, for example in abattoir workers.

What are the symptoms of anthrax?

Cutaneous anthrax

Infection is believed to occur by penetration of spores through a skin lesion, although in some cases the patient will not be aware of the lesion. Sores (papules) develop within one to three days. These begin as small red swellings, which later develop into black depressions. After two to three days, the pimple ulcerates and forms a dry black scab.

Inhalation anthrax

Occurs when a person breathes in anthrax spores. Symptoms include fever, chills, sweating, chest discomfort and difficulty breathing. Inhalation anthrax is the form of the disease that is linked with deliberate release of anthrax to intentionally cause harm and is more lethal.

Gastrointestinal anthrax

Occurs following the ingestion of anthrax spores and is characterised by nausea, loss of appetite, vomiting, fever, abdominal pain, vomiting of blood and severe diarrhoea.

How is anthrax diagnosed?

Blood tests or swabs may be used to confirm the infection in people who have symptoms.

Antibiotic treatment

Suspected human cases of anthrax are treated immediately with appropriate antibiotics. Likewise, people who have had significant exposure to anthrax may be treated with antibiotics to prevent the disease.

Anthrax vaccine

There is no human anthrax vaccine registered for civilian use in Australia.

How is it controlled?

Public Health Officers will investigate confirmed and suspected anthrax cases and give advice or further management.

There are emergency response plans to protect the public in case there is a deliberate release of anthrax.

Need more information?

For more information about anthrax infection, contact your doctor or call the Health Protection Service, Communicable Disease Control Information Line during business hours on **(02) 6205 2155**.

Communicable Disease Control Section at Health Protection Service is responsible for the investigation and surveillance of notifiable or infectious conditions in the ACT in order to control or prevent their spread in the community. This includes the promotion of immunisation, education and other strategies that help to limit the spread of diseases.

Anthrax is a notifiable disease. Cases notified to the Health Directorate, ACT Government are investigated by Public Health Officers.

Acknowledgements

1. Heymann, D L, 2008, *Control of Communicable Diseases Manual*, 19th edition.
2. NSW Health Infectious Diseases Fact Sheet, *Anthrax*, 2007.
3. Department of Human Services, Victoria, 2005, *The Blue Book - Guidelines for the Control of Infectious Diseases*.

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