Anthrax

What is anthrax?

Anthrax is a serious disease caused by *Bacillus anthracis*, a bacterium that forms spores. A bacterium is a very small organism made up of one cell. Many bacteria can cause disease. A spore is a cell that is dormant (asleep) but may come to life with the right conditions.

There are three types of anthrax:
- skin (cutaneous)
- lungs (inhalation)
- digestive (gastrointestinal)

How do you get it?

Anthrax is not known to spread from one person to another.

Anthrax from animals. Humans can become infected with anthrax by handling products from infected animals or by breathing in anthrax spores from infected animal products. People also can become infected with gastrointestinal anthrax by eating undercooked meat from infected animals.

Anthrax as a weapon. Anthrax also can be used as a weapon. This happened in the United States in 2001. Anthrax was deliberately spread through the postal system by sending letters with powder containing anthrax. This caused 22 cases of anthrax infection.

What are the symptoms?

The symptoms (warning signs) of anthrax are different depending on the type of the disease:

- **Cutaneous:** The first symptom is a small sore that develops into a blister. The blister then develops into a skin ulcer with a black area in the center. The sore, blister and ulcer do not hurt.
- **Gastrointestinal:** The first symptoms are nausea, loss of appetite, bloody diarrhea, and fever, followed by bad stomach pain.
- **Inhalation:** The first symptoms of inhalation anthrax are like cold or flu symptoms and can include a sore throat, mild fever and muscle aches. Later symptoms include cough, chest discomfort, shortness of breath, tiredness and muscle aches. (Caution: Do not assume that just because a person has cold or flu symptoms that they have inhalation anthrax.)

How dangerous is anthrax?

The Centers for Disease Control and Prevention (CDC) classifies agents with recognized bioterrorism potential into three priority areas (A, B and C). Anthrax is classified as a Category A agent. Category A agents are those that:
- pose the greatest possible threat for a bad effect on public health
- may spread across a large area or need public awareness
- need a great deal of planning to protect the public’s health

In most cases, early treatment with antibiotics can cure cutaneous anthrax. Even if untreated, 80 percent of people who become infected with cutaneous anthrax do not die. Gastrointestinal anthrax is more serious because between one-fourth and more than half of cases lead to death. Inhalation anthrax is much more severe. In 2001, about half of the cases of inhalation anthrax ended in death.
How soon do infected people get sick?

Symptoms can appear within 7 days of coming in contact with the bacterium for all three types of anthrax. For inhalation anthrax, symptoms can appear within a week or can take up to 42 days to appear.

How is anthrax treated?

Antibiotics are used to treat all three types of anthrax. Early identification and treatment are important.

Prevention after exposure. Treatment is different for a person who is exposed to anthrax, but is not yet sick. Health care providers will use antibiotics (such as ciprofloxacin, levofloxacin, doxycycline or penicillin) combined with the anthrax vaccine to prevent anthrax infection.

Treatment after infection. Treatment is usually a 60-day course of antibiotics. Success depends on the type of anthrax and how soon treatment begins.

Can anthrax be prevented?

There is a vaccine to prevent anthrax, but it is not yet available for the general public. Anyone who may be exposed to anthrax, including certain members of the U.S. armed forces, laboratory workers and workers who may enter or re-enter contaminated areas, may get the vaccine. Also, in the event of an attack using anthrax as a weapon, people exposed would get the vaccine.

What should I do if I think I have been exposed to anthrax?

Contact local law enforcement immediately if you think that you may have been exposed to anthrax. This includes being exposed to a suspicious package or envelope that contains powder.

If an anthrax event occurs, should people buy and store antibiotics?

There is no need to buy or store antibiotics, and indeed, it can be detrimental to both the individual and to the community. First, only people who are exposed to anthrax should take antibiotics. Second, individuals may not stockpile or store the correct antibiotics. Third, under emergency plans, the federal government can ship appropriate antibiotics from its stockpile to wherever they are needed.

Should I buy a gas mask?

Purchasing a gas mask is not currently recommended for the following reasons:

- If an attack occurs, the types of agents and concentrations are unknown and therefore it is almost impossible to accurately select a mask.
- Gas masks may reduce, but do not eliminate exposure to chemical or biological agents. They do not eliminate the risk of infection.
- There may be no obvious warning in the event of a biological or chemical attack, so you would not be able to determine when to put the mask on.
- Gas masks may help protect your lungs, however, some chemical agents may be absorbed through the skin or eyes.
- Negative pressure masks can be dangerous for children or people with respiratory problems.

How can I protect my family or myself?

Local, state and federal government agencies have been active in preparing responses to chemical, biological and nuclear threats.

In the event of a credible anthrax threat, appropriate measures will be taken to protect the health of the public. Individuals are strongly cautioned against stockpiling antibiotics or self-medicating in order to prevent anthrax.

What is the health district doing to prepare for a possible anthrax attack?

The Office of Public Health Preparedness, working closely with partner agencies, has developed the Mass Prophylaxis Plan, which identifies a process to dispense oral antibiotics to residents and visitors of Clark County within 48 hours an an anthrax attack.

The Mass Prophylaxis Plan is reviewed annually by the Nevada State Health Division and the CDC.
What is CDC doing to prepare for a possible anthrax attack?

CDC is working with state and local health authorities to prepare for an anthrax attack. Activities include:

- Developing plans and procedures to respond to an attack using anthrax.
- Training and equipping emergency response teams to help state and local governments control infection, gather samples, and perform tests. Educating health care providers, media, and the general public about what to do in the event of an attack.
- Working closely with health departments, veterinarians, and laboratories to watch for suspected cases of anthrax. Developing a national electronic database to track potential cases of anthrax.
- Ensuring that there are enough safe laboratories for quickly testing of suspected anthrax cases.
- Working with hospitals, laboratories, emergency response teams, and health care providers to make sure they have the supplies they need in case of an attack.

Where can I get more information?

Additional information about anthrax can be found on the CDC’s website at www.cdc.gov.