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What is brucellosis?

Brucellosis is a disease caused by the bacterium *Brucella* that affects many types of animals, including sheep, goats, cattle, deer, elk, pigs, and dogs. People can become infected after coming into contact with infected animals or consuming unpasteurized (raw) milk or cheese.

Who gets brucellosis?

Brucellosis is found worldwide, but is more common in certain countries in Africa, Asia and Central America. In the United States, there are 100-200 cases reported each year. Virginia reports fewer than 5 cases each year and they are usually associated with eating imported, unpasteurized dairy products (such as raw cheese). Certain groups of people are at higher risk of getting brucellosis, including people who work in slaughterhouses or the meat-packing industry, veterinarians, laboratory workers, and hunters.

How is brucellosis spread?

People can become infected after having contact with infected animals or animal products. These include:

- Eating undercooked meat and game meat such as sheep, cow, goat, bison, elk, caribou, moose, and wild hog.
- Consuming unpasteurized (raw) milk or other dairy products made from contaminated milk.
- Breathing in the bacteria that cause brucellosis.
- Getting body fluids from infected animals in the eyes, nose, or mouth.
- Preparing meat or hides after hunting.
- Getting certain animal vaccines in the eyes, nose or mouth or accidentally injecting yourself when vaccinating animals.
- Working in a lab with brucellosis samples.

It is extremely rare for brucellosis to spread between people.

What are the symptoms of brucellosis?

The first symptoms of brucellosis usually include fever, chills, headache, fatigue, loss of appetite, and pain in the muscles, joints, or back. Brucellosis can also cause long-lasting (chronic) symptoms, including recurrent fever, chronic tiredness, memory loss, and swelling in other body parts, such as the joints, testicle and scrotum area, lining of the heart, liver, spleen, brain, or spinal cord. Although rare, death can occur.

How soon after exposure do symptoms appear?

Symptoms usually develop two to four weeks after exposure, with a range of five days to six months.

How is brucellosis diagnosed?

Brucellosis is diagnosed by identifying *Brucella* organisms in blood, bone marrow, or other body fluids. Tests can also be done to check for the presence of antibodies.

Knowing about an ill person's exposure to animals or animal products can also help the healthcare provider make the diagnosis. If a culture is performed, the laboratory should be notified that brucellosis is suspected because laboratory workers need to take special precautions to protect themselves.

What is the treatment for brucellosis?

Brucellosis is treated with antibiotics for at least six to eight weeks. It is very important to take the medications as directed by the healthcare provider and finish them, even if the symptoms go away. Otherwise, patients might experience a relapse that is harder to treat. Depending on when treatment is started and severity of illness, recovery may take a few weeks to several months.

Do people who have been in contact with someone with brucellosis infection need to be tested and treated?

In certain occupational settings, contacts of individuals with brucellosis may be recommended for testing and treatment.

How can brucellosis infection be prevented?

- Make sure that all milk and milk products (e.g., butter, cream, cheese, ice cream) that you eat have been pasteurized.
- Meat should be cooked thoroughly.
- If handling sick or dead animals or animal tissues, or if assisting an animal giving birth, wear protective clothing (glove and eye protection).
- If working in a laboratory, wear protective clothing (gloves, gown, and eye protection) and take special safety precautions.
- When traveling to areas where brucellosis is common, avoid contact with livestock and consumption of unpasteurized (raw) milk or milk products.
- For accidental exposures to *Brucella*, such as those involving laboratory workers or veterinarians, antibiotics might be prescribed to prevent infection.
- There is no vaccine available for humans.

Could *Brucella* be used for bioterrorism?

Brucella is classified as a Category B bioterrorism agent by the Centers for Disease Control and Prevention (CDC). Category B agents are the second highest priority agents for bioterrorism (behind Category A agents) because they could be relatively easy to disperse and could cause many people to become seriously ill or die. If *Brucella* were used as a bioterrorism agent, it might be released in the air or through contaminated food.

How can I get more information about brucellosis?

- If you have concerns about brucellosis, contact your healthcare provider.
- Call your local health department. You can find your local health department by visiting the VDH Health Department Locator at vdh.virginia.gov/health-department-locator/.
- Visit the CDC page on brucellosis at cdc.gov/brucellosis/.
- For Healthcare Providers
 - [Brucellosis: Overview for Health Care Providers](#) A two-page quick reference guide with basic information and recommendations for treatment and postexposure prophylaxis.
 - [Brucellosis: Guidance for Health Care Providers](#) A comprehensive summary of the key medical and public health interventions to pursue after the identification of a suspected case.

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