

Brucellosis

(Also Known as: Undulant Fever)

What is Brucellosis



Brucellosis is an infectious disease caused by bacteria. People can get the disease when they are in contact with infected animals or animal products contaminated with the bacteria. Animals that are most commonly infected include sheep, cattle, goats, pigs, and dogs, among others.

Spread of Disease

Brucellosis affects many wild and domestic animals. Cattle, goats, sheep, pigs, dogs, camels, wild boar and reindeer are especially prone to the disease. A form of brucellosis also affects harbor seals, porpoises and certain whales. The bacteria may be spread from animals to people in three main ways:

- **Raw dairy products.** Brucella bacteria in the milk of infected animals can spread to humans in unpasteurized milk, ice cream, butter and cheeses. The bacteria can also be transmitted in raw or undercooked meat from infected animals.
- **Inhalation.** Brucella bacteria spread easily in the air. Farmers, laboratory technicians and slaughterhouse workers can inhale the bacteria.
- **Direct contact.** Bacteria in the blood, semen or placenta of an infected animal can enter your bloodstream through a cut or other wound. Because normal contact with animals such as touching, brushing or playing doesn't cause infection, people rarely get brucellosis from their pets. Even so, people with weakened immune systems should avoid handling dogs known to have the disease.

Brucellosis normally doesn't spread from person-to-person, but in a few cases, women have passed the disease to their infants during birth or through their breast milk. Rarely, brucellosis may spread through sexual activity or through contaminated blood or bone marrow transfusions.

Signs and Symptoms

Symptoms of brucellosis may show up anytime from a few days to a few months after infection. Signs and symptoms are similar to those of the flu and include:

- Fever
- Chills
- Sweats
- Weakness
- Fatigue
- Joint, muscle and back pain
- Headache

Brucellosis symptoms may disappear for weeks or months and then return. In some people, brucellosis becomes chronic, with symptoms persisting for years, even after treatment. Long-term signs and symptoms include fatigue, fevers, arthritis and spondylitis; an inflammatory arthritis that affects the spine and adjacent joints.

Diagnosis

Doctors usually confirm a diagnosis of brucellosis by testing a sample of blood or bone marrow for the brucella bacteria or by testing blood for antibodies to the bacteria.

Treatment

Treatment for brucellosis aims to relieve symptoms, prevent a relapse of the disease and avoid complications. Patients need to take antibiotics for at least six weeks, and symptoms may not go away completely for several months. The disease can also return and may become chronic.

Prevention

To reduce the risk of getting brucellosis, take these precautions:

- **Avoid unpasteurized dairy foods.** In recent years in the United States, few cases of brucellosis have been linked to raw dairy products from domestic herds. Still, it's probably best to avoid unpasteurized milk, cheese and ice cream, no matter what their origin. If traveling to other countries, avoid all raw dairy foods.
- **Cook meat thoroughly.** Cook all meat until it reaches an internal temperature of 145 to 165 F (63 to 74 C). When eating out, order beef and pork at least medium-well. It's unlikely that domestic meat in the United States contains brucella bacteria, but proper cooking destroys other harmful bacteria such as salmonella and Escherichia coli. When traveling abroad, avoid buying meat from street vendors, and order all meat cooked "well-done".
- **Wear gloves.** Veterinarians, farmers, hunters or slaughterhouse workers should wear rubber gloves when handling sick or dead animals or animal tissue or when assisting an animal giving birth.
- **Take safety precautions in high-risk workplaces.** Laboratory workers must handle all specimens under appropriate biosafety conditions. Treat all workers who have been exposed promptly. Slaughterhouses should also follow protective measures, such as separation of the killing floor from other processing areas and use of protective clothing.
- **Vaccinate domestic animals.** In the United States, an aggressive vaccination program has nearly eliminated brucellosis in livestock herds. Because the brucellosis vaccine is live, it can cause disease in people. Anyone who has an accidental needle stick while vaccinating an animal should seek medical treatment.



For more sources of information on this topic visit:

ST. CLAIR COUNTY HEALTH DEPARTMENT www.scchealth.co

MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES www.michigan.gov/mdhhs

CENTERS FOR DISEASE CONTROL AND PREVENTION www.cdc.gov

THE MAYO CLINIC www.mayoclinic.org