

# Brucellosis

## Information for the Public

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### What is brucellosis?

Brucellosis is a bacterial infectious disease. There are several species of *Brucella* that cause disease in humans: *Brucella abortis*, *Brucella melitensis*, *Brucella canis* and *Brucella suis*. *Brucella* is classified as a „zoonotic disease“ because people can get this infection from animals. Infected animals have the bacteria in their milk and meat. The bacteria can also be found in aborted fetuses, placenta and birth fluids of infected animals.

### Which animals get brucellosis?

*Brucella melitensis* affects goats, sheep and camels. *Brucella abortus* is found mainly in cattle. *Brucella suis* is found in pigs, and *Brucella canis* is found in dogs. In some parts of the US, a high percentage of feral pigs and wild boars may have brucellosis.

### How do people get brucellosis?

People can get the disease when they are in contact with infected animals or animal products contaminated with the bacteria. The most common way people get infected is by eating or drinking unpasteurized (raw) dairy products. Eating undercooked meat can also cause disease in humans.

People can also get the bacteria by breathing it into their lungs. Bacteria can get into the air and be inhaled by a person when infected animals are slaughtered. This can also happen when an infected animal gives birth.

The bacteria can also enter the body through skin wounds or mucous membranes. This can happen when a worker is accidentally exposed to contaminated material from newborn animals, fetuses, and birth fluids. This can also happen during slaughter of an infected animal or processing of infected meat.

Veterinarians, farmers, slaughterhouse workers, meat processing workers and hunters are at highest risk from brucellosis.

Infected people do not usually spread brucellosis to other people, but there are exceptions. An infected mother can spread brucellosis to her unborn child or young infant. Transmission has also rarely occurred during organ transplantation or blood transfusion. Transmission has also rarely occurred from infected patients to hospital workers. Sexual transmission has also been reported.

### What are the signs and symptoms of brucellosis?

The signs and symptoms of brucellosis are highly variable, but fever is always present. Other symptoms include sweats; feeling poorly; loss of appetite; headache; pain in the muscles, joints, or back; fatigue and other symptoms.

The most common complications include arthritis and swelling of the testicles and scrotum area in men. Infected women may experience spontaneous abortion. Almost any organ can be affected, especially the liver (hepatitis), heart (endocarditis or infection of a heart valve), and the brain.

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### Division of Infectious Disease Epidemiology

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*Brucella* may result in chronic infection and relapses occur in about 10 percent of persons after an acute infection.

### **How do I know if I have brucellosis?**

Your doctor will talk with you and do a physical examination. Testing for *Brucella* may be difficult and may need to be performed by a specialized laboratory. Blood tests may help with the diagnosis. Your doctor may recommend a biopsy or culture of tissue. Specialized blood cultures can also be very helpful for diagnosis of brucellosis.

### **How is brucellosis treated?**

Once a diagnosis is made, your doctor can prescribe antibiotics. Depending on the situation, treatment may last a few weeks to several months. Because brucellosis is an unusual disease, many times your doctor will consult a specialist about diagnosis and treatment.

### **What is the best way to prevent brucellosis?**

Do not consume undercooked meat or unpasteurized (raw) dairy products, including milk, cheese or ice cream.

People who work directly with animals such as cattle, goats, sheep and pigs - veterinarians, meat processing plant workers, farmers – should take extra precautions to prevent exposure to brucellosis.

- Appropriately dispose of placenta, birth products, fetal membranes, and aborted fetuses at facilities housing farm animals. Bury birth products if no other method of disposal is available.
- Restrict access to barns that house animals that might be infected.
- People who handle animal tissues (such as hunters and farmers) should protect themselves by using rubber gloves, goggles and gowns or aprons. This will keep bacteria out of the eyes or inside a cut on the skin.
- Farmers and directors of other facilities that house animals should talk to their veterinarians about other means of prevention.

### **Questions?**

Talk to your local health department or your doctor or veterinarian for more information. You can also call the Division of Infectious Disease Epidemiology at (800)-423-1271 or (304)-558-5358.

Also, look for more information at [www.dide.wv.gov](http://www.dide.wv.gov) or [www.cdc.gov](http://www.cdc.gov)

Based in part on:

CDC

“Red Book” 2012 Report of the Committee on Infectious Diseases

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