

Canine Brucellosis and Foster-based Dog Rescue Programs

What is canine brucellosis?

Canine Brucellosis is a disease found in dogs and caused by the bacterium, *Brucella canis*. Infected dogs can also spread the disease to people.

Who gets brucellosis?

Dogs and people can get brucellosis.

Dogs in breeding programs, stray dogs that have not been spayed or neutered, and unowned or free roaming dogs are at higher risk of having brucellosis.

In people, dog breeders and veterinarians are most at risk of infection because of their work with birthing puppies (whelping). People can also get brucellosis from their family pet, but this is much less common.

How is brucellosis spread?

Dog-to-dog spread of brucellosis occurs most often through breeding and by contact with vaginal discharges, semen, birthing fluids, and urine. Contact with an infected dog's blood, milk, saliva, and feces are less common sources of infection.

Brucellosis can spread from dogs to people through contact with an infected dog's birthing fluids and vaginal discharge while birthing puppies. This is why dog breeders and veterinarians are at higher risk. Rarely, brucellosis can be spread from family pets to people through contact with urine, saliva, and other bodily fluids from an infected dog.

What are the symptoms?

In dogs

In female dogs, the most common symptoms are aborted pregnancies, stillbirth, and inability to become pregnant. In males, the primary symptom is the inability to sire puppies. Both sexes may have swollen lymph glands, eye disease, and infections of the spine. However, most infected dogs appear normal and show no symptoms except for infertility. Female dogs can deliver healthy-appearing, but infected puppies.

In people

Brucellosis in people normally causes a fever, headache, swollen lymph glands, night sweats, joint and muscle aches, fatigue, weight loss, and swollen liver and/or spleen. Some people may not have any symptoms.

How do you test for brucellosis?

In dogs

A blood sample is tested for the antibodies that fight *Brucella canis*. If a dog tests positive for the antibodies on a screening test, another test is done to confirm. The tests are:

- Screening tests: Rapid Slide Agglutination Test (RSAT) and Tube Agglutination Test (TAT)

- Confirmatory tests: Agar Gel Immunodiffusion (AGID) and PCR

The screening tests are very sensitive. A negative result means that the dog is truly not infected, but a positive may be a false positive and a confirmatory test should be done.

In people

There is no antibody screening test for people, so blood culture is used to diagnose brucellosis infection. People who have been diagnosed with brucellosis should be referred to an infectious disease specialist for treatment.

Can brucellosis be treated?

In dogs

Brucellosis is very difficult to treat and relapses are common. Treatment includes spaying or neutering, giving antibiotics for several months, and frequent blood tests to monitor treatment progress.

Treatment is typically not attempted for dogs in breeding kennels and when dogs cannot be regularly tested and isolated from other dogs and people, potentially for the life of the dog.

In people

Brucellosis is treatable in people. Treatment involves taking antibiotics daily for several months, regular monitoring, and may also involve surgery.

What are the regulations in Minnesota for dogs infected with canine brucellosis?

- Inspect - All dogs coming across state lines must be inspected by a licensed veterinarian and have a valid health certificate (certificate of veterinary

inspection). Dogs over three months old must also be vaccinated for rabies.

- Screen - Dogs coming from high risk situations for brucellosis (breeding programs and stray or unowned dogs) should be tested with a *Brucella* screening test before being placed in a foster home.
- Test - Pregnant dogs should not be placed in foster homes unless they have tested negative for canine brucellosis within the last six months.
- Isolate - In Minnesota, a dog infected with brucellosis must be isolated from healthy dogs for the life of the dog, or may be euthanized. The Minnesota Board of Animal Health (BAH) places infected dogs under a permanent quarantine.

Minnesota Department of Health
Zoonotic Diseases Unit
PO Box 64975, St. Paul, MN 55164-0975
651-201-5414

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651-201-5414*