

# Brucellosis (*Brucella canis*) & Abortions in Dogs

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Brucellosis is a disease caused by *Brucella canis*, which is a bacteria that was first isolated from dead puppy fetuses in the middle 1960's. It is the most common bacteria that can infect bitches and their fetuses. It seems that over the years much has been written on brucellosis in breeding dogs, but despite it all, infection rates may run as high as 8-10%. That is right, it is suspected that one in ten dogs in this country may carry *Brucella canis*.

*Brucella canis* also poses a significant public health hazard since it is transmissible to humans, especially those handling aborted fetuses. Humans may develop a serious liver impairment or arthritis.

Medical advancements in controlling this disease have been few and far between. Contrary to some opinions, it is a very difficult disorder to treat, and in **most** cases, treatment is unsuccessful. A prevalent attitude among many people is that "if my dogs get it, then I will treat it." This is a serious mistake because you probably will not cure it, and if you do, the individual will probably be sterile or be a poor breeding specimen.

## Transmission of *Brucella canis*

*B. canis* is sexually transmitted by the mating of infected males and females. *Brucella canis* in the female dog will live in the vaginal and uterine tissue and secretions for years, and except in rare cases, for life. The infected female usually appears healthy with no signs of disease or indication that she is a 'carrier' or harborer of the organisms. She can spread the bacteria to other animals through her urine, aborted fetuses, or most commonly through the act of breeding. Once pregnant, the bacteria will also infect the developing fetuses causing illness.

In males, the *Brucella* bacteria live in the testicles and seminal fluids. An infected male is just as dangerous as the female as he can spread the *Brucella* bacteria via his urine or semen. Oftentimes, there are no signs except in advanced cases when the testicles may be uneven in size.

Litters are commonly aborted, usually in the last two weeks of gestation, or the puppies may die shortly after birth. If a pregnant dog aborts after 45 days of gestation, you should be highly suspicious of brucellosis. Usually, the fetuses are partially decayed and accompanied by a gray to green vaginal discharge. This discharge can have very high numbers of *Brucella canis*. If embryos die early, they may be reabsorbed and the female may never appear to be pregnant at all.

## What are the risks?

The risks are great. Since the *Brucella canis* organisms are transmissible to humans, it is best to avoid all contact with the dead fetuses and their associated vaginal discharge. The infected mother will likely be unable to sustain a pregnancy in the future. Furthermore, she would likely transmit the disease to any male which breeds her causing fertility problems in him as well.

## Testing

Testing for Brucellosis usually requires a blood test by your veterinarian and all positives should be retested for a confirmation. Since *Brucella canis* is mainly spread by the act of breeding, it is paramount to test all canines, male and female, prior to breeding. Test between **every** breeding of different animals. In other words, if a male (or female) was tested one year ago but has bred since, he must be tested again. In the case of a male, if he serviced a female since his last test, then he must be tested again even if his last test was as recent as four weeks ago. Testing is the only sure way to detect carriers.

In cases of abortion, the bacteria may be isolated from the aborted fetuses. Blood tests can also be performed on the mother's blood to help confirm a positive diagnosis of Brucellosis.

## Prevention

When possible, all incoming breeding dogs should be isolated for two weeks upon arrival at the kennel. At the end of two weeks, have the individual (male or female) tested by your veterinarian for brucellosis. Do this even if the dog was tested before shipment. This may seem excessive, but you will spend a lot more money if Brucellosis creeps into your kennel, not to mention the disruption in your breeding program and loss of genetic potential.

[Artificial Insemination](#) (AI) can lessen the risk of *Brucella* transfer at breeding. While rare, transmission of *Brucella canis* to a bitch can occur during AI, especially if infected semen is used. However, AI will protect an infected female from transferring it to a noninfected male.

All positive males and females should not be bred. Surgical spaying or neutering of these individuals is recommended. Various blood tests are available to screen breeding dogs (male and female) and identify those who are infected (carriers). All individuals used for breeding should be routinely tested prior to breeding.

## Treatment

There is no reliable treatment for Brucellosis. *Brucella canis* lives inside of the dog's cells so it is difficult to reach the bacteria with antibiotics. Any attempt at treatment would require the use of multiple types of antibiotics. Various antibiotics such as doxycycline, minocycline, and dihydrostreptomycin have been partially effective at causing a temporary reduction in the bacterial organisms after several weeks of treatment. A complete cure is unlikely. It is recommended that infected animals

be castrated or spayed.

As a rule, do not breed your dog with an individual that is said to be treated and cured. (Unless of course it is the last of its breed and even that would be questionable.) 'Cured' patients often begin shedding the bacteria months to years after treatments... Do not knowingly take a chance.

#### Human health hazards

People can become infected with *Brucella canis*. People should avoid contact with dead fetuses or the discharge from aborting dogs. Transmission has also occurred from contact with secretions from male dogs.

In conclusion, test and isolate. Do not rely on an uncertain cure. If you do not heed these suggestions, then you are playing with fire in your kennel and perhaps with your own health. Remember, statistically one out of ten dogs may be carriers and those are very disturbing odds.