



State of Louisiana

Louisiana Department of Health

Office of Public Health

RECOMMENDATIONS TO VETERINARIANS DIAGNOSING BRUCELLOSIS (*Brucella canis*) in DOGS

The appropriate response to a dog diagnosed with *Brucella canis* infection is summarized in this document. The primary targets of prevention efforts will be directed to three categories:

1. the dog that is confirmed to be infected, and the dogs that currently live in the same domicile
 2. the human companions to the dog in the home
 3. the veterinarian and veterinary staff.
1. a. The positive dog:
 - The most effective preventive tool is to euthanize the animal diagnosed with confirmed *Brucella canis*. Since treatment can be ineffective and since negative diagnostic tests are often inaccurate, euthanasia and disposal of the infected dog is the best course of action.
 - If the owner refuses this suggestion, one should adhere to the following recommendations from USDA: "If the decision is made to re-home brucellosis positive dogs, they should undergo an ovariohysterectomy or castration and be placed on appropriate long-term antibiotics, with proper supervision by a licensed veterinarian that should include lifetime periodic laboratory testing for *B canis*. Brucellosis is considered a lifelong infection in dogs, and even after undergoing surgical sterilization and long term antibiotic use, both male and female dogs may continue to intermittently shed the organism." The dog should be considered infected for life and additional testing is recommended every six months.
 - b. The other dogs in the home:
 - Test all dogs that have been in contact with the confirmed infected dog (house-mates). Recommend removal (Euthanasia and disposal) for all positives (or) treat the positive dogs with appropriate therapy. The best practice is to refrain from introducing new animals (any susceptible pet species) into the household, while the infected animal is present. If the owner should purchase, adopt, or otherwise acquire additional dogs, these animals should not be brought into the home until screened for *B canis*.
 - The dog's environment at home should be thoroughly cleaned and disinfected. (Explain to owner to use PPE as recommended below in notes.) "*B canis* is relatively short-lived outside the body and is readily inactivated by common disinfectants as well as by sunlight. *B canis* is stable in the environment in the presence of organic debris for up to two months (proper cleaning and disinfecting is therefore a must). *B canis* can withstand drying in the presence of organic debris, can withstand freezing, and can survive in water, dust and soil. The combination of organic debris, high humidity, low temperatures and little or no sunlight favors survival of the organism (winter conditions in most dog kennels).(USDA)"
2. The human companions to the dog at home:
 1. Due to the lack of availability and inaccuracy of human tests for *B canis*, no testing is recommended. All exposed individuals, regardless of risk status, should be monitored for the development of symptoms. Self-surveillance for febrile illness among household human contacts for exposure to *Brucella* dogs should be

conducted for six months after the last exposure to the dog (after completion of the dog's treatment regimen). If the human household contacts have experienced or do experience a febrile illness during the observation period, they should consult their healthcare provider. Human contacts should remind their healthcare provider of this potential exposure on any visit to the physician within the six-month observation period.

3. The veterinarian or veterinary staff:

- Arrange for regular (weekly) active surveillance for febrile illness among all workers exposed to *Brucella* animals for six months after last exposure. (Everyone that handled the dog is to take their temperature under supervision once per week, and the temperature should be recorded.) Broader symptoms of brucellosis should be passively monitored for six months from the last exposure. It is likely a good practice to record the answers to routine questioning at the time the temperature is taken. (See checklist for symptoms in veterinary workers!)

Notes:

- Recommended PPE when handling patient (positive canine) or cleaning and disinfecting areas where the animal is/was present:
"Appropriate use of personal protective equipment beyond just wearing gloves (respiratory [surgical masks or respirators] and ocular protection) may be required to prevent human infection during cleaning and disinfection and animal handling in brucellosis-positive kennels during quarantine and isolation situations. Caution should be taken when collecting and handling blood, serum, fluids or tissues for laboratory analysis by the veterinarian, paraprofessional staff, the client, and laboratory personnel if brucellosis is suspected." (USDA)
- Diagnosis of *Brucella canis*:
"*B canis* monitoring may be achieved with a variety of tests which have been well described by Hollett and by Greene and Carmichael... Because of the zoonotic potential of *Brucella*, caution should be exercised when collecting and handling blood, serum, fluid or tissues." (USDA) See list of laboratories providing *Brucella canis* testing also on this website.
- Verifying positive results (not necessary if culture positive. These recommendations apply only to serological results.)
If a positive result is obtained on any test, the dog should be isolated and classified as a *Brucella*-suspect dog. Because of the possibility of false positives on some tests, select a different diagnostic test to validate the initial results. If the second test does not agree with the initial test, a third diagnostic test should be performed eight weeks after the second test to rule in or rule out brucellosis.
- Disease reporting
Cases of *Brucella canis* or any other animal diagnosis of *Brucella* species should be reported to the Louisiana Department of Agriculture and Forestry [(225) 925-3962]. In addition, reporting to the State Public Health Veterinarian at the Office of Public Health, Infectious Disease Epidemiology Section is recommended [(800) 256-2748].

Much of this information was provided by the United States Department of Agriculture (USDA)