



# State of Louisiana

Louisiana Department of Health  
Office of Public Health

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## Treatment of Dogs Diagnosed with *Brucella canis*

Consultation with a specialist at the Louisiana State University School of Veterinary Medicine Veterinary Teaching Hospital and Clinics is recommended to inquire about the latest developments in treating this disease. The following are two recommended regimens, but these two treatments may not be the best or latest courses of treatment:

“When treatment is attempted, the patients should be spayed or neutered, and studies have shown that single-antibiotic regimens are unsuccessful. Combination therapy has had better results such as doxycycline (10 mg/kg po q 12 hours), gentamicin (5 mg/kg SC q 24 hours for 7 days and repeated every 3 weeks), and rifampin (5 mg/kg po q 24 hours) for 3 months. Some success has been reported using enrofloxacin (5 mg/kg po q 24 hours) alone with similar efficacy to that of combination therapy. After this antibiotic trial, retest and repeat until the patient has a negative test. After reaching a negative serology test, continue to test every 4 to 6 months and repeat treatment as necessary. It is also important to isolate these treated dogs from other dogs and breeding animals. The cost of antibiotic therapy and diligence of the testing protocol may deter many owners from trying to treat. It is also important to counsel owners and kennel workers that the therapy is not curative and the dog may be a risk to other dogs and humans, especially young children, older persons, and immunocompromised individuals.”

Note: the Doxycycline is given for 3 continuous months, the rifampin is given for 3 continuous months, and the gentamicin is given for 7 straight days every 3 weeks.

Citation: Maklosky C. Canine brucellosis management. *Vet Clin Small Anim.* 41 (2011) 1209-1219

5 mg/kg of enrofloxacin orally every 12 h for 30 days.

Citation: Wanke MM1, Delpino MV, Baldi PC. Use of enrofloxacin in the treatment of canine brucellosis in a dog kennel (clinical trial). *Theriogenology.* 2006 Oct;66(6-7):1573-8.

The following is an excerpt from a e-book entitled, *CANINE AND FELINE INFECTIOUS DISEASES* (Publisher: Elsevier Health Sciences, Published on Jun 6, 2013, ISBN 9780323241946

“Antibiotic therapy has historically not been rewarding, likely because the organism is intracellular and bacteremia is periodic. Antimicrobial drug treatment can reduce antibody titers without clearing infection. Relapses are common. Combination therapy should be used whenever possible, preferably with tetracyclines (high-dose doxycycline or minocycline) for at least 1 to 2 months and an aminoglycoside (streptomycin or gentamicin) for the first 1 to 2 weeks of treatment. Some also advocate use of two 1-week courses of aminoglycoside treatment spaced 1 month apart, or treatment with streptomycin every other week for 8 weeks. Combination therapy with tetracyclines and streptomycin is thought to be the most successful treatment, but unavailability of streptomycin, nephrotoxicity, parenteral therapy requirements, and expense may be problematic. In addition, aminoglycosides do not provide adequate ocular

or CNS penetration for dogs with ophthalmitis or meningitis. A combination of doxycycline and rifampin has been used to treat human brucellosis, but may not be well tolerated by dogs because of gastrointestinal adverse effects. The use of three or four drugs in combination (e.g., streptomycin, enrofloxacin, doxycycline with or without rifampin) was efficacious for treatment of ophthalmitis in dogs. Topical 1% prednisolone acetate and atropine ointment may be required for management of uveitis.

One study reported a possible benefit of therapy with enrofloxacin (5 mg/kg q12h PO for 4 weeks, often for multiple courses) in a small group of infected dogs and bitches. Enrofloxacin did not completely eliminate *B. canis*, but it maintained fertility and avoided the recurrence of abortions, transmission of the disease to subsequently whelped puppies, and dissemination of microorganisms during parturition. Ultimately, however, most treated individuals remained culture positive. Combinations of enrofloxacin and doxycycline may be a more effective alternative for dogs unable to tolerate aminoglycoside or rifampin treatment and for dogs that have ocular or CNS involvement, but studies are lacking.”