



Superior Animal Hospital & Boarding Suites, Ltd.

36 E. 2nd Street,
Superior, Wisconsin 54880

Robert D. McClellan, D.V.M.
Jody A. Berquist, D.V. M.
Sarah J. Harwood, D.V.M.
Jennifer A. Shamla, D.V.M.
Michelle C. Severs, D.V.M.

Lyme Disease

We can screen your dog for four major diseases: **Heartworm disease, Lyme disease, Ehrlichiosis and Anaplasma Phagocytophilum**. Heartworm disease is transmitted by mosquitoes; Lyme disease, Ehrlichiosis, and Anaplasma Phagocytophilum are transmitted by ticks.

What if your dog tests **POSITIVE** for **Lyme disease**? What does this mean? What should be done?

Although your dog may not currently have any obvious symptoms that you are noting, he or she is infected with the spirochete *Borrelia burgdorferi* (species of bacteria); this is the bacterium that causes Lyme disease. The test that was run is very specific for an infection and does not cross-react with antibodies produced from vaccines.

Left untreated, this infection can lead to a number of conditions including arthritis, kidney failure, neurological and heart disease. These conditions can occur, regardless of the age of your dog, and many times are irreversible and fatal.

We are not able to determine which dogs that test positive for Lyme disease will progress to develop kidney failure (the fatal condition we've most often seen). Therefore, it is important to treat and monitor all dogs testing positive even though they currently are having no obvious symptoms.

The protocol we are using is as follows:

1. **ERD urine test** for protein (microalbuminuria). This test determines if there are any inflammatory conditions currently affecting the kidneys. We will try to collect the urine today or if we are unsuccessful you can drop off a sample collected at home. If the ERD test is negative (normal), no other lab work needs to be done.
2. **Quantitative C6 test**. While our in-house Lyme test (4DX) can tell us if your dog has been infected with *Borrelia*, it does not tell us the exact level of infection. The Quantitative C6 blood test gives us a number correlating with tissue levels of *Borrelia*. Doing this test today, followed by a repeat C6 test in 6 months will help us determine the severity of infection as well as the effectiveness of treatment. It will help us determine if further treatment is necessary.
3. **Vaccination for Lyme Disease**. If your dog is not already vaccinated, a series of two Lyme vaccines, 2 to 3 weeks apart should be given. The first may be given today. If the vaccine has been given previously and is within 6 months of being due, the booster vaccine should be given today.

4. **Doxycycline antibiotic.** This is the antibiotic of choice for treating Lyme disease; an initial prescription is administered for 28 days and is generally well-tolerated. Potential side effects are gastrointestinal related, including vomiting, diarrhea, and/or inappetance. It is best to give this pill with food. Do not give pills with dairy products. If there are any side effects seen, you should call the doctor and usually an adjustment of the dose will correct the symptoms.
5. **Retest in 6 months.** We should retest for Lyme disease in 6 months to see if the infection has been cleared or significantly reduced. The test will be the Quantitative C6 referred to above and will determine if further treatment is necessary. We will call you to schedule a recheck appointment in 6 months.
6. **Institute Effective Tick Control.** Applying Frontline Topspot monthly is the safest effective tick control.

In summary, it is best when we can diagnose Lyme disease in your pet prior to the development of outward and irreversible symptoms. Please call if you have any questions about your dog's condition.