



## LYME DISEASE (BORRELIOSIS)

Lyme disease is a widespread serious disease that can affect dogs, cats, horses, cattle, birds, other wild animals, and people. **Lyme disease in dogs has become the most frequently diagnosed preventable disease in our area, surpassing heartworm.** *Borrelia burgdorferi*, a corkscrew shaped bacterium, causes the disease and is transmitted by the bite of a very small Ixodes tick, commonly called a “deer” tick. The more familiar “dog: or “wood” ticks have not been found to transmit Lyme disease. White footed deer mice and white tailed deer seem to be the natural carriers of the disease. Once bitten by a “deer” tick it takes at least 24 hours for the bacterium to leave the tick and enter the bitten animal. This is important because tick killing products and tick removal before 24 hours of attachment drastically diminish the chance of contracting Lyme disease. Unlike most human infections, a ring-shaped rash at the site of the tick bite does NOT occur in dogs.

Signs of Lyme disease in dogs usually involve lameness or pain, fever, lack of appetite, and lethargy. The most serious effects of Lyme disease can be kidney failure and death. Symptoms can occur as soon as two weeks or up to nine months after a deer tick bite.

A person cannot contract Lyme disease from their dog, although people are often walking in the same area with their dog where they may pick up ticks. People should check themselves and their dogs thoroughly after walking in tick infested areas and remove any ticks found. Prevention of Lyme disease involves tick prevention products (“Frontline Plus” and “Vectra 3D” monthly topical treatments and “NexGard” chewable tablets are the industry leaders) and Lyme vaccination. There is no 100% tick prevention product and no 100% effective vaccines, so tick searching and removal is still very important.

Infected dogs can usually be tentatively diagnosed with an in-office blood test. The test detects antibodies produced in the dog’s blood after exposure to Lyme organism, it doesn’t test for the organism itself. Diagnosis involves 3 points, suspicious symptoms, positive antibody blood test and rapid improvement after using appropriate antibiotics. Though improvement is usually seen within several days of starting treatment, a complete treatment course is 30 days. Most infected dogs respond well to appropriate antibiotic treatment. Current research suggests that once infected, dogs don’t become immune and may remain infected for life, but recurrence of symptoms is uncommon. Previously infected dogs should continue to receive tick prevention treatments and vaccines to prevent accumulating more Lyme organisms in their bodies.

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## **ANAPLASMOSIS (FORMERLY EHRLICHIA EQUI)**

Lyme disease is a very prevalent canine disease in our area and gets a lot of publicity.

Another tick-carried disease is beginning to be found more often here as well, and that is Anaplasmosis, previously called Ehrlichia equi.

Similar to Lyme, Anaplasma is carried by tick bites. Though ticks are most prevalent in spring and fall, Anaplasma infected dogs are found year-round. This is because ticks that are infected with the Anaplasma organism become cold tolerant. The time from tick bite until symptoms are seen can be as early as several days and up to many months.

Symptoms of Anaplasmosis are similar to Lyme disease and MAY include, fever, lameness or sore joints, loss of appetite, lethargy, vomiting and diarrhea and rarely, neurologic signs. Serious illness related to platelet destruction causing bleeding episodes and possibly fatal immune system reactions have also been attributed to Anaplasmosis.

A positive Anaplasmosis blood test tells us that the dog has been exposed to the organism and treatment needs to be given. However, a positive test result DOESN'T mean that the dog HAS the disease. A negative test result can occur, especially if testing is performed less than three weeks after infection has occurred. While we may prescribe antibiotics for a dog that we strongly suspect has Anaplasmosis, a reliable diagnosis of Anaplasmosis is made by a combination of three factors: suspicious symptoms, a positive test result, and recovery after using appropriate antibiotics.

Doxycycline is the most commonly prescribed antibiotic used to treat Anaplasma infections. Most genuinely infected dogs begin feeling much better within 2-3 days, though a complete treatment course is 30 days. A positive dog should be kept as quiet as possible throughout treatment to prevent bleeding episodes related to low platelet counts.

There is no vaccine for Anaplasmosis. Tick preventative medications such as Frontline Plus, and NexGard and removal of any ticks found are the best preventative measures.

If found early and treated appropriately, MOST dogs with Anaplasmosis do quite well.

Feel free to call with any questions you might have.