

TICK DISEASE

This is an extensive topic of great importance to Greyhound adopters. The limited space here will serve as a summary of tick disease issues and hopefully a guide for you to pursue further information.

WHAT ARE THEY?

These are a group of diseases caused by microorganisms transmitted by an attached tick. Racing Greyhounds seem to be disproportionately over represented among groups of exposed dogs. Tick disease infection can occur in utero (during fetal development), during their puppyhood or training, or during their active racing careers. In our testing, approximately 30% of the retired racers tested are testing positive for exposure to one or more of the tick diseases.

The diseases most commonly seen are *Babesia canis*, *Ehrlichia canis*, and *Borrelia burgdorferi* (Lyme). Other diseases sometimes found include *Ehrlichia equi*, *Ehrlichia risticii*, *Rickettsia rickettsii* (Rocky Mountain Spotted Fever), and *Bartonella* spp.

SYMPTOMS

Each tick disease does tend to have its most likely associated symptoms, but there can also be much overlap in the symptoms of different tick diseases. Individually, your dog may have an atypical case, or one of the less common organisms, so the most common signs of tick disease in general are listed as a group here.

Low platelet count (remember the Greyhound normal is lower than other breeds, but if your hound's is below 100,000 consider tick testing if it hasn't been done) resulting in possible nose bleeds, bruising, and any other sign of bleeding.

- Low (or high) white blood cell count
- Anemia
- Neck pain
- Seizures
- Fever
- Weight loss
- Lethargy
- Stiff gait
- Enlarged liver or spleen
- Enlarged lymph nodes

This is not an all-inclusive list. An individual dog may show one or more of these signs, or others not listed. Tick diseases can present with almost any symptom. A carrier with a dormant infection may have no appreciable signs. These can be very elusive diseases to diagnose, and the situation is further complicated by the fact that a dog who has one of the tick borne diseases has a good chance of having a second one as well.

TESTING

The reason for testing sick dogs is obvious, but why screen apparently healthy Greyhounds? The reason is that all but Rocky Mountain Spotted Fever can remain dormant in a dog's body, sometimes for years, before causing significant signs of illness. By testing, you are trying to discover a potential problem in the future.

If a dog has an active TBD (tick borne disease), it is very likely that there will be measurable changes in their CBC (complete blood count). A normal CBC suggests of an absence of active disease. If the CBC shows anemia, a depressed platelet count, or a low white cell count, the patient could be infected and further testing is warranted.

There are two common methods of testing:

ANTIBODY DETECTION - by submitting serum for this test, your vet is looking for signs of past or current exposure to one of these diseases. The confusion in interpretation of the resulting antibodies titers rests with the difficulty of distinguishing between a current active infection, a dormant infection, or simply the memory of a past cured infection. Many Greyhounds are tested by Protatek labs in Arizona, although Antech and other labs also perform this testing.



PCR TESTING - considered to be the gold standard for testing because it actually detects the DNA of the organism. A positive test indicates current infection 99.99% of the time. A negative test, however, doesn't completely rule out a dormant infection since the sample submitted for testing is blood and the organism may be present in other tissues, but not in the blood. PCR testing is not valid for Lyme's disease for that same reason - the organism is never found in the blood. Both PCR and serology (antibody) testing is performed at the North Carolina State Tick Borne Diagnostic Laboratory.



TREATMENT

When and how to treat these diseases is a controversial subject. Again, you must be informed about the tick disease(s) found in your dog, and discuss with your veterinarian whether your dog needs to be treated. Many veterinarians are reluctant to treat a seemingly healthy dog aggressively, while others recognize the potential for future problems and might treat an asymptomatic dog. Stay involved in the care of your Greyhound.

We follow this protocol for our antibody positive Greyhounds:

Ehrlichia titers - all positive titers are treated doxycycline. If doxycycline isn't tolerated, Imizol (imidocarb) can be tried but its effectiveness is unclear.

Babesia canis titers above 1:160 are treated with 2 injections of Imizol given 2 weeks apart.

Borrelia (Lyme) - all titers are treated with doxycycline. If doxycycline isn't tolerated, Amoxicillin is given.

Bartonella spp - Doxycycline or Azithromycin can be used.

Rocky Mountain Spotted Fever - only symptomatic dogs are tested and treated. This is the one tick disease that does not lay dormant, so a positive antibody titer on a healthy dog only indicates past infection.

Again, the decision to treat, and what protocol to use, is one you must make with your own veterinarian.

A word about doxycycline - The traditional dose of doxycycline is much lower than what is now used by many veterinarians who treat tick diseases on a regular basis. We are now dosing doxycycline at 10 mg/pound divided into 2-3 doses over the day for 6-8 weeks. That means that a 60 pound dog gets 600 mg each day, divided either as 300 mg twice a day or 200 mg three times a day. This is double what the traditional dosing has been. Only you and your vet can decide what dosing is appropriate for your dog, but consulting with a veterinarian who is familiar with treating tick diseases would be wise.

Doxycycline must be given with food to try to avoid a stomach upset.

ADDITIONAL RESOURCES

There is a very active "**Tick List**" which can be an invaluable resource of additional information.
You can subscribe by visiting TICK-L@APPLE.EASE.LSOFT.COM

The information on these pages is for educational purposes only and should never be used as a substitute for seeing your own veterinarian, with your pet, for a complete examination and individually prescribed treatment.

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