

WHY ALL THE CONCERN ABOUT EHRLICHIA IN ADOPTED GREYHOUNDS?



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Studies have shown that it can take as long as 5-7 years following a bite from an Ehrlichia-carrying tick for a dog to show symptoms. By then, a greyhound is long gone from the tick-infested racing kennel or farm and possibly living in an area where Ehrlichia is unheard of. The greyhound may present with a variety of mysterious ailments, some of which can be serious and fatal if not treated. Veterinarians working with adopted greyhounds should maintain a high index of suspicion for Ehrlichia.

Ehrlichia canis is the most common Ehrlichia species infecting dogs, but there are others (E. platys, E. risticii, E. equi) and researchers suspect that there are many more. E. canis is a rickettsia (an organism somewhere between a bacteria and parasite) carried by the brown dog tick - a common if not universal problem in racing kennels. Greyhounds from all over the country mingle together sharing their ticks, making racing kennels a smorgasbord of tick-borne diseases.

Acute (first few weeks) signs of Ehrlichia, such as runny eyes/nose and cough (resembling distemper) would not be expected in adopted racers. Virtually all adopted greyhounds will be in the chronic stage. There may be vague signs such as lethargy, fever, anorexia, and weight loss. Greyhounds may have bleeding, bone marrow suppression, eye disease, neurologic signs, neck/spinal pain, polyarthritis, enlarged spleen, enlarged lymph nodes, or kidney disease. Bloodwork may show anemia, low white blood cell counts, low platelets, increased protein (hyperglobulinemia), and increased ALT/ALKP.

Ehrlichia testing is done with antibody titers. Titers measure the body's immune response to the bug, not the amount of bug in the dog's body. Most labs titer from 1:20 to 1:1,000,000 or more. In general, the more chronic the infection, the higher the titer. The IDEXX in-office "combo" test (heartworm/Lyme/Ehrlichia) catches titers over 1:100. While sick dogs usually test positive, they might not if:

1. They have a poor immune response (the reason why a very sick dog sometimes tests negative).

2. They carry an Ehrlichia strain other than the standard E. canis the lab tests for.
3. They have a titer <1:100 on the IDEXX test, or
4. There is variation between labs.

There is not necessarily a correlation between the severity of the disease and the titer number. All positive titers should be treated.

Ehrlichia dogs respond dramatically and quickly (within days) to doxycycline dosed at 5 mg per pound twice daily. For this reason, greyhounds should be started on doxycycline as soon as Ehrlichia is suspected. If not immediately available at the veterinary office, all human pharmacies carry doxycycline (a tetracycline family antibiotic). Often patients are vastly improved by the time their titer results are back from the lab. This doxycycline trial can be as useful as the titer results in determining whether to continue with treatment. The standard regimen we use in Arizona where Ehrlichia is endemic is 5 mg per pound twice daily for 2 months. Doxycycline must always be given with food - otherwise it may upset the stomach. Alternatively, Ehrlichia can be treated (offlabel) with Imizol, an injectable drug approved for the treatment of Babesia, another tick-borne disease. The Imizol protocol is two injections two weeks apart.

There is a poor correlation between resolution of infection and serum antibody titers. In patients with high antibody titers, the antibody concentrations decline very slowly (over years) following effective therapy. In many patients, the antibody titers persist at high concentrations indefinitely. The PCR (polymerase chain reaction) test, which tests either positive or negative (no numeric value) for Ehrlichia DNA in the bloodstream, may be used for follow-up testing, but is not perfect either.

The most reliable indices of response to therapy are clinical signs, CBC changes (i.e. anemia, platelet counts), and serum globulin concentrations. A reasonable approach is to monitor recovered dogs with a CBC and titer at six-month intervals as long as the dog remains clinically normal. If clinical signs develop or the CBC becomes abnormal, re-treat, using Imizol if doxycycline was used the first time around. The majority of Ehrlichia dogs will require only one treatment course, but owner and veterinarian should remain watchful in order to recognize a relapse.