

Ticks: More Than a Nuisance!

Some of you will still be shoveling snow when you read this article but others have to deal with ticks all year round. The AKC Canine Health Foundation has given us permission to print an informative whitepaper regarding tick-borne diseases (see below). In addition to the infections listed in their publication, the keynote address at the Canine Health Foundation meeting by Dr Edward Breitschwerdt introduced an emerging disease, Bartonellosis. The *Bartonella* bacteria is transmitted by insects; including fleas and ticks. Symptoms of this zoonotic disease in the dog include intermittent lameness and fever, polyarthritis, weight loss, and rash.

Infectious agents such as those carried by ticks have been shown to play a role in certain cancers. Specific to this topic, it has also been shown that dogs treated with tick preventatives have lower rates of hemangiosarcoma and lymphosarcoma. As a matter of fact, one study has shown that approximately 30% of the hemangiosarcomas from a group of dogs contained *Bartonella* bacteria in the tumors. Although the full implications of these findings unknown, they certainly merit further investigation.

Transmission of tick-borne disease can be fast (as little as 4 hours) or may take up to 48 hours. One bite is all it takes. Unfortunately, diagnosis of tick-borne disease can be difficult in dogs, and there are no “really good” vaccines yet to prevent infections. This forces owners to seriously weigh risk versus benefits of anti-parasitic medications. Personally, I used to just pluck them off if present, but now I’m taking them more seriously.

Several investigators of tick-borne diseases, including Dr Anne Avery, said the Seresto collars are very good. They are water resistant, last for 8 months (~ 5 months if they swim), and are 27.5 inches long (may be a bit short for the big Leo boys). There are other good products on the market as well so consult with your veterinarian. This is an evolving area and readers are encouraged to keep up on current information. Always check the labels regarding breeding animals.

Introduction to Tick-borne Disease

Tick-borne disease occurs when ticks infected with a pathogen bite a dog and transmit the pathogen into the dog’s body. Many of these pathogens are zoonotic, meaning they can also infect humans. Disease is not spread between dogs and humans directly because these pathogens must complete their lifecycle phase within the tick to become infectious. Therefore, while humans and other non-canine family members can also become infected, a direct tick bite is required to transmit disease. The most common tick-borne diseases are Ehrlichiosis, Anaplasmosis, Rocky Mountain spotted fever, Hepatozoonosis, Babesiosis, and Lyme disease. The feeding time required to allow disease transmission from a tick to a dog or person varies between ticks and disease agents. Ehrlichiosis and Rocky Mountain Spotted Fever-causing bacteria can be transmitted within 3-6 hours of tick attachment, while Lyme Disease-causing bacterial transmission can require 24-48 hours of feeding before a host is infected.

Regional Prevalence of Tick-borne Disease

Distribution of tick-borne disease is associated with the species of tick endemic to a given region. Distribution