

## If My Dog Tests Positive, Does This Necessitate Treatment?

Veterinarians are able to effectively treat most tick-borne infections; however, the decision of whether to treat an asymptomatic dog remains a point of controversy. Dr. Adam Birkenheuer, DVM, PhD, DACVIM, an Internal Medicine and Infectious Disease specialist at North Carolina State University College of Veterinary Medicine recommends treatment after a positive test, followed by a complete blood cell count, serum biochemistry and urinalysis in 6 month intervals for 1 year. According to Dr. Birkenheuer "There are currently no evidence-based recommendations on whether or not to treat your pet if he or she is found to be exposed to a tick-transmitted infection like Ehrlichia or Borrelia. Some doctors may recommend treatment while others may not. The most important thing is to continue to monitor your pet for signs of illness with examinations and laboratory testing. I recommend this yearly for the rest of the pet's life."

### Rocky Mountain Spotted Fever

Rocky Mountain spotted fever (RMSF) is caused by Rickettsia rickettsia bacteria. RMSF is transmitted by the American dog tick and the lone star tick. In dogs, Rocky Mountain spotted fever appears suddenly with severe illness lasting about two weeks. If not treated early enough, Rocky Mountain spotted fever can result in death. Rocky Mountain spotted fever is also a zoonotic disease, which means it can infect people as well as pets. While Rocky Mountain spotted fever is most prevalent in the Rocky Mountain States, it is also prevalent in the Southeast and can be found throughout the United States and Canada.

*Symptoms of canine Rocky Mountain spotted fever* (can be moderate to severe):

- Acute fever
- Depression and/or lack of energy
- Arthritis-like stiffness when walking
- Neurological abnormalities

### Lyme Disease

Lyme disease is caused by Borrelia burgdorferi bacteria. Lyme disease is transmitted by the deer tick and the western black-legged tick. Lyme disease has been found throughout the United States and Canada, but infections are most frequently diagnosed in the northeastern, mid-Atlantic and north-central states, as well as in California.

*Symptoms of Lyme disease*

- Spontaneous and shifting leg lameness that lasts 3–4 days, recurrent lameness due to inflammation of the joints
- Reluctance to move, fatigue
- Loss of appetite and depression

More serious complications include damage to the kidney, and rarely heart or nervous system disease symptoms may come and go and can mimic other health conditions. Cases vary from mild to severe with severe cases sometimes resulting in kidney failure and death.

### Anaplasmosis

Canine anaplasmosis [pronounced an-uh-plaz-moh-sis] is caused by Anaplasma species of bacteria, specifically Anaplasma phagocytophilum and Anaplasma platys. Both forms of canine anaplasmosis are found throughout the United States and Canada. Areas where canine anaplasmosis is more common include the northeastern, mid-Atlantic and north-central states, as well as California. Anaplasma platys, specifically, is more common in Gulf Coast and southwestern states

Anaplasma phagocytophilum is transmitted by the deer tick and the western black-legged tick. These are the same ticks that transmit Lyme disease which increases the risk of co-infection with multiple tick-borne diseases. Anaplasma phagocytophilum is also a zoonotic disease, which means it can infect people as well as pets.

Anaplasma platys is transmitted by the brown dog tick.

*Symptoms of Anaplasma phagocytophilum*

- Anaplasma phagocytophilum infect white blood cells, causing symptoms associated with inflammation. Symptoms are often vague and nonspecific.
- Loss of appetite
- Lethargy
- Lameness, reluctance to move
- Neck pain or neurologic signs in some cases

*Symptoms of Anaplasma platys*

- Anaplasma platys infects platelets, causing symptoms associated with failure of blood clotting:
- Bruising on the gums and belly
- Spontaneous nosebleeds