

# Canine Babesiosis Is Notoriously Hard to Diagnose and Treat – Far Simpler to Prevent

If this nasty parasite gains access to your dog, the symptoms can range from nothing at all to multiple organ failure. Diagnosis is a major challenge, and once lodged in your dog's system, it's notoriously difficult to obliterate it. Instead, take this step daily to prevent the problem.

Analysis by Dr. Karen Shaw Becker

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## STORY AT-A-GLANCE

- Babesiosis, a tick-borne disease caused by the Babesia parasite, is a relatively common infection in dogs, but has not been reported in domestic cats in the U.S.
- Dogs who spend time outdoors and in wooded areas are at increased risk for tick-borne infections like babesiosis, especially during the summer months
- Symptoms of babesiosis can range from none to quite severe, depending on the species of parasite involved and the ability of the dog's immune system to fight infection. Symptoms may come and go as the disease runs its course. A polymerase chain reaction (PCR) test is the best method for detecting a Babesia infection
- Adjunctive natural support for a dog with babesiosis can include beta-glucans, medicinal mushrooms, curcumin, olive leaf, and cat's claw, as well as hyperbaric oxygen chamber therapy
- Prevention of tick-borne infections involves checking your dog daily for the presence of ticks and safely removing any you find. The longer a tick stays attached to your dog, the higher the risk for parasite transmission

**Editor's Note: This article is a reprint. It was originally published February 01, 2015.**

Babesiosis is a disease caused by the intracellular parasite Babesia. The infection is relatively common in dogs, but not in domestic cats in the U.S.

Dogs are most often exposed to the parasite through the bite of an infected tick, but transmission can also occur via blood transfer from a dog bite, a blood transfusion, or across the placenta from an infected mother dog to her puppies.

When babesiosis is a tick-borne infection, it's not unusual for an affected dog to have additional tick-borne infections including ehrlichiosis, Rocky Mountain spotted fever, and others. These infections can interact, making each one more severe. Dogs who spend a lot of time outdoors, especially in wooded areas, are at increased risk for tick bites and tick-borne infections like babesiosis, especially during the summer months when tick populations are highest.

Young dogs tend to suffer more serious symptoms, and Greyhounds, Pit Bull Terriers, and American Staffordshire Terriers appear to be more susceptible than other breeds.

Most canine cases of babesiosis occur in the southern part of the United States, with pockets of disease also reported in Massachusetts, Pennsylvania, and New Jersey.

## **Symptoms of a Babesia Infection**

The incubation period between exposure to the parasite and symptoms is about two weeks. A Babesia infection can have very mild or no symptoms, or it can be very severe. Babesia parasites replicate in red blood cells. As the red blood cells are destroyed, hemoglobin is released into the dog's body, which can lead to jaundice as well as anemia, including immune-mediated hemolytic anemia.

In addition to destruction of red blood cells and anemia, the severe inflammation that can occur with babesiosis can be overwhelming and completely separate from the anemia. Blood clotting can be impaired and a variety of neurologic symptoms can also occur when the parasite invades the central nervous system. In severe cases, there can be lung damage and liver disease as well.

Severity of symptoms depends on the species of parasite involved and on the ability of the dog's immune system to defend against it. Babesia strains reported in the U.S. appear to cause milder forms of the disease than other strains found elsewhere in the world.

Symptoms may come and go as the disease runs its course and can include lack of energy, lack of appetite, weakness, fever, pale gums and tongue, orange or red-colored urine, discolored stool, weight loss, enlarged lymph nodes, an enlarged spleen, and jaundice, which is yellowing of the eyes and skin. A severe infection can affect multiple organ systems including the lungs, GI tract, kidneys, and nervous system.

## **Diagnosing Canine Babesiosis**

Diagnosis of canine babesiosis can be quite challenging. Your veterinarian will take a complete history to identify any possible incidents that might have exposed your dog to a parasitic infection. And in addition to a physical examination, he or she will also do a blood chemical profile, a complete blood count (CBC), and a urinalysis.

Your vet might also use a Wright's stain for microscopic examination of a blood sample. Immunofluorescence antibody (IFA) testing may also be performed, but it is often difficult to differentiate between species and subspecies of the Babesia parasite with an IFA test. In addition, some infected dogs, especially young dogs, may have no detectable antibodies.

PCR (polymerase chain reaction) testing for the presence of Babesia DNA in a biological sample can differentiate between subspecies and species and is more sensitive than other testing methods. While only certain laboratories run the PCR test, it's really the best method for confirming a Babesia infection.

## Treatment Options and Prevention Tips

A severely ill dog, especially one that requires fluid therapy or blood transfusions, should be hospitalized. Unfortunately, the drugs used to treat babesiosis are not always effective and can have serious side effects. In asymptomatic dogs, drug treatment is not worth the risk.

In addition, drug therapy often relieves symptoms of the infection but doesn't actually clear the parasite from the dog's system. The dog can remain infected and the infection can flare up during periods of stress or immunologic imbalance.

I put chronically ill or infected dogs on several nutraceuticals and herbs, including beta-glucans, medicinal mushrooms (shiitake, maitake, and reishi), curcumin, olive leaf, and cat's claw. If possible, I also recommend hyperbaric oxygen chamber therapy.

If your dog spends time in areas that are known tick habitats, prevention is obviously the best course of action. Check your pet daily for the presence of ticks and safely remove them. A tick must feed for two to three days to infect a dog with *Babesia*, so the longer it stays attached to your dog, the higher the risk for parasite transmission.

If your dog isn't acting normally and has had exposure to ticks, ask your veterinarian about the potential for infection with a tick-borne disease. In my opinion, tick-borne infections are responsible for a lot more illness than many vets realize, and could be the reason your pet isn't feeling well.

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