

# Lyme Disease: Should You Be Concerned?

Why do healthy dogs test positive for Lyme disease? And how concerned should you be if yours does? Warm weather and pests are on their way. But you'll be best served by knowing these truths instead of getting freaked out by the scaremongers out there.

Analysis by Dr. Karen Shaw Becker

## STORY AT-A-GLANCE

- April has been designated Prevent Lyme Disease in Dogs Month, and provides a good opportunity to arm pet parents with the facts, not the hype, about canine Lyme infections
- Fact: Most Lyme-positive dogs show no symptoms, and symptomatic dogs are typically able to clear the infection on their own within a few days
- Fact: A SNAP-4Dx blood test checks for Lyme. If your dog has symptoms and tests positive, antibiotic therapy will be administered
- Fact: Dogs don't transmit Lyme to humans, infected ticks do
- Prevention tips if you live in a Lyme-endemic area include using a (preferably natural) tick repellent, and checking your dog twice daily for ticks

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Warm weather is on the way, and so are the pests that pester our pets. Ticks and mosquitoes top the list of problem parasites, so heading into the summer months, the traditional veterinary community has designated April not only **National Heartworm Awareness Month**, but also Prevent Lyme Disease in Dogs Month.

Regular readers here know that I don't get as wound up about these bugs as many other veterinarians do. It's not that I don't recognize the potential dangers of parasitic disease, because I certainly do.

I just don't feel it's constructive to scare the living daylights out of pet parents, nor do I advocate the constant use of chemical insecticides or vaccines, which are staples in the conventional veterinary community.

Sadly, there's a lot of misinformation floating around about Lyme disease in dogs that's quite frankly more about selling preventives and vaccines than arming pet parents with the information they need to make the best decisions about preventing disease in their animal companions.

## Facts About Lyme Disease Every Dog Parent Should Know

Lyme disease is caused by *Borrelia burgdorferi* bacteria, which is carried by certain types of ticks.

Depending on the tick and *Borrelia* species, transmission can occur rapidly, with the likelihood of infection increasing the longer the tick is attached,<sup>1</sup> so checking your dog for ticks twice daily during tick season is a smart idea.

And just because a tick carrying the bacteria attaches to your dog doesn't mean he will get Lyme disease, as only a percentage of dogs exposed become infected. Lyme disease symptoms in dogs differ from human symptoms. For example, humans develop a telltale rash or red area at the site of the bite, but dogs don't.

And in fact, many dogs infected with *B. burgdorferi* show no symptoms at all, and the bacteria is only discovered during routine blood tests, which is why I recommend checking for infection at least annually.

If your dog does develop symptoms of an infection, it will typically be well after the tick bite — usually months later. Common symptoms of Lyme disease include:

- Fever
- Lameness that shifts from leg to leg
- Hot, painful, swollen lymph nodes
- Lethargy
- Joint swelling
- Loss of appetite

Rarely, an infected dog develops severe, progressive kidney disease. Kidney failure can be life-threatening, so if your dog has tested positive for Lyme, it's a good idea to schedule regular blood and urine tests to monitor her kidney function.

Occasionally, dogs also develop a heart or nervous system problem after being infected with *B. burgdorferi*.

It's important to know that if your dog does become infected, there's no evidence he can make you or another family member sick. However, it is possible for you to become infected from a tick that detaches from your pet before it's fully engorged, and attaches to you.

## **Lyme Disease Causes Few or No Symptoms in Most Dogs**

Researchers at the University of Pennsylvania School of Veterinary Medicine published an interesting study a few years back on Lyme disease in dogs.<sup>2</sup>

A group of Beagles was experimentally infected with *B. burgdorferi*. None of the adult dogs got sick and none showed any symptoms of the disease — no fever, no flu symptoms, no cardiac or neurologic issues.

In from two to five months after they were infected, the Beagle puppies in the study experienced about four days of transient symptoms such as fever and lameness. By the fifth day the symptoms were gone, indicating the pups' bodies cleared the infection quickly.

The results of the Beagle study correlate closely to what veterinarians see in their practices.

About 95% of dogs that test positive for Lyme disease live in just a dozen U.S. states. These are states in which Lyme disease is endemic (pervasive) — states with heavy infestations of deer ticks.

There are cases of Lyme in other states, but in locations where the infection is rare, dogs aren't routinely tested for it unless they are symptomatic.

In Lyme-endemic areas of the country, veterinarians test regularly for the disease even in healthy dogs. The results show that a large percentage of dogs are seropositive, meaning they have Lyme-related antibodies in their blood from exposure to the disease. However, they have no clinical symptoms of infection.

The bottom line is that while exposure to *B. burgdorferi* in dogs is common, Lyme disease is not. In fact, in some areas of New England, the vast majority of healthy dogs are Lyme-positive. These are not sick dogs, but dogs who've been exposed to the bacteria that causes the disease.

Statistics show that the immune systems of seropositive dogs have identified the Lyme disease pathogen and mounted an appropriate, effective response. So even though they test positive for exposure, they do not become sick with the disease.

It's very important if your dog tests positive on the 4DX screening test that you discern exposure from actual infection with a simple follow-up test called the Quantitative C6 test (QC6) that can be easily added onto the submitted sample by calling the lab.

Many veterinarians make the mistake of assuming exposure equals infection and unnecessarily treat dogs with antibiotics. The QC6 test is the best way to find out if treatment is necessary.

## **Lyme Disease Prevention Tips**

- In the spring, summer and fall, avoid tick-infested areas.
- If you live where Lyme disease is endemic or you inadvertently wind up in a tick-infested area, check your dog for ticks twice each day. Look over her entire body, including hidden crevices in the ear, under her collar, in the webs of her feet and under her tail.
- Use tick repellents. There are natural anti-tick products on the market, however, in Lyme endemic regions of the U.S., many veterinarians will recommend you use a chemical repellent.

It's important to investigate the risks and benefits of any medication before you give it to your pet, as most have side effects. Combining natural tick repellents, including topical diatomaceous earth, herbal sprays and collars (herbal, amber and Shoo!Tags may all be beneficial), may help reduce the number of chemical applications your vet recommends.

- There is a vaccine available for Lyme disease, but I don't recommend it for a couple of reasons. Number one, this vaccine is known to send the immune system into overdrive, which can trigger a number of serious secondary reactions including autoimmune disease.

Number two, many pet parents believe the vaccine will prevent ticks from attaching to their dog. This isn't the case — you will still need to apply a topical tick repellent to your pet.

## Should I Be Worried About My Own Dog?

Since up to 95% of dogs exposed to Lyme disease never get sick from it, chances are if your dog is exposed and healthy, he won't either. But if he winds up one of the unlucky 5% to 10% that becomes ill with Lyme symptoms, ask your veterinarian to run a confirming QC6 test if the SNAP-4Dx blood test is positive.

The QC6 test will confirm your dog is actually positive and will also allow your vet to check to insure treatment was successful. He or she may also do a **urinalysis** to find out if your dog is excreting protein in his urine and provide kidney support during treatment.

Dogs can acquire Lyme disease and tick co-infections more than once, so continuing to test for re-infection is necessary, even after your dog has been successfully treated for the disease. If you suspect your pet has symptoms of Lyme disease, it's important to have him seen by a veterinarian.

### Sources and References

[PetMD](#)

<sup>1</sup> [International Journal of General Medicine. 2015;8:1-8](#)

<sup>2</sup> [Journal of Veterinary Internal Medicine. 2006 Mar-Apr;20\(2\):422-34](#)

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