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Dog Tips

Lyme Exposure Sweeps Across the Nation: What You Should Know

The nasty parasite is now rearing its ugly head and presenting a high or moderate risk for exposure in about 30 locations. However, the way it presents in humans and dogs is much different. What you need to know if you live in one of these higher risk locations.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- April is Prevent Lyme Disease in Dogs month
- The vast majority of dogs who test positive for Lyme live in just a dozen U.S. states that have heavy infestations of deer ticks
- A large percentage of dogs in Lyme-endemic states test positive for exposure to the Lyme bacterium, but do not develop Lyme disease. Do not accept antibiotics until your vet has performed a confirming test that differentiates exposure from infection
- Ask your veterinarian to run a SNAP-4Dx blood test to check for multiple tick-borne infections, including Lyme disease in place of a regular heartworm test

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The American Veterinary Medical Association (AVMA; or more specifically, Merial, manufacturer of several flea/tick preventives) has designated April as Prevent Lyme Disease in Dogs month.[1]

If you're a regular visitor here at Mercola Healthy Pets, you know I don't hit the panic button with the arrival of pest season like many in my profession do. While I certainly understand the dangers of parasitic disease, I don't feel the best way to approach the problem is to scare pet parents or hand out chemical insecticides like candy.

We live in the same environment our pets do, and have the same risks of many tick-borne diseases, yet we don't apply monthly pesticides to ourselves or to our human children every month, year round, as a means of prevention. We take a common sense approach to reducing our own tick-borne disease risk, yet we're instructed to take an extreme pesticide-heavy approach when it comes to our dogs. It's something to think about.

It's also important to note there's a lot of misinformation out there about Lyme disease in dogs that's more about selling preventives and vaccines than offering pet parents the information and guidance they need to make the best decisions about preventing disease in their animal companions.

How Dogs Acquire Lyme Disease

The Borrelia burgdorferi bacterium, which is carried by certain types of ticks, is the culprit in Lyme disease (borreliosis).

It's important to understand that even if an infected tick attaches to your pet, it's not a foregone conclusion that they will develop Lyme disease, as only a percentage of dogs exposed become infected (less than 10%). Lyme disease in dogs doesn't present in the same way it does in humans. For example, humans develop a telltale rash or red area at the site of the bite, but dogs don't.

Many dogs infected with B. burgdorferi show no symptoms at all, and the bacterium is only discovered during routine blood work (which is why I recommend it at least annually). When symptoms do occur, they usually appear long after the tick bite — typically two to five months later. Common symptoms of canine Lyme disease include:

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

Once in a great while an infected dog develops severe, progressive kidney disease. Since kidney failure can be life-threatening, 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. If your dog becomes infected with Lyme, there's no evidence he can make you or another family member sick. However, you can become infected from a tick that detaches from your pet before it's fully engorged, and attaches to you.

Lyme Exposure Is Common in Dogs, but the Disease Is Not

There was a study conducted a dozen years ago on canine Lyme disease in which beagles were observed after exposure to B. burgdorferi.[2] None of the adult dogs got sick and none showed any symptoms of the disease. Not one of the adult **beagles** developed a fever, flu symptoms, or cardiac or neurologic issues.

A few months after exposure, the Beagle puppies in the study developed transient symptoms such as fever and lameness for about four days. 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 (you can view a parasite prevalence map **here**).[3] 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 areas of the country where Lyme disease is prevalent, 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 take-home message: While exposure to B. burgdorferi in dogs is common, Lyme disease infection is not. In fact, in some areas of New England, the vast majority of healthy dogs carry high Lyme antibodies — they "glow" positive on the screening test (a 4DX or Accuplex blood test). These are not sick dogs, but dogs who've been exposed to the bacteria that causes the disease.

"Exposure" means dogs' bodies have encountered the bacteria (just as our bodies encounter thousands of different bacteria that we don't become infected with) and have mounted an appropriate immune response: they made antibodies and fought off the foreign invader correctly.

Antibodies are a lasting response you can measure after your pet's body has waged and won a successful battle with a pathogen. These dogs become "seropositive" for Lyme, meaning they've been exposed to the bacteria and won the battle.

The job of our immune system is to mount an immune response (create antibodies) to potential threats: viral, fungal and bacterial pathogens that exist in our environment. Most of the time bodies do this automatically (thankfully!); we rarely become infected. That's the way our immune defense system is wired and it usually does a magnificent job protecting our pets and us.

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, they do not become sick with the disease. And they do NOT need antibiotics!

A Word About the Misuse and Abuse of Antibiotics

When it comes to Lyme disease, this is where veterinarians become confused and antibiotics get abused. Vets don't know to test for exposure versus disease, so they hand out unnecessary drugs that can destroy your dog's microbiome and set up issues for months down the road. I believe Lyme seropositive dogs will eventually become the norm. Vets will continue to hand out antibiotics like candy, so it must be your job to know when they're needed and when they're not.

As an example, I just got my Canadian vet license and see a handful of patients every month in Canada. Many dogs in this country are starting to have routine "positives" on 4DX tests (the **heartworm** + other tick diseases test I recommend everyone use), but this doesn't mean they need antibiotics, it means they need to be tested for infection!

I'm seeing vets in Canada (and many vets in the U.S.) panic on these preliminary screening tests and automatically prescribe doxycycline (an antibiotic) unnecessarily. Please decline these drugs if your vet offers them without confirming your dog is actually infected. Be smart and know the facts, most dogs don't need them.

How do you know what dogs are truly infected and what dogs are simply carrying antibodies demonstrating they've been through the war and their bodies did the job they were designed to do and fought off the enemy? A QC6 test.

Do NOT allow any vet to prescribe antibiotics without first running this critical test. A quantitative C6 test (QC6) discerns exposure from true infection. Never allow any vet to prescribe antibiotics based on exposure alone: this tells you they have not been adequately educated and you risk destroying your dog's microbiome health due to this all-too-common panic response.

Your vet may not be informed, but you are. And you should never allow this flagrant abuse of antibiotics to occur without informing them of the facts: over 90% of dogs testing positive on the screening test (4DX) do not need treatment, as their immune system did exactly what it was supposed to do — fight off the disease. The follow-up QC6 test is the only responsible option and the one you should insist on.

The vast majority of dogs are negative when testing exposure (4DX) versus infection (CQ6). If your dog truly is infected and antibiotics are required, you can create a microbiome restorative plan to minimize damage.

It's important to recheck the QC6 every one to three months until levels are normal. I recommend consulting an integrative or functional medicine vet if the levels don't continue to drop, since there are effective options for resistant animals, but only through nontraditional routes not taught in veterinary school.

4 Common Sense Steps to Help Your Pet Stay Safe

1. In the spring, summer and fall, avoid tick-infested areas.
2. 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 in her ears, under her collar, in the webs of her feet and under her tail.
3. Use a tick repellent. There are natural tick preventives available, 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. If you use these preventives, consider a detox protocol for a week after administration.
4. 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, the vaccine doesn't prevent ticks from attaching, so a topical tick repellent is also necessary.

Sources and References

AVMA.org

[1] AVMA.org

[2] Journal of Veterinary Internal Medicine. 2006 Mar-Apr;20(2):422-34

[3] CAPC.org