Lyme disease is a zoonotic disease, which means it can affect both people and pets. Cases of the disease have been reported throughout the United States, but Lyme disease is seen more commonly in the upper Midwest, Atlantic, and Pacific coastal states.

Lyme disease can be difficult to diagnose and can cause serious health problems in your dog. The best way to prevent the disease is to understand how it occurs and take steps to protect your entire family, including the 4-legged members. Understanding the signs of Lyme disease in your pet can give you a better chance of catching the disease early and treating it effectively.

**HOW DOES LYME DISEASE OCCUR?**

Lyme disease is spread through the bite of a tiny, hard-shelled tick known as a deer tick. It's important to know that ticks don't just bite; they burrow into the skin and feed for days on their victims' blood. To remain attached while they are feeding, ticks cut the victim's skin, insert a tube equipped with tiny barbs, and secrete a type of glue. Their saliva contains a type of painkiller that numbs the area, which is why pets aren't bothered by a tick bite. Infection occurs typically after the tick has been attached for 24 to 72 hours.

Although ticks are most active during the warmer months of the year, the fact is that these hardy pests can survive colder months if they find adequate shelter. That's why tick prevention should be at the forefront of every pet owner's mind year-round, especially those who live in high-risk areas. And ticks aren't only found in the woods; they may also be found in areas where wooded areas meet lawns, in tall grass, under plants in your yard, under leaves, and around stone walls and woodpiles. Dogs are especially vulnerable because they walk so low to the ground, making it easy for ticks to hop on as the dog walks by.

**DIAGNOSING LYME DISEASE**

Although Lyme disease is one of the most common tick-transmitted diseases in the world, only 5% to 10% of affected dogs show any signs.

One of the most common signs, known as "shifting-leg lameness," is caused by joint inflammation. Shifting-leg lameness may last for only 3 to 4 days but recurs (continues on back)
The best way to make sure your dog doesn’t contract Lyme disease is to take year-round precautions.

After taking a thorough history, your veterinarian may run a number of tests to look for Lyme disease. These may include blood chemistry tests, a complete blood cell count, urinalysis, fecal exam, and x-rays. If Lyme disease is found, he or she will prescribe one of two antibiotics—commonly either doxycycline or amoxicillin—for a minimum of 14 days, but 30 days is usually recommended. An anti-inflammatory medication may also be prescribed and, in some animals, a pain reliever.

If your dog is diagnosed with Lyme disease, experts recommend that all other pets—and people—in your home be evaluated by a veterinarian or physician. The disease is not contagious, but families often spend time together and may also have been unknowingly exposed to tick bites.

**TREATMENT AND PREVENTION**

Unfortunately, treatments do not always work properly, and some dogs may relapse. These pets may have to continue treatment, and some may never be completely rid of Lyme disease. The majority of pets, though, respond completely to antibiotics and the disease becomes eradicated.

The best way to make sure your dog doesn’t contract Lyme disease is to take year-round precautions. Check your dog routinely for ticks and keep your dog away from tick-infested areas as much as possible. Checking for ticks is especially important after your dog has spent time outdoors where ticks are likely to be.

Starting at the head, run your hands over your dog’s body, using your fingers like the teeth of a comb. Ticks are drawn to dark, hidden areas, so be sure to check under the tail and around the anus, between the toes, inside the groin and armpits, and inside the ears.

Your veterinarian can advise you about the available preventive products, which include sprays, collars, and spot-on topical products that can kill and repel ticks if they find their way on your dog. A canine vaccine against Lyme disease is also available, but whether your dog is a candidate depends on where you live as well as your dog’s current health, age, lifestyle, and other factors.

**LYME DISEASE IN HUMANS**

People and their pets spend lots of time together, including in areas where disease-transmitting ticks may be lurking. The incidence of Lyme disease in humans is on the rise, possibly due to increased media coverage in recent years. Twelve thousand cases of Lyme disease were reported in humans in 1995, but that number skyrocketed to 40,000 in 2015. Health officials believe the real number is far greater, with estimates of about 300,000 cases of Lyme disease.

The majority of people infected with Lyme disease develop a distinctive bullseye rash. Disease prevention in people includes avoiding tick-infested areas; covering the arms, legs, head, and feet when outdoors; wearing light-colored clothing; and using insecticides when you may encounter ticks. And, of course, be sure to check for ticks once you’re back indoors.

**Removing a Tick from Your Dog**

The ticks that cause Lyme disease are extremely small and easy to miss on your pet. If you do find a tick on your dog, don’t panic. To safely remove it, follow these steps:

1. Use tweezers to grab the tick by the head or mouth directly where it enters the skin. Do not grab the tick by its body.
2. Pull firmly and steadily directly outward. Do not twist the tick or pull it in a jerking motion.
3. After removal, place the tick in a jar of alcohol to kill it. Ticks can survive in water and are often not killed by flushing them down the toilet.
4. Clean the affected area with a disinfectant.
5. Wash your hands thoroughly.

Be sure to remove the entire tick, including the mouthparts. Do not try to burn the tick or apply anything to the skin in an effort to make the tick crawl away; these methods do not work. Also, do not crush the tick because disease-causing agents, if present, can be spread through a tick’s bodily fluids.