

## LYME DISEASE

Finding a tick on your dog or cat brings up the immediate worry of the possibility of Lyme disease. This disease is often talked about since the symptoms can be variable and the signs delayed. A definitive diagnosis is also not easy.

### So – how much do we have to worry about Lyme disease on Vancouver Island?

First of all, let me explain a little bit about the offender, a corkscrew shaped bacterium by the name of *Borrelia burgdorferi*. Transmission of the pathogen is via ticks, usually the black-legged in our area (*Ixodes* species).



Photo by Steve Jacobs,  
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Lyme disease was first seen in Sweden in 1908. A mysterious outbreak of arthritis in Lyme, Connecticut, led to the identification of the disease in 1975.

As per one of our veterinary research websites (VIN-Veterinary Information Network), several thousand ticks were tested on the coastal mainland and on Vancouver Island in the past, and only 0.35 % were positive for the bacteria which causes Lyme disease. Some studies suggest that only 5% of dogs with *Ixodes* ticks actually get sick (2). In most cases, the tick needs to be attached for at least 24 hours to cause disease transmission (5). There seem to be some areas on Vancouver Island that seem to have more ticks than others.

### What clinical signs of the disease do we see in our pets?

Contrary to Lyme disease in people, most infected dogs do not show any clinical signs. The incubation period (that is the time from the infection to the showing of symptoms) can be 2 to 5 months long. The most common clinical signs in dogs are a fever, decreased appetite, and lameness. Kidney problems caused by Lyme disease are much rarer, but more serious (1) and may not respond well to antibiotic treatment (3).

### Should we vaccinate against Lyme disease?

The vaccine, as all vaccines, is not 100% protective. On VIN, an efficacy from 40% to 80 %, possibly 90%, is suggested (2). Dogs susceptible to developing kidney disease from the infection may not be protected by currently available vaccines. There are actually concerns that vaccination of those susceptible animals, if prior infection has occurred, may trigger a more harmful response to the disease (3). Testing for Lyme disease prior to vaccination is recommended by some.

According to AAHA (American Animal Hospital Association) vaccination guidelines from 2011, the Lyme vaccine is not considered a core vaccine. It is recommended for dogs with a known exposure to *Ixodes* ticks, e.g. in endemic areas. The use of regular tick control products is important regardless whether a dog has been vaccinated or not, since ticks can also transmit other infections besides Lyme disease (4). Keep in mind that some tick control products for dogs are very toxic to cats.

Since last year new veterinary products have come on the market for tick control (a choice of chewable tablets lasting either 1 or 3 months) and controlling ticks AND fleas. Ticks will usually get killed within 12 hours by those.

## How do I get a tick off my dog or cat?

Do NOT burn off a tick. Do NOT try and get them off with the use of Vaseline, nail polish, or various other substances. You want either fine tweezers or special tick pullers. With tweezers, grab the tick at the mouthparts/head. Then gently pull straight up. Do not squeeze the tick since this will cause it to enter its intestinal contents (which include any infectious organisms present) into the wound.



The longer the tick stays attached, the greater the potential for disease transmission. If the mouthparts/head stays in, contact your veterinarian for advice. In the past, ticks could be sent off for identification and testing – this service has been discontinued and is no longer available to us. There is a new test available to check for Lyme disease – we are just in the process researching its reliability. Please ask us if you want to know more about it.

You can read more about the pros and cons for tick testing on this link to the Worms and Germs Blog (University of Guelph, Center for Public Health and Zoonoses). Click on [There's a Test For That! But, is There a Need?](#) to find out more.

You Tube video on tick removal using tweezers: <http://www.youtube.com/watch?v=0wotB38WrRY>

You Tube video using O'Tom Tick Twisters: <https://www.youtube.com/watch?v=jloCTWYJsvo>

## References

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2. “lymes (sic) vaccination”. 2012. Discussion on VIN (Veterinary Information Network) between Drs. Datz (Consultant for Infectious Disease/Immunology and Parasitology) and Virtanen.
3. Jacobs, S. 2013. Lyme Disease. University of Pennsylvania. <http://ento.psu.edu/extension/urban/lyme-disease>
4. Centers for Disease Control and Prevention (CDC). 2013. Lyme disease transmission. <http://www.cdc.gov/lyme/transmission/>

