

Lyme Disease

As the spring is upon us and the summer is nearing, I thought I would discuss a topic that is often on the minds of many parents, Lyme disease. Lyme disease is caused by a bacterium called *Borrelia burgdorferi* and is transmitted to humans via infected blacklegged ticks.



(The tick on the far left is an adult blacklegged tick, next is an adult male, nymph and then larva. The adult female and nymph can transmit disease through their bites. The scale is in centimeters to illustrate how small the blacklegged tick is.)

First of all, it is important to know that most people bitten by a tick do not get Lyme disease. For the transmission of Lyme disease to occur, a tick needs to be attached to the skin for 24 or more hours. If a tick is found, it should be removed with a pair of fine tipped tweezers and the person monitored for symptoms of Lyme disease. Without symptoms of Lyme disease, there is no need to seek medical attention or to begin treatment. One of the earliest symptoms of Lyme disease is a rash called erythema migrans.



The rash appears and expands over several days. As it expands the center often clears giving it a bull's-eye appearance. The rash initially appears at the site of the tick bite and can then spread to involve other areas. Other symptoms to look for include fatigue, chills, fever, headache, muscle and joint pain, along with swollen lymph nodes. If left untreated, the infection can spread to other parts of the body including the muscles, heart, brain and nerves.

If you suspect you have Lyme disease, it is imperative to contact your health care provider immediately for testing and diagnosis. The diagnosis of Lyme disease is based on symptoms, objective physical findings, and a history of possible exposure to ticks. Laboratory testing is used for confirmation. Lyme disease can be treated and cured with antibiotics in most people. Those treated during early stages of infection usually recover rapidly and completely. A small minority of patients treated during later stages of the

disease, may have persistent or recurrent symptoms. These patients are usually treated with a repeated, longer course of antibiotics that is curative.

Now that you know how you get Lyme disease, let me discuss how to prevent it. Since ticks prefer wooded or bushy areas, it is best to avoid these areas if possible. Extra caution should be exercised during May, June, and July when ticks that transmit Lyme disease are the most active. If you must enter one of these areas, walk in the center of the trail to avoid contact with overgrown grass, brush, and leaf litter. Keep ticks off your skin by using insect repellents with 20-30% DEET. The repellent should be applied to exposed skin and clothing to prevent tick bites. Effective repellents can be purchased in most grocery or pharmacy stores. Another type of repellent, permethrin can be purchased at outdoor/camping equipment stores. Permethrin should be applied to your clothing to kill ticks on contact. Permethrin should **NEVER** be applied directly to your skin or used in small children that may potentially touch their clothing and put their hands in their mouths. When going into wooded areas, it is best to wear long pants, long sleeves, and long socks. Lighter clothing helps you to spot ticks that have attached to your clothing. It is best to tuck your shirt into your pants and your pants into your socks in an effort to keep ticks on the outside of your clothing. Before coming in from outdoors (even from your own backyard), it is best to check your clothing and remove any ticks. Your clothing should be washed immediately in hot water and dried with high heat to kill any ticks you may have missed. Any ticks found on your skin should be removed immediately. By utilizing these prevention tips, you and your children have a greater chance of decreasing your risks of getting Lyme disease.