



A CUP OF HEALTH WITH CDC

Beware of Ticks

Lyme Disease Awareness Month – May 2015

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[Announcer] This program is presented by the Centers for Disease Control and Prevention.

[Dr. Gaynes] Welcome to *A Cup of Health with CDC*, a weekly feature of the *MMWR*, the Morbidity and Mortality Weekly Report. I'm your host, Dr. Robert Gaynes.

As winter gives way to spring and we head outdoors, it's important to take steps to avoid getting Lyme disease.

Dr. Christina Nelson is a researcher with CDC's National Center for Emerging and Zoonotic Infectious Diseases, and she's joining us today by phone to discuss ways to help prevent Lyme disease. Welcome to the show, Christina.

[Dr. Nelson] Thank you so much, Bob.

[Dr. Gaynes] Christina, let's start with, what are the symptoms of Lyme disease?

[Dr. Nelson] I'll start first with a brief description of what Lyme disease is. Lyme disease is an infection caused by a bacteria that is transmitted by the bites of infected blacklegged ticks. The most common sign of Lyme disease is a red rash at the site of the tick bite, and that usually appears one to two weeks after the tick bite. It's usually a bulls-eye shape, but not always, and it's greater than two inches across and it gradually expands. And, this is actually a local infection of the skin by the Lyme disease bacteria. People can also have fever, headache, fatigue, muscle and joint aches, so people can actually feel quite sick during this early infection. If the early infection is left untreated, the bacteria can then spread to other parts of the body and cause additional symptoms and these include a droop on one or both sides of the face, and that's due to infection of the facial nerves, heart rhythm disturbances, meningitis, or pain and swelling in the large joints, such as the knees.

[Dr. Gaynes] At what time of year is Lyme disease most common?

[Dr. Nelson] Since Lyme disease is transmitted by ticks, the infection occurs most commonly when the ticks are out in full force. So that means, starting in spring when the weather is warming up. This is when the nymphs are out. Nymphs are like the teenagers of ticks. They're not the baby larvae but they're not quite adults. They are actually very small—the size of a poppy seed—and very hard to find because of this. The ticks are out through the summer and into the early fall. Fall is when the adult ticks are really out, commonly. But it's important to note that in milder climates, ticks can be out during the winter, any time the temperature is above 50 degrees.

[Dr. Gaynes] Is Lyme disease more common in any particular area of the country?

[Dr. Nelson] Yes. The majority of cases occur in New England; the mid-Atlantic states, like Virginia, Maryland, and Pennsylvania; and also in the upper mid-West, particularly in Wisconsin and Minnesota. There are small regions of northern California, Oregon, and Washington where people can contract Lyme disease but these do not account for large numbers of cases. In other parts of the country, either the black legged tick is not present, or if the tick is there, it has different behavior and ecology so it does not typically bite humans.

[Dr. Gaynes] Christina, what should a person do if they are experiencing symptoms of Lyme disease?

[Dr. Nelson] We recommend if people are experiencing the symptoms that I mentioned of Lyme disease that they see their health care provider. Lyme disease can be treated with antibiotics but the best outcome is when people are diagnosed and treated early in the course of infection. So if you have the symptoms, see your health care provider.

[Dr. Gaynes] What are some ways to prevent Lyme disease?

[Dr. Nelson] The best way to prevent Lyme disease is to prevent tick bites, so when you're outside, avoid areas where tick bites are common. We definitely want people to get outside and enjoy outdoor activities, but certain behaviors can reduce your risk. So for example, when hiking, you can walk in the center of the trail, away from the thick brush where the ticks typically are. After coming indoors, it's important to shower soon after that and this serves a dual purpose. First of all, it helps wash away unattached ticks and also gets your clothes off so you can do a complete body check. And, speaking of body checks—daily tick checks during the high tick season—in the spring and summer—are important. Make sure to inspect your scalp and skinfolds and around the waist because ticks are very good at hiding there. And if you have children, helping them do tick checks is important, as well. Repellent is also very helpful for preventing tick bites. One repellent that is commonly used is called DEET and you can use that in concentrations up to 30 percent. The American Academy of Pediatrics says it is okay for kids over two months of age to use DEET, as long as you follow the package instructions. Higher percentages or concentrations last longer but over 30 percent does not give you much additional benefit. Lemon eucalyptus oil is a good alternative for people who prefer a naturally derived product and that is okay to use on kids over three years of age. And permethrin also is very helpful. It's not for skin, it's actually for treating clothing. You can buy clothes that have been pre-treated with permethrin or you can buy bottles of permethrin and treat your own clothes and it lasts through many washes and is very good at repelling ticks. Finally, if you do find a tick attached to your skin, remove it with tweezers using gentle upward pressure. In most cases, it takes at least 36 hours to transmit the Lyme disease bacteria, so removing the tick promptly will *greatly* reduce your risk of Lyme disease.

[Dr. Gaynes] Christina, what is the *best* source of information on Lyme disease?

[Dr. Nelson] So, Bob, there's a lot of misinformation out there, so for *accurate* information, we recommend people go to cdc.gov/lyme. So visit and check it out. Again, that's cdc.gov/lyme.

[Dr. Gaynes] Thanks, Christina. I've been talking today with CDC's Dr. Christina Nelson about ways to prevent Lyme disease.

To help prevent tick bites, avoid areas where ticks are common, apply repellents that contain up to 30 percent DEET, wear pesticide-treated clothing, and check for ticks daily. If you've been in a tick habitat and get a fever, muscle and joint pain, or rash, see a health care provider immediately.

Until next time, be well. This is Dr. Robert Gaynes for *A Cup of Health with CDC*.

[Announcer] For the most accurate health information, visit www.cdc.gov or call 1-800-CDC-INFO.