

PRESS RELEASE

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SUBJECT: Lyme Disease Found Locally

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Lyme Disease is Here!

The recent announcement that Lyme Disease is now endemic in Berrien, Van Buren and Allegan Counties increases the level of concern that physicians and the public must have regarding preventing tick bites, treating tick-related rashes, and evaluating patients for Lyme Disease.

Until recently, people in Southwest Michigan could take some reassurance regarding possible tick exposure because the only area in Michigan which was endemic for Lyme Disease was Southern Menominee County which is in the Upper Peninsula adjacent to Wisconsin. However, Lyme Disease has been present in Northwestern Indiana, and investigators from Michigan State University (MSU) have been surveying the tick and rodent populations of Berrien, Van Buren, Allegan, Cass and St. Joseph Counties. Preliminary results from their survey now indicate that Lyme Disease has extended up into Berrien, Van Buren and Allegan Counties.

Ixodes scapularis is the tick which transmits *Borrelia burgdorferi*, the spirochete responsible for Lyme Disease. *I. scapularis*, also known as the Black Legged Tick, or in the past known as the Deer Tick, are new to the Southwestern Michigan area. Of roughly 52 sites checked so far in the 5 county area, 10 have shown the presence of *I. scapularis*. Several ticks tested have also shown infection with *B. burgdorferi*.

The local presence of Lyme Disease is also demonstrated by tests of trapped rodents. In addition to deer, *I. scapularis* can live on white-footed mice, the primary reservoir for the infection. Researchers leave small mammal traps in areas under investigation then return to test the trapped wild rodents for *B. burgdorferi* infection. Several such rodents have tested positive.

The sites testing positive for the presence of *I. scapularis* ticks are primarily along the coastline of Lake Michigan. However, two locations which are considerably inland have tested positive, as well. The tick can migrate into new areas on deer and they can also migrate on certain ground nesting birds.



***Ixodes scapularis*, the Black Legged tick**

From left to right: Adult female, adult male, nymph, and larva on a centimeter scale.

These ticks are much smaller than common dog and cattle ticks. In their larval and nymphal stages, they are no bigger than a pinhead.

Formal compilation and analysis of the tick and rodent data will not be presented for many months; the researchers are still in the data collection phase of their work. Dr. Ned Walker and Erik Foster of MSU are heading up the local work.

Dogs can get ill from Lyme Disease. A vaccine is available for them. However, the human vaccine for Lyme Disease was removed from the market in February 2002. Since its removal from the market, the primary means to prevent the chronic disease include: avoiding tick habitats, using personal protection measures, and seeking early diagnosis and treatment.

Avoid tick habitats: Whenever possible, avoid entering areas that are likely to be infested with ticks, particularly in spring and summer when nymphal ticks feed. Ticks favor a moist, shaded environment, especially areas with leaf litter and low-lying vegetation in wooded, brushy or overgrown grassy habitat.

Use personal protection measures: If you are going to be in areas that are tick infested, wear light-colored clothing so that ticks can be spotted more easily and removed before becoming attached. Wearing long-sleeved shirts and tucking pants into socks or boot tops may help keep ticks from reaching your skin.

The risk of tick attachment can also be reduced by applying insect repellents containing DEET to clothes and exposed skin, and applying permethrin (which kills ticks on contact) to clothes. DEET can be used safely on children and adults but should be applied according to Environmental Protection Agency (EPA) guidelines to reduce the possibility of toxicity.

Perform a tick check and remove attached ticks: The transmission of Lyme disease from an infected tick is unlikely to occur before 36 hours of tick attachment. For this reason, daily checks for ticks and promptly removing any attached tick that you find will help prevent infection. Embedded ticks should be removed using fine-tipped tweezers. DO NOT use petroleum jelly, a hot match, nail polish, or other products. Grasp the tick firmly and as closely to the skin as possible. With a steady motion, pull the tick's body away from the skin. The tick's mouthparts may remain in the skin, but do not be alarmed. The bacteria that cause Lyme disease are contained in the tick's midgut or salivary glands. Cleanse the area with an antiseptic.

Early diagnosis and treatment: The early diagnosis and proper antibiotic treatment of Lyme disease are important strategies to avoid the costs and complications of infection and late-stage illness. In many circumstances, treating persons who only have a tick bite is not recommended; however, persons with the rash, erythema migrans, should be treated. Individuals who are bitten by a deer tick should remove the tick promptly, and may wish to consult with their health care provider. Persons should promptly seek medical attention if they develop any signs and symptoms of early Lyme disease.

Lyme disease most often presents with a characteristic "**bull's-eye**" rash, erythema migrans, accompanied by nonspecific symptoms such as fever, malaise, fatigue, headache, muscle aches (myalgia), and joint aches (arthralgia). The incubation period from infection to onset of erythema migrans is typically 7 to 14 days but may be as short as 3 days and as long as 30 days. Some infected individuals have no recognized illness.



The signs of early disseminated infection usually occur days to weeks after the appearance of a solitary erythema migrans lesion. In addition to multiple (secondary) erythema migrans lesions, early disseminated infection may be manifest as disease of the nervous system, the musculoskeletal system, or the heart.

Lyme disease infection in the untreated or inadequately treated patient may progress to late disseminated disease weeks to months after infection. The most common objective manifestation of late disseminated Lyme disease is intermittent swelling and pain of one or a few joints, usually large, weight-bearing joints such as the knee. Some patients develop chronic axonal polyneuropathy, or encephalopathy, the latter usually manifested by cognitive disorders, sleep disturbance, fatigue, and personality changes. Infrequently, Lyme disease morbidity may be severe, chronic, and disabling. An ill-defined post-Lyme

disease syndrome occurs in some persons following treatment for Lyme disease. Lyme disease is rarely, if ever, fatal.

Tick Identification and Testing: Expert tick identification is available. Contact the Environmental Health Division of your Local Health Department for instructions regarding submission. The tick will be forwarded to the Michigan Department of Agriculture. If the tick is still alive and of the appropriate species, it can be tested for infection with Lyme Disease (*I. scapularis*) or Rocky Mountain Spotted Fever (the dog tick, *D. variabilis*). The Environmental Health Division of the Branch, Hillsdale, St. Joseph Community Health Agency can be reached at (517) 279-9561 or (269) 273-2161 X 230.