What is Lyme disease?
Lyme disease is caused by the bacteria *Borrelia burgdorferi*, which is transmitted to humans through the bite of an infected tick. The infected blacklegged tick, (also known as the deer tick) is a slow-feeding tick that needs to be attached at least 24 hours before the bacteria can be passed on to humans.

How common is Lyme disease?
The number of Lyme disease cases in the US has been increasing since the 1990s. Improved physician awareness and expanded tick distribution along with increased tick infection rates may have contributed towards this trend. Exposure to deer ticks and Lyme disease in Minnesota occurs primarily from May to July when people are outdoors and ticks are actively feeding.

What are the symptoms of Lyme disease?
Early symptoms of Lyme disease occur 3 to 32 days after a tick bite. The first sign of the disease is a “bull’s-eye” rash. This rash has a red center surrounded by a central clearing that is followed by another red ring, which increases in size as time goes on. Later, multiple rashes can develop. Other early symptoms include a flu-like symptoms consisting of fever, headache, fatigue, muscle and joint aches, and a stiff neck. The late stage of the disease begins months to years after initial infection. Symptoms can include chronic arthritis and joint swelling, numbness in extremities, facial paralysis (Bell’s palsy), sleep disorders and, rarely, meningitis.

How is Lyme disease diagnosed?
Lyme disease is diagnosed by its symptoms and a blood test to rule out other infections. Rashes reaching greater than five centimeters in size occur in approximately three quarters of early Lyme disease cases, but sometimes only generalized symptoms occur. Generalized symptoms can be mistaken for signs of other diseases so an initial blood test for antibodies to *B. burgdorferi* bacteria will be performed. This will be followed by a confirmatory blood test if the initial test is positive.

How is Lyme disease treated?
Lyme disease is treated with antibiotics. Usually treatment lasts for 21 days. Sometimes, if the infection has more severe symptoms, intravenous treatment may be given or oral treatment will be given for a longer period of time.

Can animals get Lyme disease?
Animals such as dogs, horses, and cattle can get Lyme disease. Symptoms in animals include acute lameness, fever, loss of appetite, fatigue and increased lymph nodes with or without swollen joints. Animals are diagnosed based on history, clinical signs, elimination of other diagnoses, blood tests, and response to antibiotic therapy.

What can be done to prevent Lyme disease?
- Avoid tick habitats such as wooded, brushy, or overgrown grassy areas.
- When hiking, wear light-colored clothing and use DEET bug spray on your skin or permethrin spray on your clothing.
- After working or hiking in areas where ticks live, check for ticks.
- Vaccines are available for dogs and tickicides should be placed routinely on dogs. Consult your veterinarian to determine if vaccination is appropriate or regarding tick preventive products.

Additional Information:
- Centers for Disease Control and Prevention
- Minnesota Department of Health

This fact sheet is meant to provide basic information. For specific health concerns please contact your physician or veterinarian. Updated 2009.