

Lyme Disease In Michigan

What is Lyme Disease?

Lyme disease is transmitted by ticks and is the most commonly reported disease associated with tick bites in the United States. More than 21,000 cases were reported to the Centers for Disease Control and Prevention (CDC) in 2007.

What's the Cause? A bacteria (*Borrelia burgdorferi*) that infects a variety of small mammals in the Upper Midwest, and is then transmitted to people through the bite of an infected Blacklegged tick

Where is it Found? In Michigan, Lyme disease in ticks and people has historically been isolated to the Western Upper Peninsula, but is now appearing in the western counties of Lower Michigan

What are the Symptoms? In the early stages, most infected people will experience a "flu-like" illness that includes fever and body aches. Up to 70% of infected persons will also present with a "Bull's-eye" rash around the site of the tick bite 3-30 days after exposure. The rash expands over time, with no pain or itching.



Above: Characteristic "bull's-eye" rashes associated with early Lyme disease - A) Rash with central clearing, B) Rash without central clearing, C) Multiple rashes

Early symptoms may include:

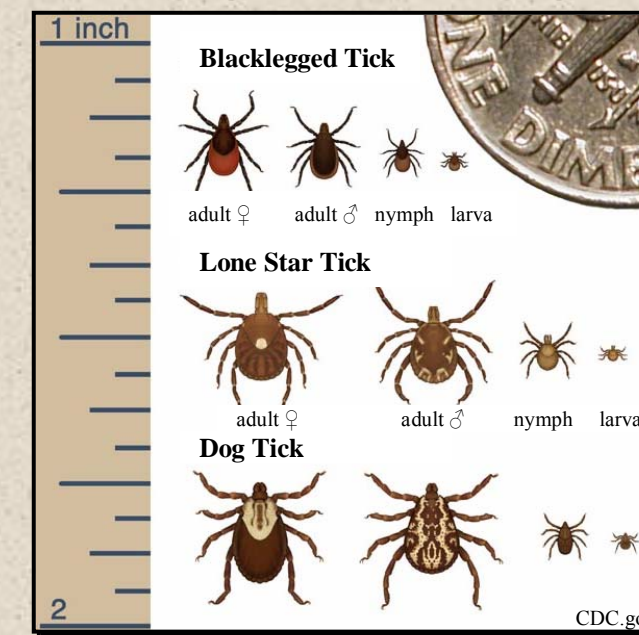
- Headache
- Spreading Rash
- Nausea
- Aching Joints and Muscles
- Fever
- Fatigue

If not treated, some people may develop complications involving the heart and/or nervous system. Specific disorders may include:

- various degrees of heart block
- nervous system abnormalities such as meningitis, encephalitis and facial paralysis (Bell's palsy), and other conditions involving peripheral nerves
- painful joints, tendons, or muscles may also be noted during this stage of the disease.

Most people can be treated successfully with antibiotic therapy when diagnosed in the early stages of Lyme disease. Therefore, early identification of symptoms and diagnosis by a physician is important.

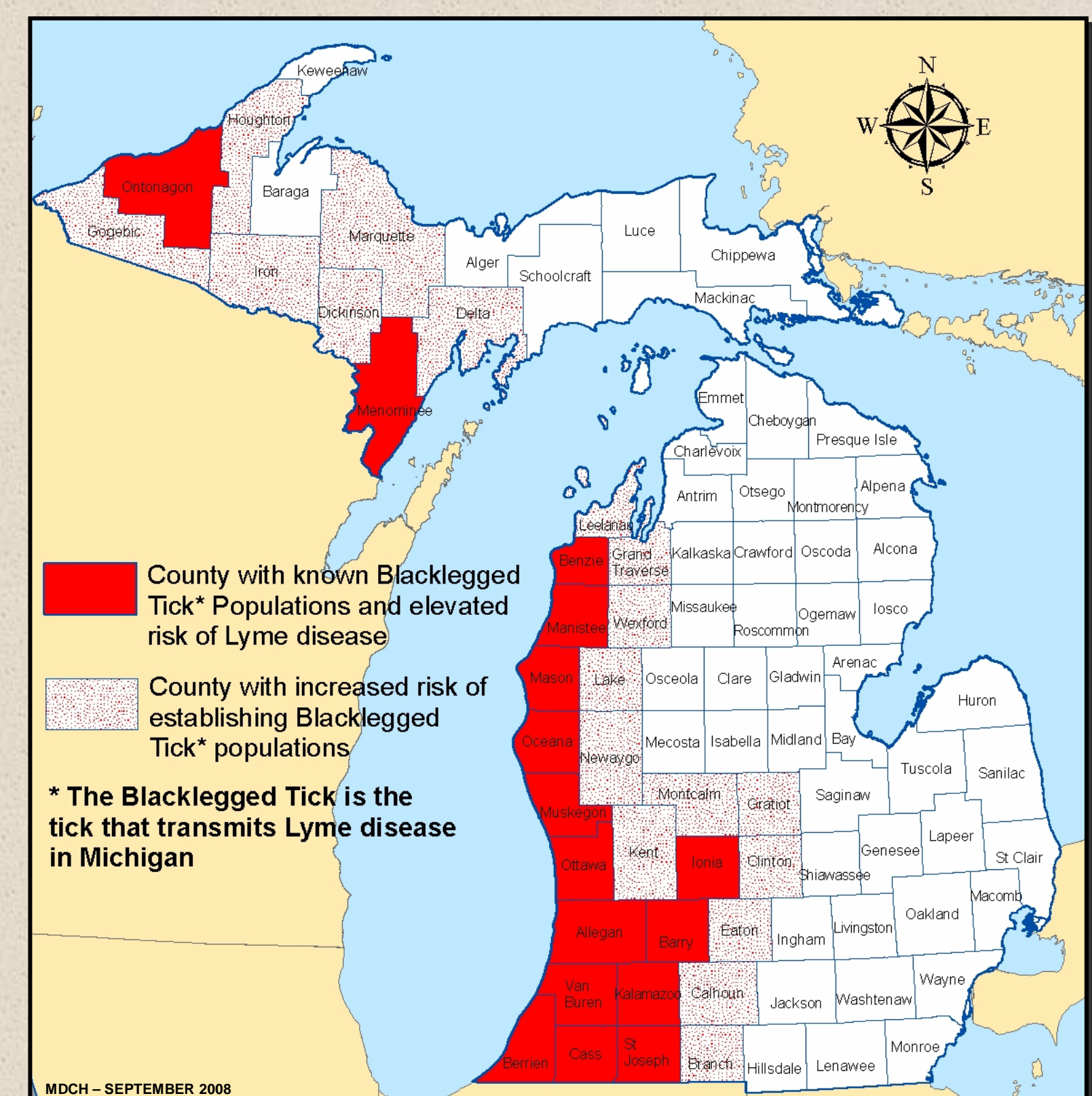
Disease Carrying Ticks



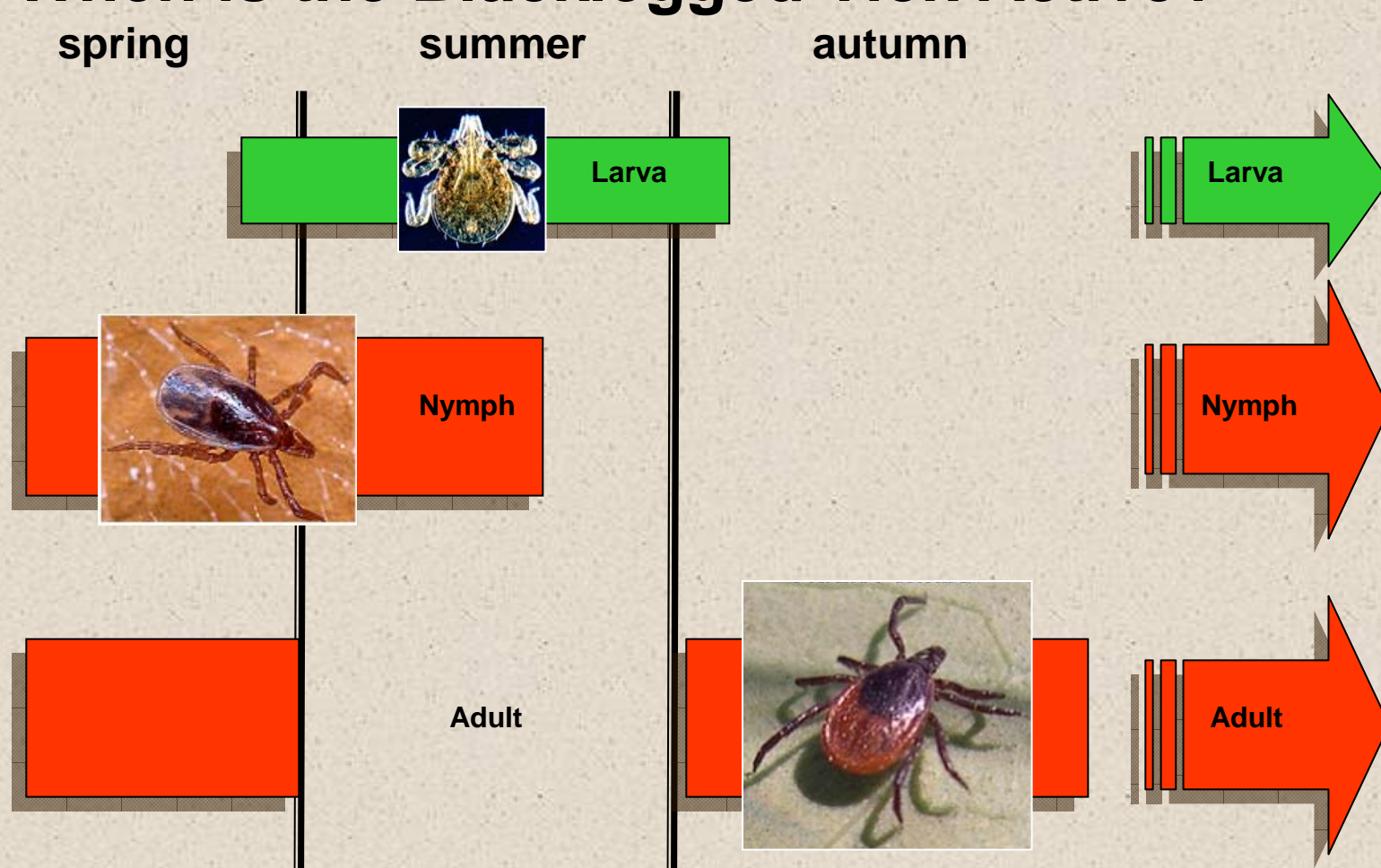
- Some ticks in Michigan can harbor animal and human diseases
- Ticks are normally found in forested areas and fields with dense vegetation
- They are widely dispersed, but often accumulate along pathways, game trails, or bedding locations used by their hosts
- Tick bites are normally painless and the tick will attach for several days

Lyme Disease Risk in Michigan

Increased attention is currently being focused on Western Lower Michigan. This area, which previously showed no evidence of Lyme disease activity, has been identified as an area of concern by researchers studying the Blacklegged Tick. Investigations conducted from 2001-2007 have discovered tick populations are being established in these areas, and found *Lyme* bacteria in the wildlife and tick populations. The map below summarizes these results.



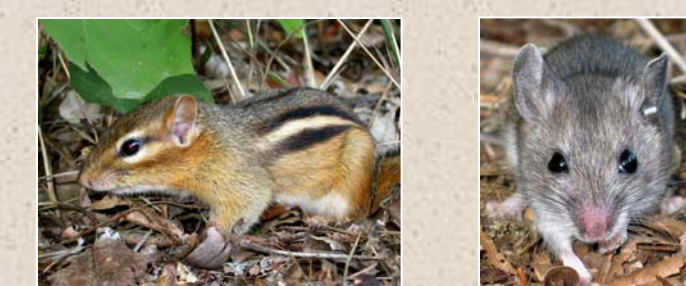
When is the Blacklegged Tick Active?



Larval ticks do not hatch with Lyme disease. They may become infected by feeding on small mammals that are the carriers of Lyme disease in the environment.

Nymphs are the most dangerous tick stage to people. They are tiny (hard to notice) and may be infected with Lyme disease.

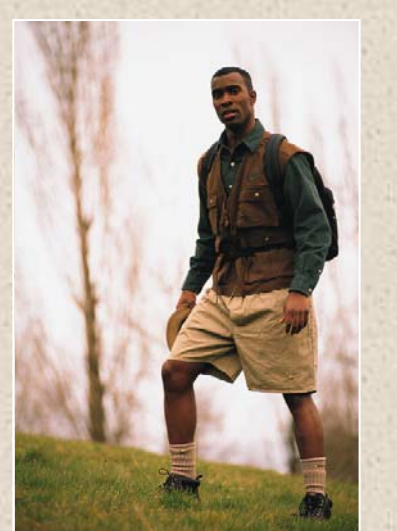
Adult ticks are also dangerous for people as they may be infected with Lyme disease. Adult ticks are easier to notice and remove promptly.



White-footed mice and chipmunks are carriers of the disease and a favorite host for larval and nymphal ticks.



The white-tailed deer is not a carrier of Lyme disease. White-tailed deer provide an excellent meal for adult ticks, as well as providing a means for travel to new areas.



People can become unknowing participants in the Lyme disease cycle by recreating or working in tick infested habitats. Knowing where and when ticks can be found, and taking appropriate protective measures are the most important factors in prevention.

Lyme Disease is Preventable

How Can You Reduce Your Risk?

If you are going to be in areas that may be tick infested, there are several ways you can protect yourself:

- An infected tick must feed for approximately 48 hours to transmit Lyme disease bacteria to its host. Therefore, prompt removal of ticks can prevent infection.
- Apply insect repellants that contain DEET to clothes and exposed skin, and/or apply Permethrin (which kills ticks on contact) to clothes to reduce the risk of tick attachment. Apply according to label guidelines.
- Several Michigan agencies can identify or test ticks from people or animals, for more information contact your local health department or visit Michigan's Lyme disease website at:

www.michigan.gov/lyme



Prompt Tick Removal

Check yourself and children for attached ticks after recreating in areas that may be tick infested. The safest way to remove ticks is to use fine-tipped forceps or tweezers. Grasp the tick as close to the skin as possible, and with gentle pressure, pull straight out. Wash the bite site thoroughly.

Protect Yourself Against Lyme Disease in Spring, Summer, and Fall

