



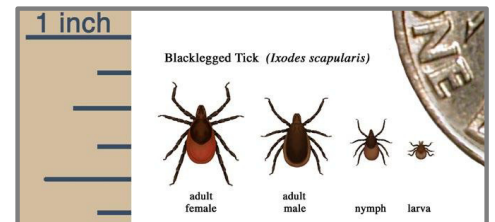
Ticks and Your Health

**Preventing tick-borne illness
in Michigan**

**Michigan Department of Health and Human Services
Michigan Department of Natural Resources
Michigan State University**

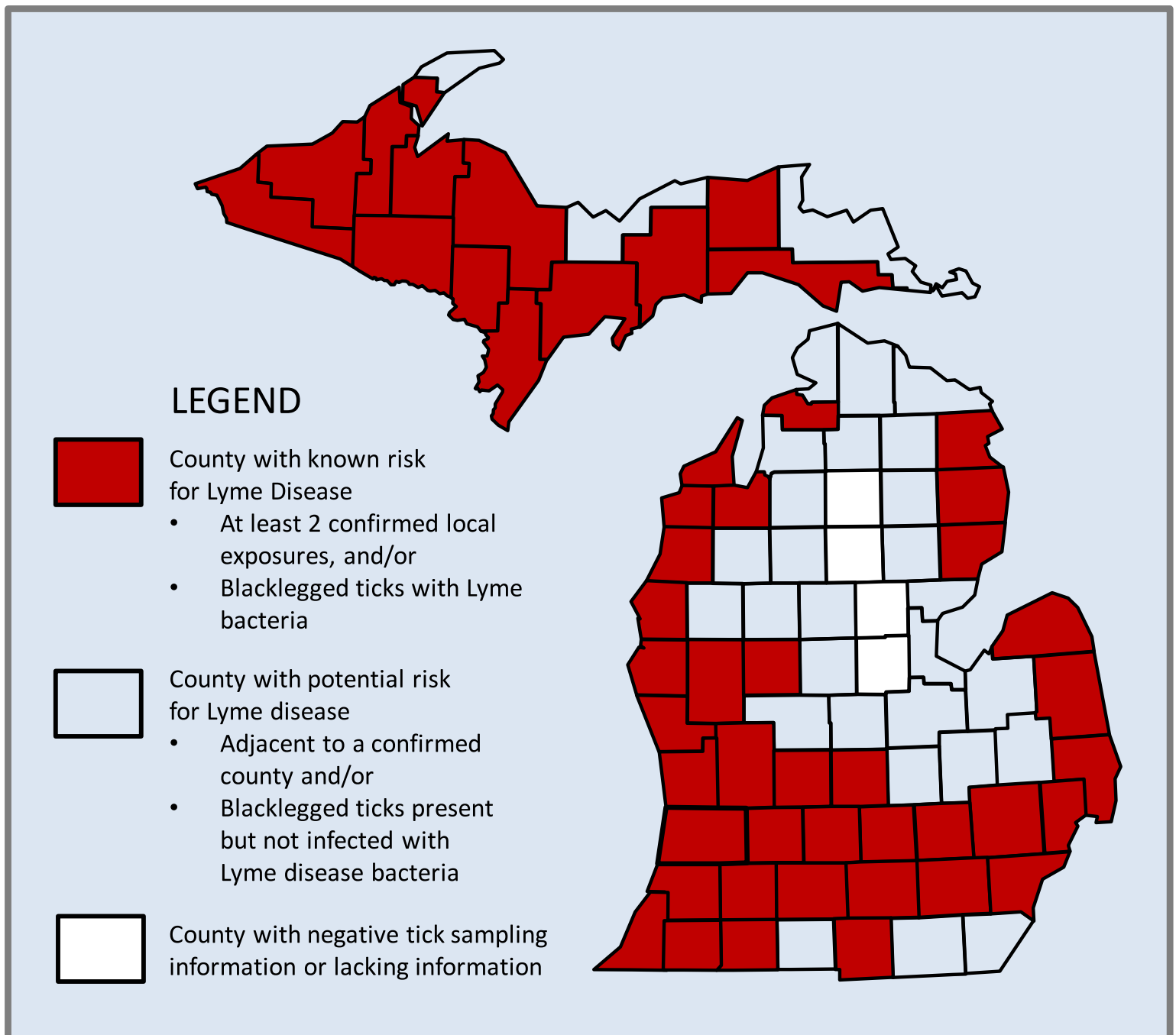
2023 Michigan Lyme Disease Risk Map

Lyme disease is an emerging disease transmitted by the blacklegged tick in Michigan. Local risk for Lyme disease varies depending on whether infected ticks are in the area. Several local and state agencies partner to conduct surveillance for Lyme disease in people and animals. The below map classifies risk based upon field collected and infected ticks and reported human cases of Lyme disease in Michigan (see the legend for specific criteria). The map is updated as new information becomes available.



Blacklegged ticks are active from March to November in Michigan. They are commonly found in wooded and brushy habitats.

For more information about Lyme disease prevention, visit www.michigan.gov/lyme



General Information

Ticks are closely related to insects and spiders, and there are over 20 known tick species in Michigan. Usually they feed on wildlife, however people may be bitten when they spend time in areas where ticks live. Ticks are most often found in natural areas such as tall grasses, wooded areas, or fields near wooded areas. Ticks do not normally come indoors unless they are carried inside on people or pets.

Several kinds of ticks will bite people and pets, and some can carry dangerous bacteria, viruses, or parasites. Not all tick bites will make you sick, but tick-borne diseases do occur in Michigan, and can be serious or fatal if not properly treated.

Ticks have three life stages – larvae, nymph and adult (see size comparison photo). All stages can bite people.

When a tick bites, it does not hurt. It will stay attached for several days as it swells up with blood to several times its normal size (see photo below). Ticks can attach anywhere on the body, but are often found in the hairline, ears, waistline, armpit, and groin.

Actual Size Comparison



Tick stages: female, male, nymph, larva

It is important to take steps to prevent tick bites when spending time in wooded or grassy environments. Examples include avoiding areas with a lot of ticks, using insect repellents, checking skin and clothing for ticks often, and showering after coming indoors (see page 10 for more information).



Left to right: American dog tick female, Lone star tick female, engorged blacklegged tick female, blacklegged tick female, blacklegged tick nymph.

Tell your doctor if you are ill and have had a tick bite, or been in an area with ticks. This may help them decide how best to treat your illness.

Common Ticks in Michigan

Ticks are best identified by an experienced professional. See the section on “Tick Identification” (page 11) for information on how to get your tick identified by an expert.

The most common ticks submitted by Michigan residents are:

American dog tick (wood tick)

70%

of all ticks
submitted in
Michigan

Where found:

Widespread throughout the Lower and Upper Peninsulas of Michigan in wooded and grassy areas.

Key facts:

American dog ticks are large brown ticks with ornate white markings. It is mainly the adult ticks, active from April through July that will bite people and pets.



Diseases they may carry:
Rocky Mountain spotted fever and tularemia

Blacklegged tick (deer tick)

20%

of all ticks
submitted in
Michigan

Where found:

Spreading throughout the Lower and Upper Peninsulas of Michigan in wooded and grassy areas.

Key facts:

The blacklegged tick is a small tick with black legs, and has a round black shield behind its head. The adult tick is active in the spring and the fall, and the nymph stage is active throughout the summer months. Both stages can transmit diseases.



Diseases they may carry:
Lyme disease, anaplasmosis, babesiosis, deer tick virus, and Ehrlichia muris-like disease

* Sesame seed

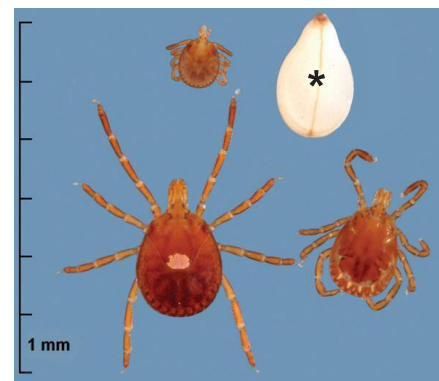
Lone star tick

5%

of all ticks
submitted in
Michigan

Where found: Rare in Michigan, but becoming more common. Usually found in wooded areas.

Key facts: The adult female has a distinctive “lone star” marking. All stages of this tick will readily bite people and their pets.



Diseases they may carry:
Ehrlichiosis and tularemia

Woodchuck tick

3%

of all ticks
submitted in
Michigan

Where found: Normally found in the dens of wild animals such as woodchuck and skunk dens.

Key facts: Normally bite pets when they are near animal dens. People spending time in the woods near animal dens may also be bitten.



Diseases they may carry:
Powassan encephalitis,
a potentially serious viral
illness

Brown dog tick (kennel tick)

1%

of all ticks
submitted in
Michigan

Where found: Able to survive and breed in indoor environments as well as outdoors in grassy and brushy areas.

Key facts: May be hard to distinguish from other ticks because of “plain” brown appearance. It is often found in shelters, breeding facilities, and dog kennels. Proper cleaning in these facilities can prevent infestations.



Diseases they may carry:
Rocky Mountain spotted
fever, canine babesiosis,
and canine ehrlichiosis

* Sesame seed

Other tick species

There are many other tick species in Michigan. Most are seen less frequently on people and pets, and are not associated with human illness.

Lyme Disease

Lyme disease is an illness caused by the bacterium *Borrelia burgdorferi*. In the midwestern and eastern U.S. people and animals get Lyme disease from the bite of an infected blacklegged tick. In most cases, the tick must be attached for 36 to 48 hours or more before the Lyme disease bacterium can be transmitted. **Avoiding tick bites and promptly removing ticks are the best ways to prevent infection.**

The most important factors in preventing Lyme disease are:

1. Knowing where blacklegged ticks can be found (see the map at the front of this brochure)
2. Preventing tick bites
3. Removing ticks promptly if they do bite
4. Seeking prompt medical care if illness occurs after a tick bite

The symptoms of Lyme disease may include:

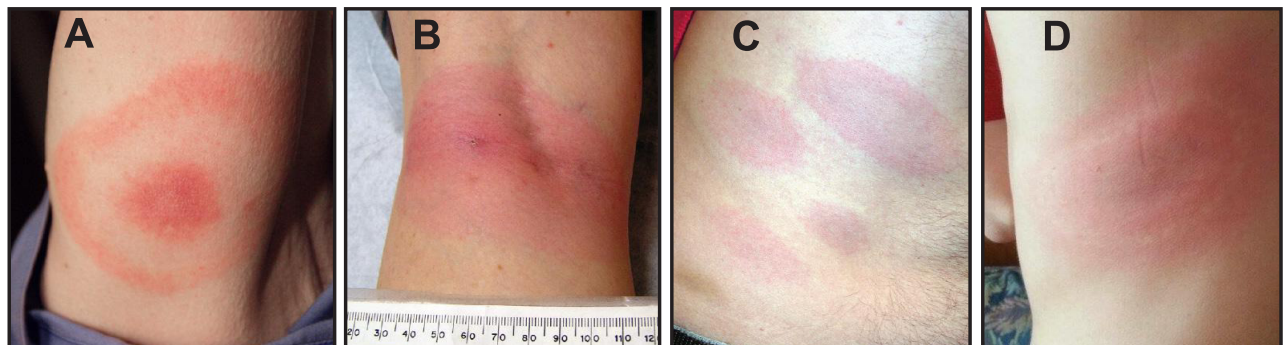
3-30 days
after a bite from an
infected blacklegged
tick

Early localized Lyme disease

- Chills and fever
- Headaches
- Muscle and joint pain
- An expanding skin rash, called erythema migrans, in 70% to 80% of people

Erythema migrans (EM) rash: It's not always a "bull's eye"

Most people recognize the classic target or bull's-eye shaped rash. However, most EM rashes actually look like a solid red or reddish-blue oval. There may also be multiple rashes. An EM rash may begin at the site of a tick bite and expand over a period of days. The rash may feel warm to the touch, but is not usually itchy or painful.



Any of the above rashes could be a sign of Lyme disease (from left to right): A) Classic bull's eye rash with "target" appearance; B) Solid red lesion; C) Multiple red, oval lesions; D) Reddish-blue rash with expanding and clearing ring.

Weeks to Months

without treatment

Disseminated Lyme disease

- Additional EM rashes on other parts of the body
- Loss of muscle tone or droop on one or both sides of the face (facial palsy)
- Headache or stiff neck

Arthritis with joint swelling, usually in one or more large joints, especially the knees

- Heart palpitations or dizziness due to changes in heart rhythm

Consult with your physician if you think you have Lyme disease. If your doctor wants to order a blood test, the MDHHS laboratory offers the nationally-standardized test for Lyme disease.

Other Tick-Borne Illnesses

Ticks may spread other diseases to people and pets and although they are less common than Lyme disease, it is just as important to protect yourself. If you are bitten by a tick, monitor your health. If you have symptoms of fever, headache, body aches, or rash within a month after being bitten by a tick, or after being in an area with ticks, see your healthcare provider. Tick-borne diseases often begin with “flu-like” symptoms, but may rapidly progress to more serious illness.

Treatment

Most tick-borne diseases, including Lyme disease, tularemia, Rocky Mountain spotted fever (RMSF), anaplasmosis, and ehrlichiosis, are treatable with antibiotics. People and pets treated in the early stages of these diseases usually recover rapidly and completely. The antibiotic doxycycline is the most effective treatment of Lyme disease and ALL rickettsial diseases, including RMSF, anaplasmosis, and ehrlichiosis. Doxycycline is the treatment recommended by the American Academy of Pediatrics (AAP) and the Centers for Disease Control and Prevention (CDC) for patients of ALL ages.

For additional details about Lyme disease and other tick-borne diseases in Michigan, please see the table on the next page.

Rocky Mountain spotted fever usually causes a rash that begins on the arms or legs, and spreads to the trunk of the body.

