

## TICK BITES

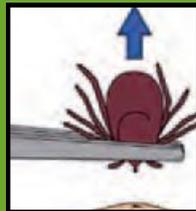
Ticks are generally found near the ground in bushy or wooded areas. They can't jump or fly. Instead, they climb tall grasses or shrubs and wait for a potential host to brush against them. When this happens, they climb onto the host and seek a skin site for attachment.

## PREVENTION

- Wear insect repellent containing DEET.
- Wear permethrin-treated clothing.
- Treat dogs for ticks.
- Check for ticks after activities in tick areas.
- Shower soon after coming indoors.

## TICK REMOVAL

1. Use fine-tipped tweezers to grasp the tick as close to the skin's surface as possible.
2. Pull upward with steady, even pressure. Don't twist or jerk the tick; this can cause the tick's mouth parts to break off and remain in the skin. If this happens, remove the mouth parts with clean tweezers.
3. After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub, or soap and water.



## FOLLOW-UP

If you develop a rash or fever within several weeks of removing a tick, see your doctor. Be sure to tell your doctor about your recent tick bite, when it occurred, and where you most likely acquired the tick.

## FOR MORE INFORMATION

To learn more about Tick-borne Diseases visit the Center for Acute Disease Epidemiology website at [www.idph.iowa.gov/cade](http://www.idph.iowa.gov/cade)

For additional information on Tick-borne Diseases, visit Centers for Disease Control and Prevention [www.cdc.gov/ticks/diseases/index.html](http://www.cdc.gov/ticks/diseases/index.html)

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Black-legged/deer tick  
Found in Iowa



Western Black-legged tick  
Not in Iowa



Lone star tick  
Found in Iowa



American dog tick  
Found in Iowa



Rocky Mountain Wood Tick  
Not in Iowa



Brown dog tick  
Not commonly found  
in Iowa

# TICKS

# TICK-BORNE DISEASES



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## ANAPLASMOSIS

Anaplasmosis is a tickborne disease caused by the bacterium *Anaplasma phagocytophilum*.

Anaplasmosis is transmitted to humans by tick bites primarily from the black-legged/deer tick (*Ixodes scapularis*) and the Western black-legged tick (*Ixodes pacificus*).

### Signs and Symptoms:

Symptoms can include fever, chills, severe headache, malaise, and muscle aches.

### Where Found:

Anaplasmosis is most frequently reported in the upper Midwest and Northeastern U.S. Historically, less than five cases have been reported each year in Iowa.

## EHRlichiosis

Human ehrlichiosis is a disease caused by at least three different ehrlichial (bacteria) species in the United States: *Ehrlichia chaffeensis*, *Ehrlichia ewingii*, and *Ehrlichia muris*.

Ehrlichiae are transmitted to humans by the bite of an infected lone star tick (*Amblyomma americanum*).

### Signs and Symptoms:

Typical symptoms can include fever, headache, fatigue, and muscle aches. Usually, these symptoms occur within one to two weeks after a bite.

### Where Found:

Transmission mainly occurs in the upper Midwest and Northeastern U.S. Historically, less than five cases have been reported each year in Iowa.

## LYME DISEASE

Lyme disease is caused by the bacterium *Borrelia burgdorferi* and it is transmitted to humans through the bite of infected black-legged/deer tick (*Ixodes scapularis*).

### Signs and Symptoms:

Symptoms can include fever, headache, fatigue, and a characteristic bull's eye-shaped skin rash called erythema migrans.

Most cases of Lyme disease can be treated successfully with a few weeks of antibiotics.

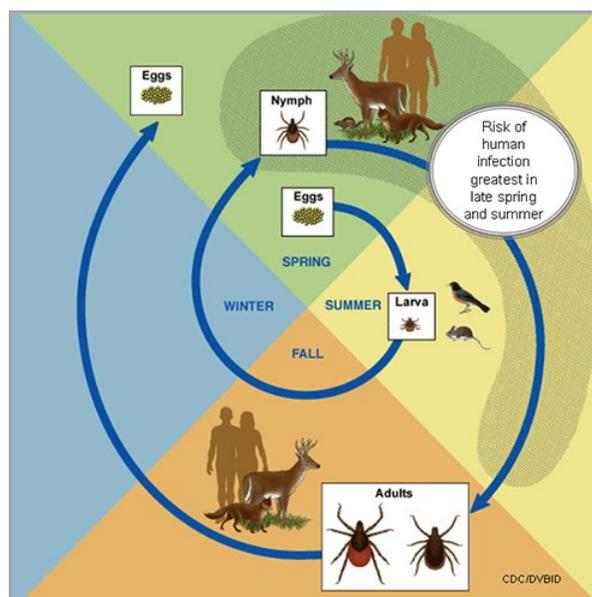
### Where Found:

Lyme disease is most frequently reported in the upper Midwest and Northeastern U.S. From 2009-2013, an average of 144 cases were reported each year in Iowa.



Erythema Migrans

## TICK LIFE CYCLE



## ROCKY MOUNTAIN SPOTTED FEVER

Rocky Mountain spotted fever (RMSF) is a tickborne disease caused by the bacterium *Rickettsia rickettsia*.

In the U.S., RMSF is transmitted to humans by the bite of the American dog tick, Rocky Mountain wood tick, or brown dog tick.

### Signs and Symptoms:

Symptoms can include fever, headache, abdominal pain, vomiting, and muscle pain.

A rash may also develop, but is often absent in the first few days, and never develops in some patients.

RMSF can be a severe or even fatal illness if not treated in the first few days of symptoms.

### Where Found:

Less than ten cases are historically reported each year in Iowa.

## BABESIOSIS

Babesiosis is caused by microscopic parasites *Babesia microti* that are spread by the bite of an infected black-legged/deer tick (*Ixodes scapularis*).

### Signs and Symptoms:

Many people who are infected with *Babesia* do not have symptoms.

Symptoms can include fever, flu-like symptoms, and hemolytic anemia.

### Where Found:

Transmission mainly occurs in the upper Midwest and Northeastern U.S. and usually peaks during the warm months. Cases are infrequently reported in Iowa.