

## IDENTIFICATION AND TESTING

Identification of ticks is the first step in determining disease risk because not all ticks cause human disease. Certain species of ticks may be tested for bacteria that can cause Rocky Mountain spotted fever (RMSF) or Lyme disease.

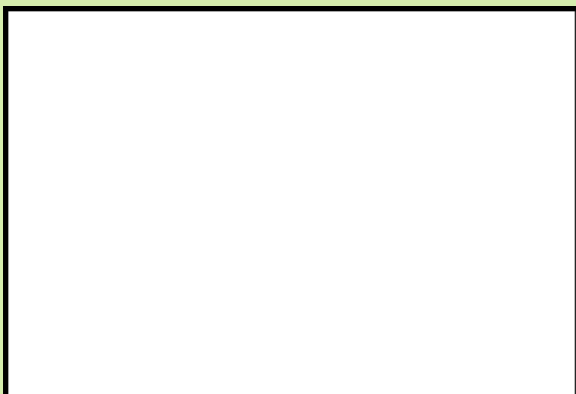
To submit a tick for I.D. or testing, **keep the tick alive** and place it in a tightly sealed container (pill bottle, film container) with a small piece of moistened paper towel. Send the tick to the address below and include a note with the date it was found and what county the tick came from.

For more information, contact your local health department, or contact us at:

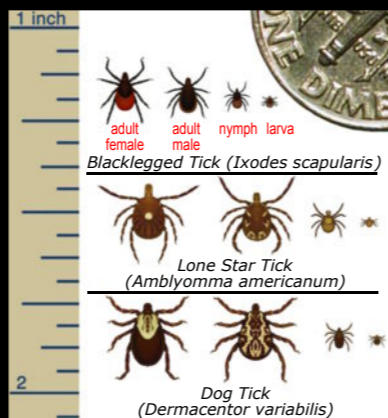
**Zoonotic Disease Program**  
**Ohio Department of Health**  
**8955 E. Main St.**  
**Reynoldsburg, Ohio 43068**

**Tel. 614-752-1029**

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# Tick-Borne Diseases



**Rocky Mountain Spotted Fever**  
**Lyme Disease**  
**Ehrlichiosis**

## ROCKY MOUNTAIN SPOTTED FEVER

Rocky Mountain spotted fever (RMSF) is a bacterial disease transmitted by ticks. The American dog tick (*Dermacentor variabilis*) is the primary carrier and is Ohio's most common tick.

Ohio reports approximately 10 cases of RMSF per year. The majority of RMSF cases occur in the southeastern United States.

Most Ohio RMSF cases occur between April and August when dog tick populations are high. Adult ticks look for large hosts such as dogs, but they will also feed on humans.

Dog ticks are often found in overgrown lots and along weedy roadsides, paths and hiking trails. In spring and summer, adult ticks wait on vegetation for a host to pass by. When a person or animal brushes against the vegetation, the tick will cling to fur or clothing and crawl upward, looking for a place to attach and begin feeding.

Contrary to popular belief, ticks don't fall out of trees, they climb up to your head and attach to your scalp.

## SYMPTOMS OF ROCKY MOUNTAIN SPOTTED FEVER

Symptoms usually appear three to 12 days after tick contact. There is a sudden onset of symptoms, which include **high fever, headache and aching muscles**.

On the second or third day of fever a pink, non-itchy rash may develop on the wrists, forearms and ankles.

## IF YOU DEVELOP SYMPTOMS FOLLOWING TICK CONTACT, SEE YOUR PHYSICIAN

It is important to receive the appropriate antibiotics as soon as possible if RMSF is suspected. The fatality rate is about 4 percent and most deaths occur because of a delay in seeking medical attention. If RMSF is recognized and treated early, there is usually a rapid recovery.



*Dermacentor variabilis*



## PREVENTION OF TICK-BORNE DISEASE

The risk of exposure to ticks and disease can be reduced by using precautions:

- Avoid tick-infested areas.
- If exposure is unavoidable, tuck pants into sock tops or boots.
- Wear light-colored clothing to make it easier to find crawling ticks.
- Use repellants and follow label instructions carefully.
- Check children for ticks frequently.
- Use caution when handling ticks and dispose of properly.

## DOGS

- Dogs can become infected with tick-borne diseases.
- Dogs should be kept in well-mowed areas during tick season (April-August).
- Treatments are available to control ticks on dogs. Always follow label instructions.
- Inspect dogs for ticks every day. Ticks should be handled with caution and disposed of safely.
- Keep yard and outdoor play areas well mowed to discourage tick infestation.



## LYME DISEASE

Lyme disease is a bacterial disease carried by the black-legged tick (aka the deer tick), *Ixodes scapularis*. Since 1990, more than 157,000 cases have been reported nationwide. Most cases were reported from the New England and Middle Atlantic States, especially New York, New Jersey and Pennsylvania. About half of Ohio's reported cases were actually acquired out-of-state.

## SYMPTOMS OF LYME DISEASE

- Red, ring-like rash (60 percent of cases).
- Fever.
- Fatigue.
- Headache.
- Joint pain.



*Ixodes scapularis*, female

## IF YOU DEVELOP SYMPTOMS FOLLOWING TICK CONTACT, SEE YOUR PHYSICIAN

Immediate antibiotic therapy will reduce the risk of arthritis, and neurological or cardiac complications.

## TRANSMISSION OF LYME DISEASE

The black-legged tick is rare in Ohio and only 26 have been found since 1983. Neither the tick nor the Lyme disease organism has been proven to be established in Ohio. However, the fact that the black-legged tick has been found in Ohio means they are being imported into Ohio on migratory birds, travelers and pets.

## EHRlichiosis

There are two forms of ehrlichiosis in the United States—Human monocytic ehrlichiosis (HME) and human granulocytic ehrlichiosis (HGE). **HME** was first described in 1987 and is transmitted by the Lone star tick, *Amblyomma americanum*. **HGE** was first described in 1994 and is transmitted by the black-legged tick, *Ixodes scapularis*.

## SYMPTOMS OF EHRlichiosis

Symptoms may appear up to 10 days after a tick bite and include fever, headache, lethargy and muscle ache. Ehrlichiosis is treated with antibiotics.



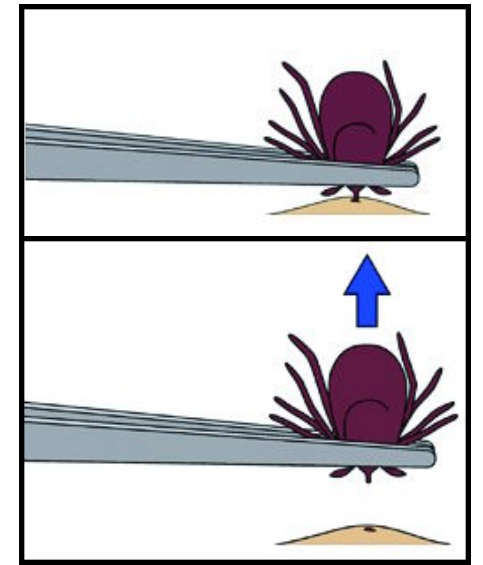
*Ixodes scapularis*  
female questing



*Amblyomma americanum*  
female



Tick Habitat



## TICK REMOVAL

- If a tick is attached, remove it as soon as possible; this reduces your risk of infection.
- Shield fingers with a paper towel or use tweezers. Grasp the tick close to the skin. With steady pressure, pull the tick straight up and out.
- Do not twist or jerk the tick. This may cause the mouth parts to be left in the skin.
- Do not crush or puncture the tick.
- Do not use a flame or cigarette to remove a tick. This may cause the tick to burst and increase disease risk.
- After removing a tick, thoroughly disinfect the bite site and wash hands with soap and water.