

# Tick Information Guide

## Preventative Measures

### Human Prevention

- Treat clothes, outdoor gear & bedding with permethrin\*.
- Wear light colored clothes, tuck pants into socks, treat skin & clothes with 20% DEET or essential oils.
- Perform tick checks within 2 hours of being outside. Check armpits, hair line, back of knees & groin.
- Put clothes in dryer on high for 10 minutes.
- Remove ticks correctly.

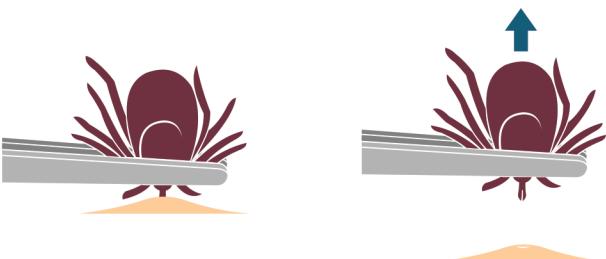
Visit our website for prevention tips for your Pets and Yard! [www.TickLab.org](http://www.TickLab.org).

**\*Safety-** Permethrin when wet is fatal for cats and unsafe for humans. Use personal protection and do not touch until dry.



## Proper Tick Removal

- Use fine tweezers or a tick remover
- Grasp at the base of the mouthparts
- Pull gently, straight up and out until tick releases
- Wash and clean the site of the tick bite



## Submit A Tick For Testing

The Tick Research Lab is a University-affiliated tick testing laboratory. Tick testing can provide early detection of potential exposure to a tick-borne disease before symptoms occur. Results can assist physician's with proper diagnostics, testing and treatment.

Ticks can be tested alive or dead for years, soaked in alcohol or essential oils, burned, broken into pieces, missing a head, or squished. We recommend not putting ticks in adhesive tape – however they can still be tested.

### Pennsylvania Free Tick Testing Program



Ticks should be mailed to:  
Tick Research Lab of Pennsylvania  
562 Independence Rd., Suite 114  
East Stroudsburg PA, 18301

SEE OTHER SIDE FOR MORE DETAILS!



Blacklegged/Deer Tick



Lone Star Tick



Dog Tick

[www.TickLab.org](http://www.TickLab.org)  
570-422-7892

[wildlifedna@esu.edu](mailto:wildlifedna@esu.edu)  
Tick Research Lab of Pennsylvania  
562 Independence Rd., Suite 114  
East Stroudsburg PA, 18301

- Tick ID Chart
- Tick Removal Info
- Tick-Borne Diseases
- Free Tick Testing Info



**Tick Research Lab**  
of Pennsylvania

[www.TickLab.org](http://www.TickLab.org)  
570-422-7892

 **EAST STROUDSBURG UNIVERSITY**

## Tick Identification

Ticks vary in size, color and have distinguishing characteristics. It is important to identify a tick to understand your potential risk for a tick-borne disease. Only the blacklegged (deer) tick can transmit Lyme disease.



### Deer/Blacklegged Tick (*Ixodes scapularis*)

Has black legs and is the smallest of ticks in the Northeast. Adult females have a reddish-brown shield. Known to transmit Lyme disease, Anaplasmosis, Babesiosis, Powassan virus and *Borrelia miyamotoi*.



### Lone Star Tick (*Amblyomma americanum*)

Adult females feature a distinctive white dot on dorsal shield. Known to transmit Ehrlichiosis, Rocky Mountain Spotted fever, Tularemia and STARI. May trigger a red meat allergy.



### American Dog Tick (*Dermacentor variabilis*)

Largest of all ticks in the Northeast. Brown tick with white shield. Known to transmit Ehrlichiosis, Rocky Mountain Spotted fever and Tularemia.

50% of people do not recall a tick bite and 50% of people do not get a rash. Understanding the symptoms and various tick-borne diseases is important for diagnostics and treatment.		
For information on treatment and diagnostics visit our website at <a href="http://www.TickLab.org">www.TickLab.org</a>		
DISEASE	TRANSMISSION	SYMPTOMS
<b>Lyme Disease</b> ( <i>Borrelia burgdorferi</i> )	<ul style="list-style-type: none"> <li>Vector: Blacklegged (Deer) tick</li> <li>Transmission time: 18-24 hours</li> </ul>	<ul style="list-style-type: none"> <li>Can begin in 3-30 days</li> <li>Flu-like symptoms are most common and include: Fever, chills, fatigue, headaches, and muscle and joint aches</li> <li>20-30% of patients will develop the bull-eyes rash and up to 50% of patients will develop a rash</li> </ul>
<b>Powassan Virus</b> (Lineage II – Deer Tick Virus)	<ul style="list-style-type: none"> <li>Vector: Blacklegged (Deer) tick</li> <li>Transmission time: 15 minutes</li> </ul>	<ul style="list-style-type: none"> <li>Most patients are asymptomatic</li> <li>Symptoms can appear in 1-4 weeks of a tick bite and include: fever, headache, vomiting, weakness, seizures, encephalitis and meningitis</li> <li>Death is possible but rare and occurs in approximately 10% of encephalitis cases</li> </ul>
<b>Anaplasmosis</b> ( <i>Anaplasma phagocytophilum</i> )	<ul style="list-style-type: none"> <li>Vector: Blacklegged (Deer) tick</li> <li>Transmission time: 10 hours</li> </ul>	<ul style="list-style-type: none"> <li>Symptoms may begin within the first 2 weeks of exposure</li> <li>Flu-like symptoms are most common and include: fever, chills, fatigue, headache, muscle pain, and nausea</li> <li>In some patients, a rash may occur</li> </ul>
<b>Babesiosis</b> ( <i>Babesia microti</i> & <i>Babesia duncani</i> )	<ul style="list-style-type: none"> <li>Vector: Blacklegged (Deer) tick</li> <li>Transmission time: 36-48 hours</li> </ul>	<ul style="list-style-type: none"> <li>Those infected can be asymptomatic, have flu-like symptoms, or have more severe symptoms</li> <li>Flu-like symptoms include: Fever, chills, sweats, nausea, vomiting and fatigue</li> <li>More severe symptoms include: difficulties breathing, walking up stairs, blood clots and decrease in blood pressure</li> </ul>
<b>Ehrlichiosis</b> ( <i>Ehrlichia chaffeensis</i> & <i>Ehrlichia ewingii</i> )	<ul style="list-style-type: none"> <li>Vector: Lone Star tick and the American Dog tick</li> <li>Transmission time: 18-24 hours</li> </ul>	<ul style="list-style-type: none"> <li>Symptoms may begin 1-2 weeks after exposure</li> <li>Flu-like symptoms include: Fever, chills, sweats, nausea, headache, diarrhea, vomiting and fatigue</li> <li>Joint and muscle pain</li> <li>Disorientation, rash, and eye infection</li> </ul>
<b>Rocky Mountain Spotted Fever</b> ( <i>Rickettsia rickettsii</i> , <i>Rickettsia parkeri</i> , & <i>Rickettsia philipii</i> )	<ul style="list-style-type: none"> <li>Vector: Lone Star tick and the American Dog tick</li> <li>Transmission time: 6 hours</li> </ul>	<ul style="list-style-type: none"> <li>Symptoms may begin 2-12 days after exposure</li> <li>Non-specific symptoms such as headache, fever, nausea, vomiting may occur first followed by a rapid progression into more severe and life threatening illnesses</li> <li>A spotted rash varying in presentation will occur in a majority of patients</li> <li>If left untreated, amputation may be necessary due to blood vessel damage</li> </ul>
<b>Tularemia</b> ( <i>Francisella tularensis</i> )	<ul style="list-style-type: none"> <li>Vector: Lone Star tick and the American Dog tick</li> <li>Transmission time: Unknown</li> </ul>	<ul style="list-style-type: none"> <li>Symptoms can range from mild to life threatening</li> <li>High fever is common</li> <li>An ulceroglandular infection characterized by a skin ulcer at the site of tick attachment and swelling of lymph nodes near the site of attachment may occur</li> <li>A glandular infection is also possible which involves swelling of the lymph nodes closest to the site of tick attachment but without the skin ulcer</li> </ul>

## Submit A Tick For Testing

Your Contact Information (results are reported via email & SMS)

Name:

Address (Street/City/State/Zip):

Cell Phone:

Email:

### Tick Survey (Must be completed)

Was tick attached to (circle): **Human Dog Cat**

Other: \_\_\_\_\_

Age & Gender of patient (if human) with bite:

Location of bite (ex. behind knee, hairline):

Location of where tick was most likely picked up (ex. Backyard, Big Pocono state park):

Provide county, state and zip code of where the tick was picked up:

Additional options:  Priority Processing \$25.00

(Results reported within 72 business hours)

(Please make checks out to:  
**East Stroudsburg University**)

MORE testing and services are available for an additional fee. Please call or visit our website for more information.

**570-422-7892** [www.TickLab.org](http://www.TickLab.org)

Ticks should be mailed to:  
**Tick Research Lab of Pennsylvania**  
**562 Independence Rd., Suite 114**  
**East Stroudsburg, PA 18301**