TICKS AND LYME DISEASE

Otsego County Public Health
What is Lyme?

Lyme disease is caused by a bacterial infection transmitted by the deer tick.
Signs/Symptoms of Lyme

Lyme disease may cause symptoms affecting the skin, nervous system, heart and/or joints of an individual.
What is Lyme?

The New York State Department of Health is aware of numerous cases in the state occurring since Lyme disease became reportable in 1986.
Who Gets Lyme?

- People of any age
- People who spend time in grassy or wooded environments are at increased risk.
Eggs → Larva

Adult female tick lays eggs, hatches Larva
Two-year Life Cycle for *Ixodes scapularis*.

1. Engorged females lay eggs
2. Larvae hatch and feed
3. Nymphs attach & feed on small mammals and birds
4. Adults seek medium to large mammalian hosts, primarily deer
5. Adult ticks active warm days winter with second peak of activity in spring
Nymphal Ticks

• About the size of a poppy seed

• Most active from Mid-May to Mid-August.

• Grow to be adult ticks
Adult Ticks

• About the size of a sesame seed

• Most active mid to late fall.

• Adult females produce eggs, start cycle over.
How is Lyme Disease Spread?

- Not all deer ticks are infected with the bacteria that cause Lyme disease.

- Ticks can become infected if they feed on small animals that are infected.
How is Lyme Disease Spread?

■ The disease can be spread when a tick infected with the bacteria bites a person and stays attached for a period of time (36 hours or more).

■ Person-to-person spread of Lyme disease does not occur.
What are the Symptoms of Lyme?

- Early symptoms may develop within a week to a few months of the tick bite.

- In about half of the cases, a large, reddish rash about > 2.5 inches in diameter appears and expands around or near the site of the bite. Sometimes, multiple rash sites appear.
What are the Symptoms of Lyme?

- Other symptoms, such as fever, headache, fatigue, stiff neck, muscle and/or joint pain, may develop.

- The most severe symptoms of Lyme disease may not appear until weeks, months or years after the tick bite. These can include severe headaches, painful arthritis, swelling of the joints, and heart and central nervous system problems.
Bulls-Eye Rash
(erythema migrans)
Bulls-Eye Rash
(erythema migrans)
Where The Ticks Are

- Deer ticks live in shady, moist areas at ground level.
- They cling to tall grass, brush and shrubs.
- Usually no more than 18-24 inches off the ground.
- They live in lawns and gardens, edges of woods and around old stone walls.
- Once a tick is on the skin it generally climbs upward until it reaches a protected area.
When in Tick Infested Areas

- Avoid contact with soil, leaf litter and vegetation.

- If you like to garden, hike, camp, hunt or otherwise spend time in the outdoors, you can still protect yourself.

![Lyme Disease Diagram]
Ways to Protect Yourself

- Wear light-colored clothing with a tight weave to spot ticks easily
- Wear enclosed shoes, long pants and long sleeved shirt
- Tuck pant legs into socks or boots and shirt into pants.
Protecting Yourself

- Check clothes and any exposed skin frequently for ticks while outdoors.
- Consider using insect repellent.
- Stay on cleared, well-traveled trails.
- Walk in the center of trails.
- Avoid dense woods and bushy areas.
Protecting Yourself

- Avoid sitting directly on the ground or on stone walls.
- Keep long hair tied back, especially when gardening.
- Bathe or shower as soon as possible after going indoors (within 2 hours) to wash off and more easily find ticks on you.
- Do a full body check at the end of the day (kids and pets too) and remove ticks promptly.
Insect Repellent

- DEET can be applied to exposed skin.
- Products containing 20% or more DEET can provide protection. Use the lowest concentration that you will need for the amount of time you will be outdoors.
- Picaridin is a colorless, nearly odorless ingredient that can be applied to exposed skin in a range of 5% to 20% of active ingredient.
Repellents

- Keep repellents out of the reach of children.
- Do not allow children to apply repellents to themselves.
- Use only small amounts on children.
Do not apply repellents to the hands of young children.

Try to reduce the use of repellents by dressing children in long sleeves, long pants tucked into socks and use netting over strollers, playpens, etc.

Pregnant women should avoid repellents when practical.
Create a Tick-Free Zone

- Keep grass mowed.
- Remove leaf litter, brush, and weeds at the edge of the lawn.
- Remove brush and leaves around stone walls and wood piles.
Create a Tick-Free Zone

- Discourage rodent activity.
- Move firewood piles and bird feeders away from the house.
- Keep dogs and cats out of the woods.
Create a Tick-Free Zone

- Use plantings that do not attract deer or exclude them with fencing.
- Move children's swing sets and sand boxes away from the woodland edge and place them on wood chip or mulch.
- Trim branches to let in more sunlight.
Create a Tick-Free Zone

- Adopt dryer or less water-demanding landscaping techniques with gravel pathways and mulches. Create a 3-foot wide or wider wood chip, mulch, or gravel border between lawn and woods or stonewalls.

- Widen woodland trails.

- If you consider pesticides, do not use near streams or any body of water.
GROUNDCOVER

- Ticks love to hide in shady moist places!

- Avoid the use of ivy, myrtle or pachysandra near entryways or outdoor faucets.
Tick Free-Zone

- Wood chips along stone wall & under foundation plantings
- 3' wide or greater barrier
- Deer resistant flower garden or vegetable garden with fence
- 3 yard tick migration zone
- Stone wall with tick barrier
- Mail box
- Swing set
- Wood pile
Tick Facts

- Ticks can only crawl; they cannot fly.
- Ticks on the scalp have usually crawled there from lower parts of the body.
- Ticks can be active on winter days when the ground temperature is about 45 degrees.
LYME DISEASE ALERT

Do a thorough body check for ticks after being outdoors.

How To Remove A Tick

• Using tweezers, grasp tick near the mouth parts, as close to skin as possible.
• Pull tick in a steady, upward motion away from skin.
• DO NOT use kerosene, matches, or petroleum jelly to remove tick.
• Disinfect site with soap and water, rubbing alcohol or hydrogen peroxide.
• Record date and location of tick bite. If rash or flu-like symptoms appear contact your health care provider immediately.

DISEASE RISK IS REDUCED IF TICK IS REMOVED WITHIN 36 HOURS.

New York State Department of Health
After You Remove a Tick

■ Call your healthcare provider.
■ Observe site of bite.
■ Cleanse area with rubbing alcohol or hydrogen peroxide.
■ Place the tick in a small container of rubbing alcohol to kill it.
■ If the ticks mouthparts break off and remain in your skin, don’t worry. The mouthparts alone cannot transmit Lyme. Leave them alone, they will dry up and fall out in a few days.
Female Deer Tick

Engorged Female Deer Tick