



## Tick and Tick-Borne Diseases

The New Jersey Department of Agriculture reported an exotic tick has been newly found in our state. The Longhorned or Bush Tick was first identified in Hunterdon County last autumn. This spring the tick was also found in Union County, and the Department of Agriculture confirmed the tick survived the Jersey winter. How the tick arrived in New Jersey remains a mystery. Tests on the exotic tick in November failed to reveal any tick-borne diseases.

Like deer ticks, the nymphs of the Longhorned tick are very small (resembling tiny spiders) and can easily go unnoticed on animals and people. This tick is known to infest deer and a wide range of other hosts. Therefore, it has the potential to infect multiple North American wildlife species.

The three most common ticks in New Jersey are the dog tick, the deer tick, and the lone star tick. The three species can range in size from a poppy seed as a nymph, to about ¼ inch as an adult. According to N.J. Department of Health, ticks in the State can carry a variety of diseases.

- The black-legged deer tick can carry Lyme disease, anaplasmosis, babesiosis, and Powassan disease.
- The American dog tick can transmit Rocky Mountain spotted fever and tularemia.
- The lone star tick can transmit ehrlichiosis, tularemia, and STARI.

**Lyme disease** bacteria are carried by the white-footed mouse. Ticks acquire them by feeding on mouse blood and can then transmit the bacteria to other animals and humans. Like many Northeast states, New Jersey has a higher rate of the disease than the national rate.

If Lyme is detected early, the disease can be treated successfully with antibiotics. If left untreated, it can lead to serious heart and nervous system problems. Other long-term effects include chronic headaches or stomach problems, memory loss, stiffness of joints and speech impairment.

Early symptoms of Lyme disease include:

- A bullseye-shaped rash at the site of the bite that appears about a week later.
- Severe headaches and neck stiffness.
- Joint and nerve pain.

While Lyme disease is the most prevalent tick-borne disease, there are several other tick-borne diseases that are present in New Jersey according to the State Department of Health:

- **Tularemia** – a bacterial disease
- **Ehrlichiosis** – a general name used to describe several bacterial diseases
- **Powassan (POW)** - a virus that can cause encephalitis or meningitis
- **Babesiosis** – a parasite that infects red blood cells.
- **Anaplasmosis** – a bacterial disease that can be a serious illness if not treated properly
- **Rocky Mountain spotted fever (RMSF)** – a bacterial infection increasing in frequency in New Jersey.
- **Southern tick-associated rash illness (STARI)** – the cause of STARI remains unknown

## **PREVENTION STRATEGIES FOR EMPLOYERS & EMPLOYEES**

### **Employers**

- Decrease tick population around your facilities such as public works buildings, lift stations, and recreational buildings by removing leaf litter and mowing, or even removing, grass and brush from around buildings.
- Use an exterminating service to control rodents
- Discourage deer and other animal activity in the proximity of facilities (ex. - do not feed wildlife)
- Encourage workers to wear long sleeves and long pants when assigning work in areas likely to hold ticks. Consider making lockers available for employees to store spare clothes. Don't forget summer employees.
- Consider making insecticide wipes available.
- Consider provided workers with protective clothing pre-treated with permethrin. Professionally pre-treated clothing may offer more effective and longer protection than over-the-counter products.
- Offer employee training and morning reminders when applicable.

### **Employees**

- Educate yourself on tick behavior and identification. Avoid areas where ticks are more likely. Work whenever possible from mowed areas when performing tasks near wood lines. Use the middle of trails when in the woods.
- Wear light-colored clothing, including long-sleeved shirts and long pants. This makes ticks easy to spot before they find a place to bite you. Tuck pant legs into shoes or sock, and shirttails into pants.
  - For employees who may wear short pants, consider having a spare pair of long pants in your locker or vehicle.
  - When you get home, put clothes in the dryer on HIGH heat for 10 - 15 minutes to kill ticks; then launder. Ticks are very sensitive to dryness. Washing, even in hot water, will not kill them reliably.
- Use insect repellent which contains 20 – 50 % DEET, picaridin, or IR 3535 on exposed skin and outer clothing. Spray the inside surfaces of pant legs also. Be sure to re-apply during the day as directed by the product's label.
- Consider treating clothing with Permethrin. This can remain effective through several washings.
- Showering at the end of the day to wash off residual insecticide and unattached ticks, and to check yourself for attached ticks. Use a mirror if needed. It takes more than 24 hours for a tick to infect you with the above diseases.
- If you do find a tick, remove it properly.
  - Using fine-tipped tweezers, grasp the tick firmly as close to your skin as possible.
  - With a steady motion, pull the tick from your skin. Do not jerk; this may rip the tick in half.
  - Wash the area with soap and warm water.

**Do not use petroleum jelly, hot matches, nail polish remover, or other products to remove a tick.**

Employees should report tick bites to their employer and closely monitor their health. They should immediately consult their physician if they experience a rash, fever, headache, joint or muscle pains, or swollen lymph nodes within 30 days of a tick bite. Be sure to tell the doctor about your recent tick bite, when the bite occurred, and where you most likely acquired the tick.