



## Tick-Borne Disease Prevention Program

### **INTRODUCTION**

Hudson Valley Community College employees working outdoors, especially in areas with tall grasses, shrubs, low hanging branches, or leaf mold are susceptible to being bitten by a tick. There are several diseases which can be carried by ticks, with the most well-known in this area being Lyme disease. This document provides information about tick-borne illnesses, how to prevent tick bites and what to do if you find a tick on you.

### **BACKGROUND**

Lyme Disease is a bacterial infection that can be caused by the transmission of the *Borrelia burgdorferi* bacteria from the bite of an infected deer tick.

Deer ticks primarily transmit the Lyme Disease bacteria in the late Spring or early Summer while they are in their nymphal stage of development, but they can carry the bacteria in their larval, nymph, or adult stages at almost any time of the year.

Ticks are picked up when a person's clothing or hair brushes a leaf or other object they are on. Ticks do not jump, crawl, or fall onto a person. Once picked up, they will crawl until they find a favorable site to feed. Often they will find a spot at the back of a knee, near the hairline, or behind the ears. Deer ticks are much smaller than common dog ticks. The nymphal stage tick is usually not much larger than the head of a pin and can easily go unnoticed if attached to a person.

Not all deer ticks are infected with the bacteria that cause Lyme disease. Ticks can become infected if they feed on animals such as mice and other mammals that are infected. The disease can be spread when an infected tick bites a person and stays attached for a period of time. In general, the tick must be attached for 48 hours or more.

Lyme disease often presents with a characteristic "bull's-eye" rash termed erythema migrans. This rash may appear as soon as three days after a tick bite and is seen in 60-80% of people who develop the infection; some people may have the disease without the presence of a rash. In addition to this rash, other non-specific symptoms may develop within several weeks or months after receiving a tick bite, including fever, lymph node swelling, neck stiffness, generalized fatigue, headaches, migrating joint aches, or muscle aches.

Other types of ticks carry other diseases, though the diseases are less common than Lyme disease in New York State. In the United States these diseases include:

- Babesiosis (a malaria like infection)
- Colorado Tick Fever (generally in the western United States including the coast)
- Ehrlichiosis
- Relapsing Fever (most common in the western United States)
- Rocky Mountain Spotted Fever (throughout the United States but most prevalent in the east)
- Tick Paralysis
- Tularemia (rabbit fever)

### **PRECAUTIONARY MEASURES**

The best way to prevent tick borne diseases is to avoid tick bites. There are several things you can do which will lessen your chance of being bitten:

- Wear long pants and a long sleeved shirt. Tuck your shirt into your pants. Tuck your pants into your socks or boots, or use tape to close the opening where they meet.
- Wear a hat, and tie back long hair
- Use an EPA approved insect repellent or arachnicide (pesticide) which is effective for ticks, such as DEET (N,N-diethyl-m-toluamide) or pyrethrin. Be sure to heed all precautionary information, and be aware that some people are sensitive to these chemicals.
- Wear light colored clothing so that a tick can be seen more easily.
- Change clothes when you return from an area where ticks may be located.
- Shower as soon as possible to wash off and find any loose ticks.

### **FINDING TICKS**

Check clothing for ticks on a frequent basis when working outdoors. When you return from an area where ticks may be located, check all of your body for ticks. Be sure to include:

- Parts that bend (back of knee, between fingers and toes, underarms).
- Pressure points where clothing presses against skin (underwear elastic, belts, neck).
- Other common areas (belly button, around or in ear, hairline, top of head).

Ticks can ride into the home on clothing and pets, then attach to a person later, so carefully examine pets, coats, and gear. Tumble clothes in a dryer on high heat for an hour to kill any remaining ticks.

### **TICK REMOVAL**

Be sure to remove unattached ticks promptly. Attached ticks are promptly removed using fine pointed tweezers:

- The mouth parts of the tick are grasped with the tweezers as close to the skin as possible;
- Apply firm steady pressure upward until the tick releases - do not jerk, twist, squash or squeeze the tick;
- Clean the wound and the tweezers with an antiseptic.
- Do not use petroleum jelly or nail polish remover, or prick or burn the tick, these actions can cause infected secretions to enter the wound.
- Dispose of a live tick by submersing it in alcohol, placing it in a sealed bag/container, wrapping it tightly in tape, or flushing it down the toilet. Never crush a tick with your fingers.

### **TICK BITE FOLLOW-UP**

If you have been bitten by a tick on campus, you should follow the instructions above to remove the tick and then report to Health Services in the Siek Campus Center, Suite 270. Health Services will provide a referral if additional care is needed and will provide information about signs and symptoms to be aware of. If you have had a tick bite, you should watch for an expanding red rash or lesion at the site of the tick bite or an unexplained feverish, achy, fatiguing illness within 1 to 4 weeks after the tick bite. If any of these symptoms occur, you should return to Health Services for evaluation.

Following a diagnosis, Lyme disease, in most cases, can be successfully treated with standard antibiotic regimens. It is very important that the infection be diagnosed and treated with appropriate antimicrobial medication as early as possible because untreated Lyme disease may result in symptoms that are severe, chronic, and disabling. These disorders include chronic inflammatory arthritis, chronic muscle pain, heart disease, and/or neurological (brain and peripheral nerves) disorders. In addition, Lyme disease in a later stage is more difficult to diagnose, and treatment may be more prolonged and costly.

### **ADDITIONAL RESOURCES**

Additional information about Lyme Disease and other tick-borne illnesses can be obtained from the following agencies:

New York State Department of

Health: <https://www.health.ny.gov/diseases/communicable/lyme/>

United States Center for Disease Control and

Prevention: <https://www.cdc.gov/lyme/index.html>

Occupational Safety and Health

Administration: <https://www.osha.gov/dts/shib/shib021103.html>