

# Ticks and Tick-borne Illness

The months of May, June and July are times of increased activity for ticks and present a chance for tick bites. Ticks are common carriers of tick-borne diseases that may cause serious health problems. These diseases first cause flu-like symptoms. They can be treated with antibiotics if caught early. Untreated, they may cause serious health problems, including death in rare cases. Three illnesses transmitted by ticks are found in North Carolina:

- Rocky Mountain Spotted Fever
- Lyme disease
- Ehrlichiosis

Rocky Mountain spotted fever is the most severe and most frequently reported rickettsial illness in the United States. It is common in North Carolina, which often reports the most cases in the nation. The disease is caused by *Rickettsia rickettsii*, a species of bacteria that is spread to humans by ixodid (hard) ticks. Initial signs and symptoms of the disease include sudden onset of fever, headache, and muscle pain, followed by development of rash. The disease can be difficult to diagnose in the early stages, and without prompt and appropriate treatment it can be fatal.

Lyme disease is caused by bacteria that are transmitted to humans by the bite of infected deer ticks. There are more than 16,000 Lyme disease infections in the United States each year. It is relatively rare in North Carolina, with only about 50 cases reported annually. Symptoms include a characteristic "bull's-eye" rash, flu-like symptoms such as fever, malaise, fatigue, headache, muscle aches and joint aches. Infrequently, Lyme disease may have long-term severe, chronic, and disabling effects, but it is rarely, if ever, fatal.

Ehrlichiosis is also caused by bacteria transmitted by certain species of ticks. Symptoms generally include fever, headache, malaise, and muscle aches. Other signs and symptoms may include nausea, vomiting, diarrhea, cough, joint pains, confusion, and occasionally a rash, particularly in children. Ehrlichiosis can be a severe illness, especially if untreated, and as many as half of all patients require hospitalization. It can be fatal. Ehrlichiosis is rare in North Carolina but may be increasing in frequency

## Personal Protection from Tick Bites

People who live or work in residential areas surrounded by tick-infested woods or overgrown brush are at risk of getting tick-borne disease. Persons who work or play in their yard, participate in recreational activities away from home such as hiking, camping, fishing and hunting, or engage in outdoor occupations, such as landscaping, brush clearing, forestry, and wildlife and parks management in endemic areas may also be at risk of getting these diseases.

To prevent tick bites and tick-carried illness take the following precautions:

- Wear long pants and sleeves when in areas that are likely to have ticks, such as moist shaded areas with high grass, bushes and woods,
- Tuck pants legs into socks and shirts into pants,
- Wear light-colored clothes so you can see ticks more easily,
- Use insect repellent containing DEET on skin and clothing to keep ticks from biting, and
- Check yourself and your children for ticks at least every six hours, paying particular attention to the scalp and back of the neck.

It is unlikely that a person will contract disease from a tick within the first few hours after it bites, so if ticks are found and removed quickly, the danger is reduced. The proper method for removing a tick is to grasp it with tweezers or close to the skin and pull straight out slowly and firmly until the tick lets go. Nail polish, petroleum jelly or hot matches will not make a tick let go. If the tick's mouth parts stay embedded in the skin, remove them with a sterile needle. Wash your hands and the bite area with soap and water, and then clean the bite with disinfectant. Save the tick in a jar or plastic bag and make a note of the day you removed it. If you develop any flu-like symptoms over the next several weeks, see your doctor and let him know you were bitten.

Source: *N.C. Department of Health and Human Services Epidemiology Section*