

Ehrlichiosis

Definition:

Ehrlichiosis is an infection caused by bacteria in the genus *Ehrlichia*. These bacteria are transmitted by the bite of an infected lone star tick.

Signs and symptoms:

Symptoms of ehrlichiosis can range from very mild to very severe illness. These symptoms may include fever, headache, chills, malaise, muscle pain, nausea/vomiting/diarrhea, confusion, conjunctival injection, and rash (in up to 60% of children). Severe clinical presentations may include difficulty breathing and bleeding disorders. Ehrlichiosis can be a serious illness that can be fatal if not treated correctly. People who are immunocompromised or elderly are more at risk for severe disease.

Transmission:

Ehrlichiosis is primarily transmitted to a person through the bite of an infected lone star tick (*Amblyomma americanum*). This tick is infrequently found in the state of Maine, but is common in the southeastern and south-central United States. Ehrlichiosis can also be transmitted by receiving transfusions from a blood donor who is infected with an *Ehrlichia* species.

Diagnosis:

Ehrlichiosis is diagnosed by clinical symptoms and laboratory tests. A blood test is necessary for confirmation. Co-infections with other tick-borne diseases may occur and should be considered.

Role of the School Nurse:

Prevention

- Provide education to students and staff regarding prevention efforts including: Wearing protective clothing, using an EPA-approved repellent, using caution in tick infested areas, and performing daily tick checks.
- School nurse should encourage the use of EPA-approved repellents when outside (following local policy guidelines), and always performing a tick check when returning indoors.
 - School nurses can apply repellent with parental permission (see <http://www.maine.gov/agriculture/pesticides/schoolipm/what/whats-new.htm>)
- If a tick is found, the school nurse should remove the tick using tweezers or a tick spoon. Identification of the tick may be useful.
- Tick identification cards are available at: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/posters/index.shtml>. Whole ticks in safe containers may be given to the parents.
- Testing of the tick is not recommended.

Treatment Recommendations

- If symptoms are noted, the child should be referred to their primary care provider for treatment.
- Several effective antibiotic treatments are available and are usually prescribed for at least 5 - 7 days.

Exclusions

- There is no need to exclude students from school for ehrlichiosis.
- Educational modifications may be warranted in children with a positive diagnosis.

Reporting Requirements

- Ehrlichiosis is reportable within 48 hours of recognition or strong suspicion of illness.

Resources:

- Maine CDC Ehrlichiosis website (including fact sheet): <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/ehrlichiosis/index.shtml>
- Tick-borne Disease in Maine: A Physician's Reference Guide: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/documents/tick-reference-guide.pdf>
- Insect Repellent Finder (including time of protection) <http://cfpub.epa.gov/oppref/insect/index.cfm#searchform>
- Tick Submission information (for identification) <http://extension.umaine.edu/ipm/tickid/>
- Federal CDC Ehrlichiosis website: <http://www.cdc.gov/ehrlichiosis/>