

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](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.
- 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:

- Insect Repellent Finder (including time of protection) [http://cfpub.epa.gov/oppref/insect/index.cfm#searchform](http://cfpub.epa.gov/oppref/insect/index.cfm#searchform)
- Tick Submission information (for identification) [http://extension.umaine.edu/ipm/tickid/](http://extension.umaine.edu/ipm/tickid/)

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