

What is anaplasmosis?

Anaplasmosis is a tick-borne disease caused by the bacterium *Anaplasma phagocytophilum*. It was once known as human granulocytic ehrlichiosis (HGE) but has more recently been called human granulocytic anaplasmosis (HGA). It is transmitted to humans by tick bites primarily from the black-legged tick and the western black-legged tick. Of the four phases in the tick life-cycle (egg, larvae, nymph, and adult), nymphs and adults are most commonly responsible for transmission of anaplasmosis to humans.

What are the symptoms of anaplasmosis?

The first symptoms usually begin 1-2 weeks after the bite of an infected tick. Tick bites are often painless and about half of infected people do not remember being bitten. Due to non-specific early symptoms, several doctor visits may occur before correct diagnosis and treatment. The following is a list of common anaplasmosis symptoms. The number and combination of symptoms varies from person to person.

- Fever
- Headache
- Chills
- Nausea, abdominal pain
- Muscle pain and/or general discomfort
- Cough
- Confusion
- Rash (rarely)
- Labored breathing, bleeding disorders, renal failure, and/or neurological problems may occur in severe cases

How is anaplasmosis diagnosed and treated?

The diagnosis of anaplasmosis is made based on clinical signs and symptoms, as well as the patient's recent activity (travel, contact with high-risk areas, etc.), and can later be confirmed using specialized laboratory tests. Diagnostic tests, especially those based on the detection of antibodies, will frequently appear negative in the first 7-10 days of illness. However, anaplasmosis can be fatal if treatment is not started early enough. Therefore, treatment should never be delayed pending the receipt of laboratory test results, or be withheld on the basis of an initial negative result. Patients who are treated early may recover quickly on outpatient medication (doxycycline, an oral antibiotic), while those who experience a more severe infection may require intravenous antibiotics, prolonged hospitalization or intensive care.

The most effective way to prevent anaplasmosis is to prevent tick bites:

- Before spending time outdoors, apply repellents that contain 20-30% DEET on exposed skin and clothing, and/or treat clothing and gear with repellents containing 0.5% permethrin.
- Avoid wooded and brushy areas with high grass and leaf litter, and walk in the center of trails.
- Examine your entire body, as well as gear and pets, after returning indoors. Promptly remove any attached ticks with a pair of fine-tip tweezers.

For more information on anaplasmosis, please visit the CDC anaplasmosis website:

- <http://www.cdc.gov/anaplasmosis/>