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## What is anaplasmosis?

Anaplasmosis is a tickborne disease caused by the bacterium *Anaplasma phagocytophilum*.

## Who gets anaplasmosis?

Any person that is bitten by an infected blacklegged tick can get this disease.

## How is anaplasmosis spread?

This pathogen is transmitted to people by the bite of an infected blacklegged tick (*Ixodes scapularis*). This tick and disease are seen primarily in the northeastern and upper midwestern United States. The western blacklegged tick (*Ixodes pacificus*) is the primary vector in Northern California.

## What are the symptoms of anaplasmosis?

The common symptoms of anaplasmosis are a rapid onset of fever accompanied by one or more of the following symptoms: headache, body aches, discomfort, nausea or vomiting. Mental confusion or impairment may also occur. It is important to note that few people with the disease will develop all symptoms. The number and combination of symptoms varies greatly from person to person.

## How soon after exposure do symptoms appear?

The first symptoms of anaplasmosis typically begin within 1-2 weeks after the bite of an infected tick. The tick bite from a blacklegged tick is painless and causes no itch, so many patients who develop anaplasmosis do not remember being bitten by a tick.

## How is anaplasmosis diagnosed?

The diagnosis of anaplasmosis must be based on clinical signs and symptoms and can later be confirmed using specialized confirmatory laboratory tests. The best diagnostic test for anaplasmosis is the multiplex PCR test of whole blood for ehrlichiosis and anaplasmosis during the period right after the onset of symptoms. Treatment should never be delayed pending the receipt of laboratory test results, or be withheld on the basis of an initial negative laboratory result.

## What is the treatment for anaplasmosis?

Doxycycline is the first line treatment for adults and children of all ages and should be initiated as soon as anaplasmosis is suspected. Use of antibiotics other than doxycycline or other tetracyclines has been associated with a higher risk of fatal outcome for some rickettsial infections. Doxycycline is most effective at preventing severe illness complications if it is started early in the course of disease.

Therefore, treatment can be based on clinical suspicion alone and should always begin before laboratory results return. If the patient is treated within the first 5 days of the disease, fever generally subsides within 24-72 hours. In fact, failure to respond to doxycycline suggests that the patient's condition might not be due to anaplasmosis or ehrlichiosis. Severely ill patients may

require longer periods before their fever resolves. Resistance to doxycycline or relapses in symptoms after the completion of the recommended course has not been documented.

### **How can anaplasmosis be prevented?**

Avoid tick habitats, such as leaf litter, grass and vegetation in forests, and shaded areas, along forest edges. If you do spend time outdoors in such tick habitats, including your backyard, take precautions to keep ticks off the skin. Walk on cleared trails, and stay in the center of the trail to avoid contact with leaf litter or low vegetation. If you visit potential tick habitats, a highly effective tick prevention method is to wear long pants, socks and shoes or boots that have been treated with a “Pemethrin” based clothing treatment; pants legs should be tucked into socks and/or into boots. Wear light-colored clothing so that ticks are easier to see and remove. If wearing shorts, apply tick repellent containing DEET, oil of lemon eucalyptus or picaridin on your skin around your knees and around your elbows. Conduct tick checks on yourself, your children, and your pets after spending time in an area likely to have ticks.

### **How can I get more information about anaplasmosis?**

- If you have concerns about anaplasmosis, contact your healthcare provider.
- Call your local health department. A directory of local health departments is located at the [VDH Local Health Districts page](#).
- Visit the Centers for Disease Control and Prevention website at [the CDC's page on anaplasmosis](#).

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