

## Ehrlichiosis

### What is ehrlichiosis?

Ehrlichiosis (“air-lick-ee-oh-sus”) is a tick-borne disease caused by very small bacteria, specifically *Ehrlichia chaffeensis*, *E. ewingii*, or *E. muris eaucloirensis*. These bacteria invade white blood cells called “monocytes” in people, and so ehrlichiosis is also called human monocytic ehrlichiosis (HME).

### How is ehrlichiosis transmitted?

The bacteria that cause ehrlichiosis are carried by certain kinds of ticks and can be transmitted to a person when a tick bites them. In the U.S., the lone star tick (*Amblyoma americanum*) and blacklegged tick (*Ixodes scapularis*) are known to carry and transmit the bacteria that cause ehrlichiosis. These ticks are primarily found in the south-central and eastern U.S. and do not occur in California.

### How common is ehrlichiosis?

Hundreds of cases of ehrlichiosis are reported each year in the U.S., with over 2,000 cases reported in 2019. Ehrlichiosis does not occur in California because the tick species that transmits ehrlichiosis is not found in California. Most cases of ehrlichiosis occur in the south-central and eastern U.S. Californians may be diagnosed with ehrlichiosis after exposure or travel to areas where the tick vector occurs.

### What are the symptoms of ehrlichiosis?

Most individuals infected with the bacteria that cause ehrlichiosis experience mild or no symptoms. When symptoms occur, they resemble influenza, with fever, headache, fatigue, muscle aches, and nausea. Some individuals may also have vomiting, cough, or a rash. More severe illness may occur in some patients, particularly elderly people or those with weakened immune systems. The disease is rarely fatal (1% - 2% of cases).

### How is ehrlichiosis treated?

Ehrlichiosis can be successfully treated with antibiotics. People with ehrlichiosis generally begin to feel better within one to two days of starting antibiotic treatment.

### How do I know if I have ehrlichiosis?

If you experience flu-like symptoms within two to three weeks after receiving a tick bite, or after having been in an area where ticks are prevalent, consult your healthcare provider. Several different blood tests are available to your physician to help determine whether or not your illness is ehrlichiosis.

### How can I prevent tick bites?

Taking appropriate precautions to avoid tick bites can reduce the risk of infection with ehrlichiosis, as well as other diseases transmitted by ticks.

- Avoid areas where ticks are known to occur.
- Use an EPA-registered repellent for use against ticks. Repellents with at least 20%

DEET are effective and can be applied to the skin and clothing. Always follow directions on the container.

- Apply permethrin to clothing (only) to kill ticks.
- Thoroughly check yourself and others for ticks during and up to three days after activities in tick-infested areas.
- Shower soon after returning from tick habitat.
- Before washing, place clothing worn while in tick habitat in a hot dryer for 10 minutes to kill ticks crawling on clothing.
- Keep grass along trails, buildings, and camping areas mown.

#### **How should attached ticks be removed?**

- ***Note: Prompt tick removal can prevent disease transmission.***
- Using tweezers, grasp the tick's mouthparts as close to the skin as possible.
- Gently pull the tick straight out, using a firm, steady motion.
- Wash your hands and the bite site with soap and water.
- Apply an antiseptic to the bite site.
- See your healthcare provider if you develop any symptoms within 30 days of the tick bite.

#### **Where can I find more information about ehrlichiosis?**

More information can be found on the [U.S. Centers for Disease Control and Prevention ehrlichiosis webpage](https://www.cdc.gov/ehrlichiosis/) (<https://www.cdc.gov/ehrlichiosis/>).

Updated March 2022