

Ehrlichiosis in Dogs

Dr. Mike Paul, DVM

Mike has more than 35 years of experience in companion animal veterinary practice and is a valued member of IDEXX's Pet Health Network team since 2013.

Ehrlichiosis is an emerging disease caused by a rickettsia: a type of bacteria that infects dogs, people, and less commonly cats. Ehrlichiosis was first recognized as a disease in the United States in the late 1980's, but did not become a reportable disease (in humans) until 1999. In dogs, most cases of ehrlichiosis are caused by *E. canis*. Transmission is always from tick bites. Although people and dogs often live in close relationship, and may be infected by the same species of ticks, direct cross infection is not known to occur.

Ehrlichia is most often transmitted by the [Brown dog tick](#) (*Rhipicephalus sanguineus*). Infection is thought to require several hours of tick to the dog attachment and clinical signs may not demonstrate for 1-3 weeks.

Stages of ehrlichiosis in dogs

There are 3 differing stages of the disease in dogs.

Acute phase of ehrlichiosis: 1-3 weeks after exposure

- Fever, anorexia, lethargy
- Enlarged lymph node
- Thrombocytopenia or low platelet counts

Most dogs recover at this point, but others progress to the subacute and chronic phases.

Subacute phase ehrlichiosis:

- Hypergammaglobulinemia or abnormally elevated immune proteins
- Thrombocytopenia and anemia
- This phase can last months to years

Chronic phase of ehrlichiosis:

- Lethargy, weight loss
- Reduction in red and white blood cell counts
- Bone Marrow Suppression and hemorrhage
- Death

Less commonly, infected dogs can also exhibit inflammatory diseases of the eye and nervous system.

According to [The University of Wisconsin](#), progression to subacute and chronic disease is generally attributed to an ineffective immune response on the part of the dog. [German Shepherd](#) dogs appear to be predisposed to the severe, chronic form of disease.

Diagnosing ehrlichia in dogs

- Most commonly, a presumptive diagnosis is made when clinical signs lead to a high level of suspicion.
- Monocytes, a kind of white blood cell, can occasionally help with diagnostics.
- Confirmation may require using an ELISA test that also looks for [anaplasma](#), [Lyme disease](#), and [heartworm](#) infection. PCR testing is also becoming commonly available.

Treatment of ehrlichiosis in dogs may include:

- Tetracycline
- Doxycycline

Treatment should be maintained for at least 4 weeks.

Prevention of ehrlichiosis

There is no available vaccine and the best ways to prevent these infectious bites are with tick repellents, thorough body checks after being outside, and proper removal of ticks. There is a correlation between canine cases and human infection and the [CDC](#) considers dogs as a sentinels for human exposure. Some experts believe that positive canine tests should be reported to human health care providers so that appropriate diagnostics can be performed.

Once a geographically limited disease, ehrlichia is now wide spread in its distribution and is of particular concern in Gulf Coast states and through the Southeast. [The Companion Animal Parasite Council](#) recommends that all dogs be tested yearly for tick borne diseases and that all dogs be treated with effective tick control

Ehrlichiosis in Dogs

agents all year round.

If you have any questions or concerns, you should always visit or call your veterinarian -- they are your best resource to ensure the health and well-being of your pets.

Beware the Bug

[Ticks 101](#)

By Dr. Ruth MacPete

Anaplasma is spread by ticks. As the weather gets warmer and dogs spend more time outside, they're more likely to be exposed to these creepy parasites and all of the diseases they carry. [Read more>](#) Or [learn more about dogs and parasites >](#)