

# Ehrlichiosis

Ehrlichiosis is a disease affecting dogs that is transmitted by ticks. There are two different types of ticks that can carry the Ehrlichiosis organism; the Brown Dog Tick and the Lone Star Tick. Either of these two (or both) ticks can be found in almost every state within the United States. The immature



ticks will take a meal on an affected animal and the organism will then be passed onto the next dog when the tick takes its next meal. The Ehrlichia organism can live in the tick for up to five months as it develops from an immature tick to a mature tick. This means that the tick can pick up the organism in the fall and infect a dog the next spring. The Ehrlichia organism is what is called a rickettsia which is between a bacteria and a virus on the evolutionary scale. Ehrlichiosis became well known and better



studied during the Vietnam War because German Shepherd Dogs that were part of the military were becoming sick. Both German Shepherd Dogs and Dobermans tend to have severe reactions to the chronic phase of the disease.

There are three phases of Ehrlichiosis: acute, subclinical and chronic. The acute phase typically develops 1 to 3 weeks after that dog has been exposed to the organism. This phase can last 2 to 4 weeks. The organism enters the white blood cells, lymph nodes, spleen, liver and bone marrow where they reproduce. The dog's platelets can also be destroyed. Signs of infection include fever, depression, lethargy, loss of appetite, shortness of breath, bruises and joint pain and stiffness. Your veterinarian may notice anemia as well as enlargement of the liver, spleen and lymph nodes upon physical exam. Many times dogs are able to fight off the infection on their own. If they are not able to then they will enter the subclinical phase. In the subclinical phase the Ehrlichia organism lives in the spleen and the dog may appear normal or show only slight anemia (a decrease in the total number of healthy red blood cells present in the circulatory system). This phase can last for months or even years and ultimately the dog will either fight off the infection or transition into the chronic phase. The third and final phase is the chronic phase and it can either be mild or severe. Signs typically include weight loss, anemia, bleeding, neurological signs, inflammation of the eyes, edema (a buildup of fluid) in the hind legs and fever. A dog that has a chronic infection can have the disease come back, especially during times of stress. Ticks can carry more than one disease causing organism at a time, meaning that the dog can have more than one disease such as Ehrlichiosis and Lyme Disease, at the same time. This can cause the dog to exhibit more severe symptoms.

The first test that your veterinarian will want to do if your dog is showing these symptoms is a 4Dx test which tests for Ehrlichiosis, Anaplasmosis, Lyme Disease and Heartworm Disease. This test is a fast test that can be run in the clinic with results within 10 minutes. This test detects the antibodies against the Ehrlichia organism. If the test comes up positive your veterinarian will want to do more inclusive bloodwork. During the more inclusive bloodwork, morulae (intracellular inclusions) can



morulae

occasionally be seen in the white blood cells. Other findings on the bloodwork can include a decreased number of platelets in each phase of the disease and a change in the protein levels in the blood. The antibodies can remain for a year or longer. This means that the dog can still have a positive 4Dx test result but it does not mean that the animal cannot be re-infected with the organism. The treatment for Ehrlichiosis is a 3 to 4 week course of antibiotics with the most common antibiotic being doxycycline. The dog may require blood transfusions or other supportive care measures depending on the severity of the condition.

The best way to prevent Ehrlichiosis is to use a monthly flea and tick preventative product such as Nexgard®, Frontline® or Vectra® year round. Nexgard is an oral product and Frontline and Vectra are topical products. There is no vaccine available for Ehrlichiosis and it is highly recommended that you have a 4Dx test done on your dog every year.

Humans can also get Ehrlichiosis but they will not get the disease from an infected dog. They have to be bitten by a tick carrying the organism to become infected.

For more information about Ehrlichiosis feel free to call us at (920) 668-6212 or email us at [info@cgvet.com](mailto:info@cgvet.com). For more information go to the following sites:

- ✓ [https://www.merckvetmanual.com/generalized-conditions/rickettsial-diseases/ehrlichiosis-and-related-infections?network=g&matchtype=e&keyword=ehrlichiosis%20in%20dogs&creative=223891419103&device=c&devicemodel=&placement=&position=1t1&campaignid=939309517&adgroupid=46072480519&loc\\_physical\\_ms=9018708&loc\\_interest\\_ms=&gclid=Cj0KCQjA5dPuBRCrARIsAJL7oeiB4XTI3-CPuYJD6E6dx-TO-2Le-JyLERhYxicESpBa5-wnoH8HYZ8aAiKiEALw\\_wcB](https://www.merckvetmanual.com/generalized-conditions/rickettsial-diseases/ehrlichiosis-and-related-infections?network=g&matchtype=e&keyword=ehrlichiosis%20in%20dogs&creative=223891419103&device=c&devicemodel=&placement=&position=1t1&campaignid=939309517&adgroupid=46072480519&loc_physical_ms=9018708&loc_interest_ms=&gclid=Cj0KCQjA5dPuBRCrARIsAJL7oeiB4XTI3-CPuYJD6E6dx-TO-2Le-JyLERhYxicESpBa5-wnoH8HYZ8aAiKiEALw_wcB)
- ✓ <https://veterinarypartner.vin.com/default.aspx?pid=19239&id=4952341>
- ✓ <https://capcvet.org/guidelines/ehrlichia-spp-and-anaplasma-spp/>

