

Ehrlichia Testing in Dogs

- Ehrlichiosis is a bacterial infection transmitted by ticks.
- Clinical signs of ehrlichiosis may include fever, swollen lymph nodes, painful joints, and lethargy (tiredness).
- Many veterinarians diagnose ehrlichiosis using a SNAP test.
- SNAP testing requires a very small blood sample and takes just a few minutes at your veterinarian's office.
- Sometimes additional diagnostic testing is recommended.

What Is Ehrlichiosis?

Ehrlichiosis is a disease caused by bacteria of the *Ehrlichia* family. There are several species of *Ehrlichia* bacteria, and some of them can affect humans. Ehrlichiosis (whether it occurs in dogs or humans) is transmitted through the bite of a tick. The tick that most commonly spreads the disease is called the brown dog tick.

After the *Ehrlichia* organism enters the body through a tick bite, it affects the cells in the dog's bloodstream. White blood cells (needed to fight infection), red blood cells (needed for carrying oxygen throughout the body), and platelets (needed to help form blood clots) can all be affected.

What Are the Clinical Signs of Ehrlichiosis?

Ehrlichiosis has different phases of illness, which are called *acute*, *subclinical*, and *chronic*:

- In the **acute phase**, clinical signs occur about 1 to 3 weeks after an infected tick bites the dog. Clinical signs associated with this phase can include lethargy (tiredness), fever, appetite loss, and enlarged lymph nodes. In some cases, clinical signs can resolve without treatment. However, if the infection is not treated, it can progress to the subclinical phase.
- In the **subclinical phase**, the dog may appear completely normal because clinical signs are not observed. This phase may last many months

or even years, but eventually, the bacteria can reactivate and start to cause illness again.

- In the **chronic phase**, the dog may again show vague signs, such as fever, lethargy, and appetite loss. However, as the *Ehrlichia* organism affects the blood cells and bone marrow, clinical signs may include bleeding problems and anemia (an inadequate number of red blood cells). At this point, the bacteria may also affect the brain, causing seizures and incoordination.

Other clinical signs associated with ehrlichiosis can include joint pain and swelling as well as autoimmune disease, in which the dog produces antibodies (proteins that defend the body) that damage its own cells. If ehrlichiosis causes severe complications, death can result.

How Is Ehrlichiosis Diagnosed?

Clinical signs of ehrlichiosis can resemble those of other tick-associated diseases, such as Lyme disease and Rocky Mountain spotted fever. Additionally, dogs can be infected with ehrlichiosis and other tick diseases at the same time, so your veterinarian may recommend screening for other tick diseases during the diagnostic testing for ehrlichiosis.

Ehrlichiosis is a bacterial infection transmitted by ticks. Clinical signs may include fever, swollen lymph nodes, painful joints, and lethargy (tiredness).

Your veterinarian may suspect ehrlichiosis based on a medical history that includes tick exposure and suspicious clinical signs. A CBC (complete blood cell count) may also show changes in white blood cells, red blood cells, or platelets; however, not all dogs develop these changes, so CBC results can be normal even if a dog has ehrlichiosis.

Tests and Procedures

Many veterinarians diagnose ehrlichiosis using a SNAP test. SNAP tests are a group of quick, convenient blood tests that can be performed at your veterinarian's office. The available SNAP tests include the following:

- The **SNAP Heartworm RT Test** screens for heartworm infection.
- The **SNAP 3Dx Test** simultaneously screens for heartworm disease, Lyme disease, and ehrlichiosis.
- The **SNAP 4Dx Test** can diagnose four diseases at the same time: heartworm disease, Lyme disease, ehrlichiosis, and anaplasmosis (which is another disease that is transmitted to dogs through a tick bite).

SNAP testing is very accurate, so it is a good way to identify dogs that may be infected with one or more of these diseases. SNAP testing is also very convenient because it uses a very small amount of blood and takes only a few minutes to perform.

Your veterinarian may recommend additional testing to follow up a SNAP test result or to look for other evidence of illness related to heartworm disease or one of the tick-borne infections. Testing may involve sending additional blood samples to a

laboratory for further analysis or performing other diagnostic tests to gain more information about your dog's condition.

What Are the Benefits of *Ehrlichia* Testing?

Tick-borne diseases like ehrlichiosis pose a risk to dogs in many areas of the country. Because clinical signs are not always apparent, periodic testing is a good way to identify dogs that have been infected. Even dogs that receive year-round tick control products and don't spend large amounts of time outside can be at risk for exposure to tick-borne diseases. Testing helps identify dogs that need (1) treatment for one (or more) of these infections or (2) adjustments in the type of tick control being used.

There are currently no vaccines to protect dogs from ehrlichiosis, so appropriate tick control methods combined with periodic testing may be the best way to help protect dogs from ehrlichiosis.

Many tick-borne diseases are regional, so not all dogs are at risk for exposure to the same diseases. Your veterinarian can discuss the risk of ehrlichiosis for dogs in your area. In some cases, your veterinarian may not recommend testing. Even if you live in an area where tick-borne diseases are less common, be sure to ask your veterinarian what tick prevention measures can help protect your dog.