

Anemia in Dogs

- Anemia in dogs has many possible causes, and it can range in severity from mild to severe. Severe anemia is life threatening and requires immediate veterinary care.
- Anemia results from a loss or destruction of red blood cells or from a failure of the body to produce enough red blood cells. Red blood cells carry oxygen throughout the body; therefore, anemia can cause lethargy (tiredness) and exercise intolerance (difficulty exercising).
- Anemia is not contagious. However, anemia can be caused by infectious diseases, such as ehrlichiosis, which is transmitted through a tick bite.
- Immediate treatment of severe anemia may require a blood transfusion to replace lost red blood cells. Treatment is based on the diagnosis of the underlying cause of the anemia.
- Certain causes of anemia may be preventable. For example, to reduce the risk of tick-borne diseases that may cause anemia, regular flea and tick prevention, as recommended by your veterinarian, is advisable.

What Is Anemia?

Anemia develops when number of red blood cells in the bloodstream is reduced. Red blood cells carry oxygen throughout the body.

There are many different causes and types of anemia. Anemia may result from blood loss, the destruction of red blood cells within the body, or the inability of the body to produce enough red blood cells. The type of anemia depends on its cause. For instance, a severe injury that causes bleeding externally or internally can result in blood loss that causes anemia. Other causes of anemia include:

- Immune-mediated disease (a condition in which the body's immune system attacks its own red blood cells)
- Bleeding into the gastrointestinal tract as a result of disease or severe inflammation
- Reaction to certain medications, such as non-steroidal antiinflammatory drugs (NSAIDs)
- Infectious diseases, including certain diseases that are spread by ticks
- Blood loss from severe flea infestations (especially in very small dogs and puppies)
- Exposure to toxins such as lead, resulting in lead poisoning
- Cancer (may lead to bleeding into the gastrointestinal tract or bleeding from a tumor)

Sometimes, anemia is caused by a lack of red blood cell production as a result of chronic diseases (such as certain types of cancer or kidney disease) or exposure to certain medications that may interfere with red blood cell production.

Signs of Anemia in Dogs

- Lethargy (tiredness)
- Pale mucous membranes (gums, inner eyelids)
- Decreased appetite
- Exercise intolerance (difficulty exercising)

How Is Anemia Diagnosed and Treated?

A simple blood test can diagnose anemia. Most veterinarians can perform a quick blood test called a packed cell volume (PCV) in the hospital. The PCV indicates the volume of red blood cells in the bloodstream. If your dog's PCV is lower than the normal range, anemia is diagnosed. Your veterinarian will

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also take a complete history and consider the physical exam findings, including whether your dog has a fever.

Other blood tests can offer more detailed information regarding the anemia, such as whether the body is producing new red blood cells to replace

Common Conditions

the lost or destroyed red blood cells. Another test looks at the structure of the red blood cells to help determine suspected causes of the anemia. A CBC (complete blood cell count) is also an important test when evaluating a dog for anemia. This test looks at red blood cells, white blood cells (which fight infection and contribute to inflammation), and platelets (which help with proper blood clotting.)

It is extremely important to identify the cause of the anemia so that proper and effective treatment may be given. Therefore, your veterinarian may recommend other diagnostic tests, including other blood tests, radiographs (x-rays) of the abdomen to check for masses that may be bleeding, or an ultrasound of the abdomen to check for masses and fluid (blood) in the abdomen.

In cases of anemia resulting from sudden loss of a large amount of blood, or severe anemia from blood loss over time, a blood transfusion may be recommended (or required) for survival. Severe anemia results in a significantly reduced ability of the blood to deliver oxygen throughout the body and, most importantly, to vital organs such as the

brain. Therefore, a blood transfusion is necessary to help deliver oxygen and nutrients to major organs and other parts of the body. Occasionally, multiple transfusions are required before the dog's body can produce enough red blood cells on its own.

Other treatments for anemia are determined based on the diagnosis of the underlying cause.

How Can I Prevent Anemia?

Prevention of certain causes of anemia may be aided by basic care and maintenance. For instance, you can reduce the risk of tick-borne diseases by using veterinarian-approved flea and tick control products. Talk with your veterinarian about the best plan for flea and tick prevention.

If your veterinarian prescribes any medication, ask about the most common side effects so you can monitor your dog for any signs of these side effects. If you notice any change in your dog's behavior while he or she is taking a medication, such as vomiting or decreased appetite, call your veterinarian right away to notify him or her of the changes and to check if you should continue giving the medication.