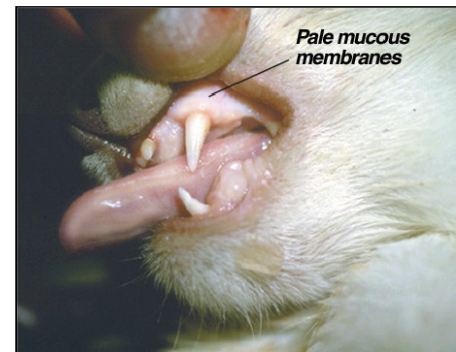


Anemia in Cats

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What does it mean to be anemic?

Anemia is a medical term referring to a reduced number of circulating red blood cells (RBC's), hemoglobin (Hb), or both. It is not a specific disease but rather it is the result of some other disease process or condition. Hemoglobin delivers oxygen to the cells and tissues of the body, and an anemic patient will suffer from symptoms related to a lack of oxygen.



Red blood cells are produced in the bone marrow and are released into the blood where they circulate for approximately two months. As they age or become damaged, they are removed from the bloodstream, and their components are recycled to form new red blood cells. The number of red blood cells may become reduced because of decreased production or increased loss of red blood cells.

What are the symptoms of anemia?

The most easily observed and common clinical sign of anemia is a loss of the normal pink color of the gums; they may appear pale pink to white when examined.

"Pale gums and lethargy indicate the need to perform blood tests."

Anemic cats also have little stamina or energy so they seem listless or tire more easily. Pale gums and lethargy indicate the need to perform blood tests.

How is anemia diagnosed?

Several tests are performed on blood samples to diagnose anemia. These tests are often performed as part of a complete blood cell count (CBC). The most common test to diagnose anemia is the **packed cell volume (PCV)**, also called the **hematocrit**. To measure the PCV, a blood sample is processed in a centrifuge to spin down or separate the red blood cells from the plasma (the liquid part of the blood). Once separated, the sample is measured to determine what percentage of the sample is made up of red blood cells. Twenty-five to forty-five percent of the normal cat's blood will be red blood cells. If the PCV is below 25%, the cat is anemic. Other tests to determine anemia include the **red blood cell count** and the **hemoglobin count**.

What other tests are important when a cat is anemic?

When there is evidence of a low red blood cell count, it is important to know if the bone marrow is producing an increased number of new red blood cells in response to the lost red blood cells. Some new red blood cells will be released prematurely, and these immature red blood cells, called *reticulocytes*, can be stained for easier identification on the **blood smear**. The presence of increased numbers of reticulocytes indicates that the anemia is "responsive". Most automated blood analyzers will detect the presence of reticulocytes, helping your veterinarian quickly determine whether the cat has a responsive anemia.

"These tests providing important information about the overall health of the cat."

A careful study of the blood smear is also important to look for parasites that might be causing red blood cell destruction and other abnormal cells that could indicate leukemia (an abnormally high white blood cell count).

A **bone marrow biopsy or aspirate** is obtained if there is concern that the bone marrow is not responding appropriately to the anemic state. A sample of bone marrow is withdrawn and analyzed, providing valuable information about its condition and occasionally revealing the cause of the anemia.

A **biochemical profile** and **urinalysis** are other important tests for anemic cats. These tests evaluate organ function and electrolyte levels, and providing important information about the overall health of the cat.

A **fecal parasite exam** is important to identify the presence of parasites in the intestinal tract that might be causing blood loss.

Finally, an anemic cat should be tested for the **feline leukemia virus (FeLV)** and **feline immunodeficiency virus (FIV)** because these viruses are important and frequent causes of anemia.

What diseases cause anemia?

Many diseases can cause a decrease in the number of red blood cells or hemoglobin. These are grouped into 1) diseases that cause blood loss, 2) diseases that cause hemolysis (red blood cell breakdown and destruction), and 3) diseases that decrease the production of red blood cells through bone marrow suppression.



What diseases of cats cause blood loss?

The main causes of blood loss in cats include:

- Trauma or injury to blood vessels or internal organs resulting in bleeding
- Severe parasitic infestations with fleas, ticks, and hookworms
- Tumors of the intestinal tract, kidneys, and urinary bladder
- Diseases that prevent proper clotting of blood

What diseases of cats cause hemolysis?

The main causes of hemolysis in cats include:

- Autoimmune disease
- Feline leukemia virus (FeLV)
- Blood parasites such as *Hemobartonella*
- Chemicals or toxins
- Neoplasia (cancer)

What diseases of cats prevent red blood cell production through bone marrow suppression?

The main causes of bone marrow suppression in cats include:

- Any severe or chronic disease (such as chronic kidney or liver disease)
- Very poor nutrition or nutritional imbalances
- Autoimmune disease
- Feline leukemia virus (FeLV)
- Feline immunodeficiency virus (FIV)
- Chemicals or toxins
- Neoplasia (cancer)

Do cats get iron deficiency anemia?

Iron deficiency anemia is a common disease in people, especially women. However, this iron deficiency is rare in cats and only develops secondary to severe chronic blood loss or in cats that are on very unbalanced diets.

How is anemia treated?

If your cat's anemia is so severe that it is life threatening, a blood transfusion will be needed. Before giving your cat a blood transfusion, blood samples will be taken for diagnostic testing. The main purpose of a blood transfusion is to stabilize your cat while the underlying cause of the anemia is determined and other treatments can begin to take effect.

Further treatment will be determined once the underlying disease causing the anemia has been diagnosed. Treatments may include corticosteroids, anthelmintics (de-worming medications), other medications, or surgery. Your veterinarian will outline a treatment plan specific for your cat's needs based on diagnostic test results.

What is the prognosis for anemia?

"Most cats, if the anemia is diagnosed early and they are in relatively good health, have a good prognosis."

The prognosis for cats with anemia is based on the specific diagnosis and the patient's condition prior to initiating treatment. Most cats, if the anemia is diagnosed early and they are in relatively good health, have a good prognosis. Cats that are anemic due to toxins, cancer or autoimmune diseases, or have suffered severe trauma have a less favorable prognosis.

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