

Splenomegaly - The Significance of an Enlarged Spleen

As a board-certified internal medicine and emergency/critical care specialist, I am often referred dogs and cats with enlarged spleens. I partner with pet parents and family veterinarians to determine the reason for splenic enlargement (called splenomegaly). This week I share some information about the spleen and the potential reasons for this important organ to grow in size. Happy reading!

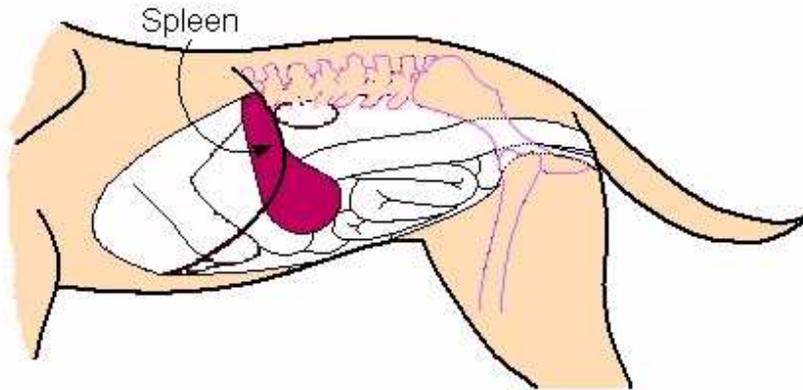


Splenomegaly - What is the spleen?

The spleen is an important component of a pet's immune system. Indeed, it's the largest lymphoid organ in the body that essentially acts as a filter. Among its chief functions are:

- Removal of foreign invaders by a process called phagocytosis
- Removal of dying/senescent and/or abnormal red blood cells from circulation

- Production of various immune cells, including lymphocytes and plasma cells
- Red blood cell production (called erythropoiesis)
- Red blood cell and platelet storage
- Iron metabolism



The normal position of the spleen in a dog

Splenomegaly - What causes it?

Spleens become enlarged for one of four general reasons:

Infiltration: Cells and other various substances can infiltrate the splenic tissue. This causes the organ to become substantially larger than normal. Cancers are the most common cause of infiltrative splenomegaly. However, some infiltration can be benign! An infiltrative process can be diffuse or nodular. Common causes of diffuse infiltrative splenomegaly include:

- [Lymphoma](#)
- Mast cell disease
- Multiple myeloma
- Leukemias
- Amyloidosis
- Histiocytosis

Some benign causes of nodular infiltration include hematoma formation, granulomas (an attempt by the immune system to wall off substances), abscesses, and some benign tumors (i.e.: hemangiomas, myelolipomas).



A primary splenic tumor in a dog

More commonly, nodular infiltration is cancerous. The most common splenic tumors are:

- Hemangiosarcoma
- Histiocytic sarcoma
- Leiomyosarcoma
- Fibrosarcoma
- Osteosarcoma
- Undifferentiated sarcomas

Inflammation: Various infectious diseases, including bacteria, viruses, protozoa, and fungi, cause the spleen to grow in size.

Reactive changes: The spleen becomes bigger when it accumulates immune cells like lymphocytes and plasma cells. This collection occurs as a result of immune system stimulation associated with certain diseases, particularly [immune-mediated hemolytic anemia](#).

Congestion: When splenic veins aren't able to drain normally, blood accumulates with the spleen to cause it to swell. Potential causes of impaired venous drainage in the spleen include right-sided heart failure, certain liver diseases, obstruction of specific major veins in the body (i.e.: portal vein, caudal vena cava), and splenic torsion.

Splenomegaly - What do affected pets look like?

The clinical appearance of a dog or cat with an enlarged spleen is highly variable. Some patients have no clinical signs while others can be profoundly ill. Potential clinical signs associated with splenomegaly are:

- Lethargy & weakness
- Collapse episodes
- Fever
- Pale gums
- Loss of appetite
- Abdominal distension and discomfort
- Vomiting & diarrhea
- Elevated and/or abnormal heart rhythm
- Rapid and/or difficulty breathing
- Yellowing of the whites of the eyes (called [icterus](#))

Dogs and cats with any of the above-listed clinical signs should be evaluated by a veterinarian as soon as possible.

Splenomegaly - How is it diagnosed?

Identifying an enlarged spleen is relatively straightforward. A veterinarian should be able to readily palpate an enlargement during a complete physical examination. A prominent spleen may be normal certain dog breeds, including German shepherds and Scottish terriers.

Once abnormal splenomegaly has been documented, a veterinarian will recommend further diagnostic testing in an attempt to determine the definitive cause of the enlargement. Common tests recommended to help determine the cause of an enlarged spleen include:

- Baseline blood & urine testing (i.e.: complete blood count, biochemical profile, urinalysis)
- Diagnostic imaging (i.e.: abdominal radiographs/x-rays; abdominal [ultrasonography](#), chest radiographs/x-rays; echocardiography/heart ultrasonography)
- Splenic cytology (evaluation of cells) and/or biopsy
- Infectious disease screening

- Bone marrow sampling



A veterinarian performed abdominal ultrasonography on a cat

Partnering with a board-certified veterinary internal medicine specialist at this juncture can be invaluable for developing a logical and cost-effective diagnostic plan.

Splenomegaly - How is it treated?

Specific treatment for splenomegaly depends on the definitive underlying cause. A patient with an infectious cause of an enlarged spleen needs drug(s) to battle the infection. A pet with an immune-mediated disease requires medication(s) to modify the function of the animal's immune system. A dog or cat with a splenic tumor typically initially needs surgery to remove the spleen (called a splenectomy), and may subsequently benefit from chemotherapy. Collaborating with board-certified veterinary surgeons and/or internal medicine specialists can help ensure a fur baby receives the most appropriate healthcare.

The take-away message about splenomegaly in dogs and cats...

An enlarged spleen or splenomegaly is relatively common in dogs and cats. It is essential to identify early the exact cause of this abnormality. Veterinarians will perform a complete physical examination, as well as some non- to minimally invasive diagnostic tests to make a definitive diagnosis. Treatments depend on the underlying cause, and may include medication(s), surgery, and cancer treatments.

To find a board-certified veterinary internal medicine specialist, please visit the [American College of Veterinary Internal Medicine](#).

To find a board-certified veterinary surgeon, please visit the [American College of Veterinary Surgeons](#).

Wishing you wet-nosed kisses,

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