

# Splenic Torsion

## Surgery Service



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### Locations

#### **Auburn Hills**

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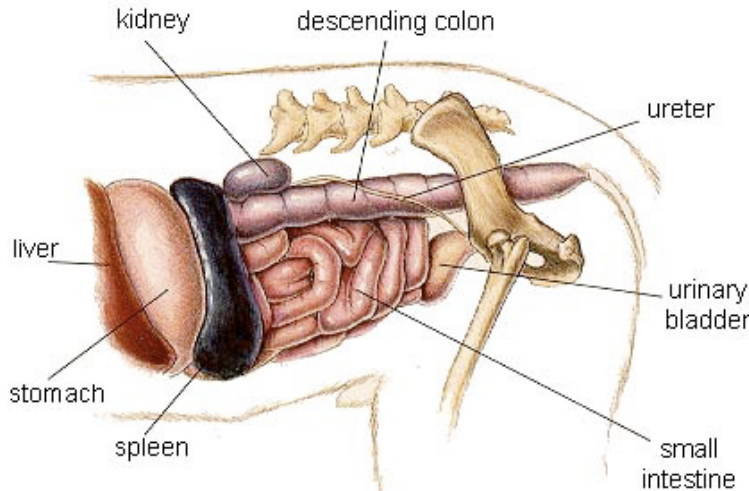
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(248) 354-6660

## Anatomy

The spleen is a tongue shaped organ within the abdomen that filters the blood. It removes and processes aged red blood cells and bacteria from the blood. In addition, the spleen is a reservoir that stores blood, in the event that the body suddenly needs it. Humans and animals can live normal lives without a spleen.



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## What is a splenic torsion?

A splenic torsion is a condition in which the spleen twists about its arteries and veins. Because veins normally have low blood pressure, they become collapsed first. The arteries, having a much higher blood pressure, will continue to pump blood into the spleen, resulting in a very large, painful organ.

There are two forms of a splenic torsion: acute and chronic. The acute form of the condition causes marked acute abdominal pain and shock within a few hours after the spleen twists. Because the spleen essentially consumes the blood from the body, the affected patient will display signs of shock. The chronic form likely is due to a partial twist of the spleen, thus the blood flow is incompletely cut off. In these cases, clinical signs often are those associated with vague illness.

## Signs and diagnosis

Splenic tumors tend to affect large deep-chested dogs such as German Shepherds and Great Danes. Clinical signs of an acute splenic torsion include acute weakness, collapse, pale gums, rapid heart rate, retching, drooling, abdominal pain, abdominal distention, and enlargement of the spleen. Signs of the chronic form of the condition include depression, lethargy, lack of appetite, and vomiting. The gums of the oral cavity may be pale due to anemia and the urine may have a dark port wine color due to break down of red blood cells.

Abdominal x-rays usually show marked enlargement of the spleen and sometimes free fluid (blood) within the abdomen. Ultrasound of the abdomen will confirm the presence of a very enlarged spleen and loss of blood flow within the veins of the spleen. Blood work is also necessary prior to surgery to ensure that the internal organs are functioning well and to ensure that your companion is not so anemic that a transfusion is needed.

# Splenic Torsion Continued...

## The day of surgery

Surgery will be performed on an emergency basis when a splenic torsion has been diagnosed. Our anesthesia and surgical team will prescribe a pain management program, both during and after surgery that will keep your companion comfortable. This will include a combination of general anesthesia, injectable analgesics, and oral analgesics.

## Treatment

Initially, your companion will be assessed and intravenous fluids, artificial plasma (Hetastarch) and potentially blood transfusions may be required to reverse shock and anemia. The spleen is removed via an abdominal incision. Commonly, hemostatic staples are used to seal the blood vessels of the spleen, therefore you should not be alarmed if an x-ray made after the surgery shows metal staples within the abdomen. After the surgery, blood pressure, EKG, and other vital signs will be monitored to ensure that your companion has an uneventful recovery. Intravenous fluids are continued after surgery to keep the patient well hydrated and to maintain blood pressure. Most pets will stay in our hospital for 24 to 72 hours after surgery.

## Aftercare and results

After surgery, you can continue to give your pet a prescribed pain reliever to minimize discomfort. Do not allow your dog to scratch or lick the incision. If necessary, the incision can be protected by placing a tee shirt on your companion to cover the abdomen or by placing an Elizabethan collar on the neck to prevent licking. Restricting your dog's activity for three weeks after surgery is essential to allow the abdominal incision to heal properly. The surgeon will evaluate your companion 2 weeks after the surgery to evaluate the healing process.

Complications that can be associated with a splenic torsion may include abnormal heartbeats, hemorrhage from abnormal coagulation, disseminated intravascular coagulation (a severe disorder of the blood that may cause death), blood clots, inflammation of the pancreas, and stomach bloat.

The prognosis for acute splenic torsion is not quite as good as the chronic form, as these dogs are more severely affected by toxins in the blood and shock. With early aggressive medical and surgical treatment, the prognosis still can be favorable. One study reported a 100% survival of cases that had surgical removal of the spleen.

## References

1. Aronsohn MG et al. Prognosis for nontraumatic hemoperitoneum in the dog: a retrospective analysis of 60 cases (2003-2006). *J Am Anim Hosp Assoc.* 2009 45(2):72-77.
2. Neath PJ, et al. Retrospective analysis of 19 cases of isolated torsion of the splenic pedicle in dogs. *J Small Anim Pract.* 1997 Sep;38(9):387-92.
3. Robinson TC, et al. Splenic torsion in dogs. *Vet Rec.* 1993 Jul 10;133(2):48.



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# Splenic Torsion Continued...

## Assessment and recommendations

Patient name: \_\_\_\_\_ Date: \_\_\_\_\_

### Treatment

- Emergency surgery is recommended
- Surgery is not recommended

### The following has been prescribed

- No medications or special diet are necessary at this time
- Prescription diet: \_\_\_\_\_
- Medication: \_\_\_\_\_

### Exercise

- Unlimited
- Confine your pet to the house other than very short leash walks necessary for bowel movements and urination for 3 weeks
- Restrict exercise to leash walks 10 minutes twice daily

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