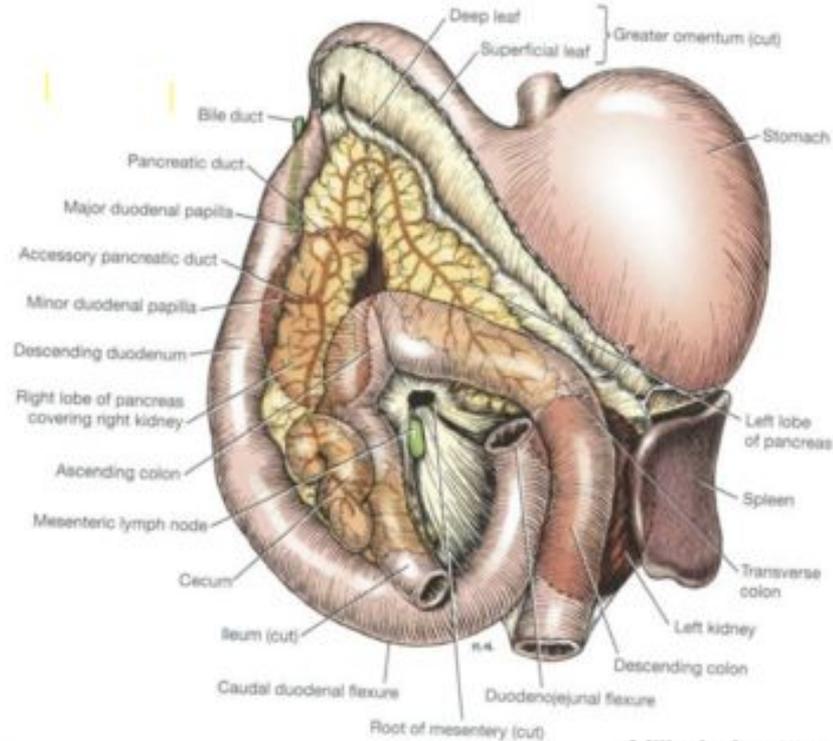


Canine Gastric Dilatation with or without Volvulus

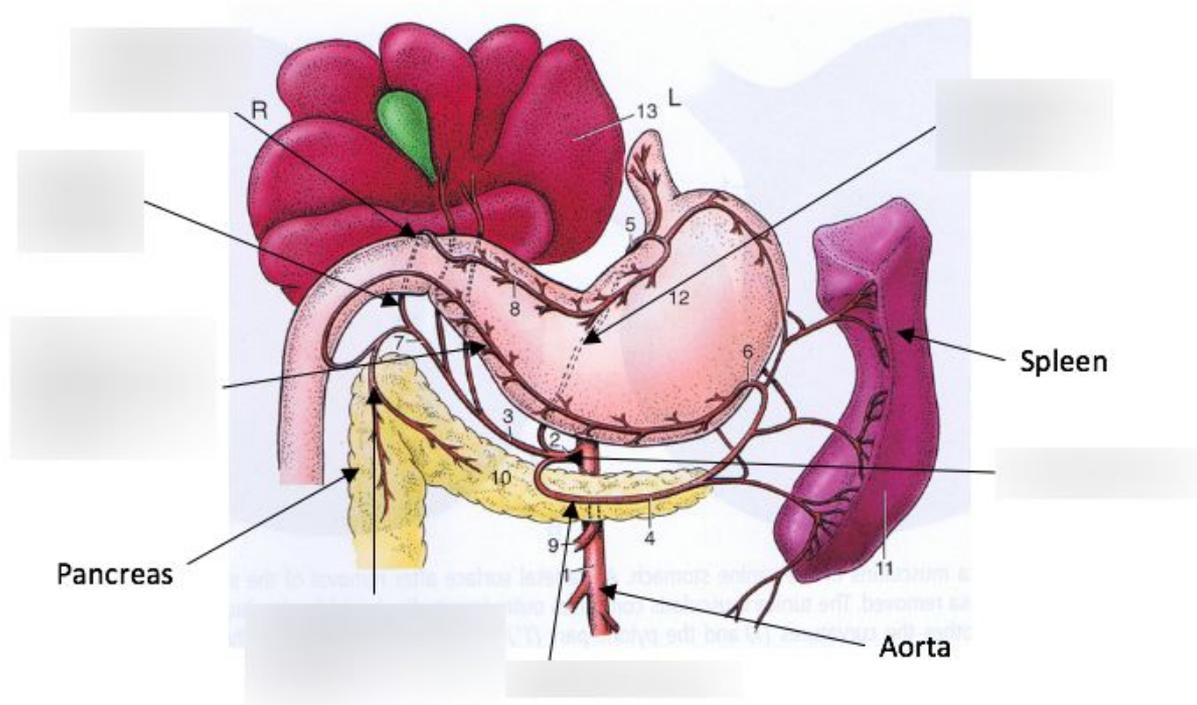
What It Is and How To Address It

Abdominal Anatomy

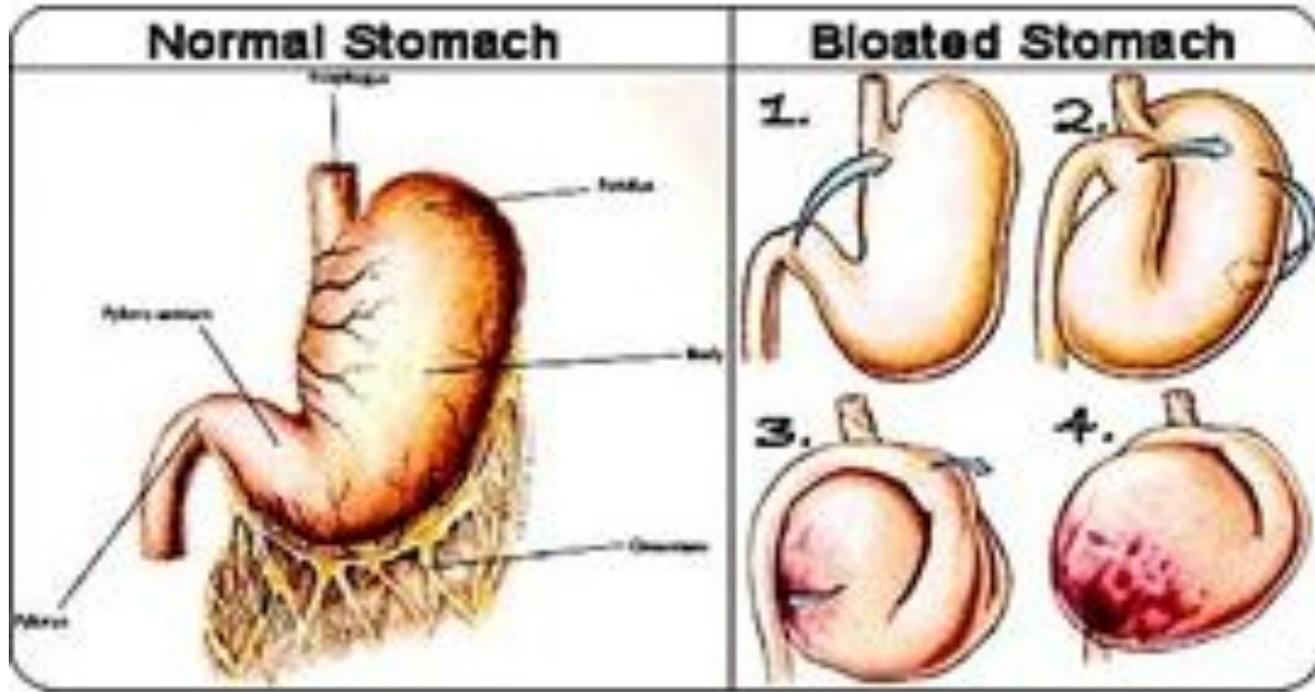
- The pancreas forms a "twisted V" and has three parts...



Canine Anatomy



Dilatation and Volvulus



Why Can a Dog Bloat?

1. The pathophysiology of why has yet to be determined
2. Predisposing factors
 - a. Increased thoracic depth to width ratio
 - b. History of GDV in a first degree relative
 - c. Eating one meal per day
 - d. Small kibble/food particle size
 - e. Eating rapidly
3. Breeds at higher risk
 - a. Great Danes
 - b. Gordon and Irish Setters
 - c. Weimaraners
 - d. St. Bernards
 - e. Standard Poodles

Why Can a Dog Bloat?

1. Previously thought only adult dogs could bloat
2. Study published in the Canadian Veterinary Journal in 2019 about a 5 month Bernese Mountain Dog puppy bloated and torted
 - a. On presentation: RR 30 bpm, HR 120 bpm, congested mucous membranes, CRT > 2 sec, abdominal distension and tympany present bilaterally behind the 13th rib
 - b. Significant biochemical disturbances (hyperphosphatemia, elevated ALT, elevated ALP, and uremia)
3. Risk Factors
 - a. Large breed dog with increasing thoracic depth to width ratio, a relative had had a GDV, and his diet was made up of small particles of food

Signs of Bloat

BLOAT **DO YOU KNOW THE SIGNS?**



Bloat is a life threatening condition which can affect any dog, but particularly dogs with deep chests. In dogs affected by bloat their stomach fills with gas and can become twisted.

Some early signs of Bloat include:

-  **BREATHING PROBLEMS**
-  **LARGE STOMACH**
-  **OVER PRODUCTION OF SALIVA**
-  **AGITATION**
-  **TRYING TO VOMIT**



IF YOU THINK YOUR DOG MAY BE SHOWING SIGNS OF BLOAT, SPEAK TO YOUR VET IMMEDIATELY AS TIME IS CRUCIAL!

Signs of Bloat

- Unproductive vomiting/retching
 - You may see a foamy like substance but there will not be much. This is most likely saliva from the irritation of trying to vomit
- Abdominal distension
 - The stomach is filling with gas (room air)
- Increased respiratory rate
 - Due to Discomfort
- Drooling
 - Nausea
- Sometimes you can also see behavior changes
 - Due to the discomfort and the dog may be agitated.

Bloat Has Been Recognized, Now What?

1. Assess the dog
 - a. Respiratory rate, trying to vomit, pacing, aggravated
2. Bloat kit
 - a. Mouth block, long clear vinyl tube, trochar/large gauge needle, GasX
 - b. Large gauge needle is minimum an 18 gauge, ideally a 12 or 16 would be better (similar to microchip needles)
3. Decompress the stomach
4. VET!



How to Tube

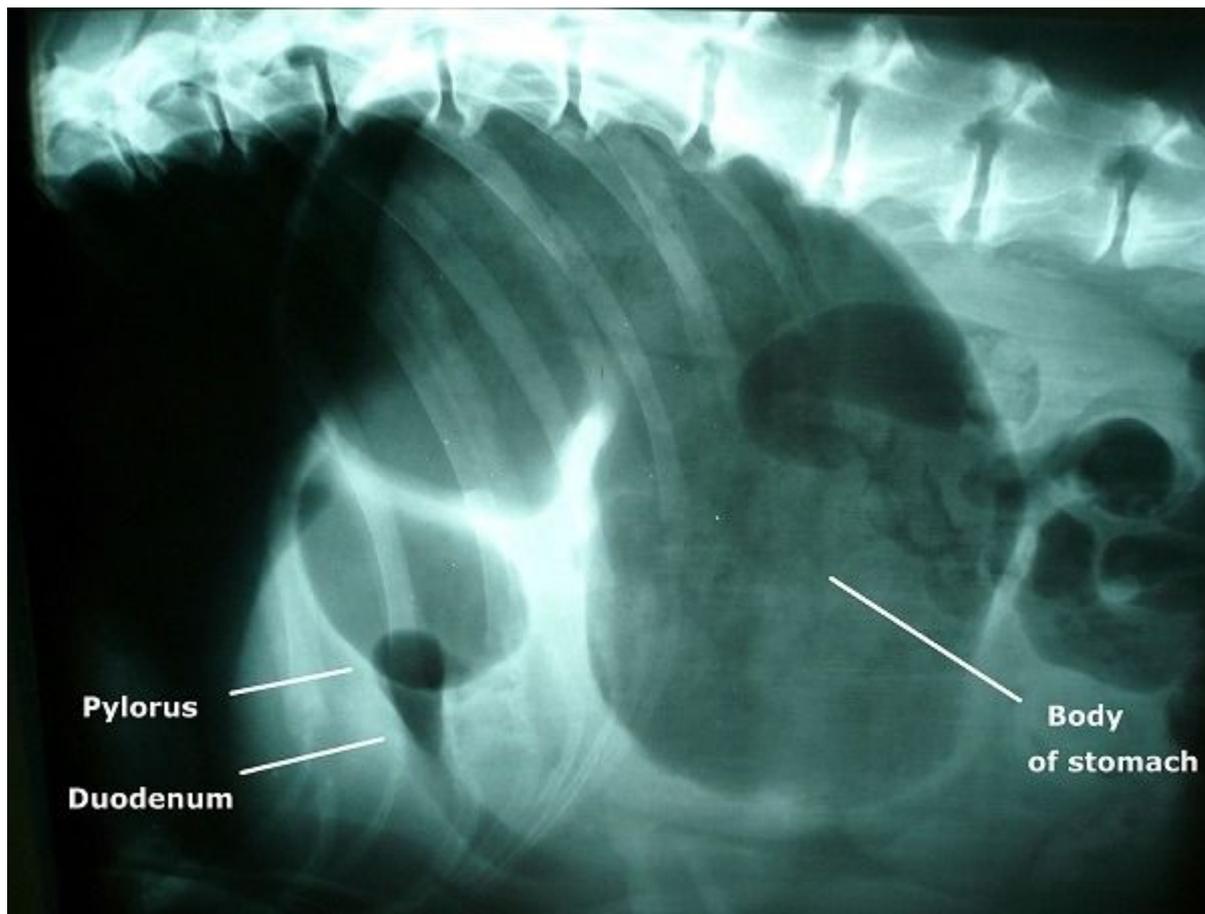
- 1) Measure the length needed/expected
- 2) Use a mouth block (tape roll, block, PVC pipe) to keep the dog from biting and swallowing the tube
- 3) Use a little bit a lube and gently advance the tube back in the mouth (thru your block)



How to Tube

- 4) This is similar to tube feeding a puppy, you want them to actively swallow the tube. You will feel the difference if you are in the esophagus vs the trachea
- 5) Once in the stomach, you can either use a 60 cc syringe or a second human to gently decompress the stomach. You should be able to smell the air coming out.
- 6) Once decompressed, remove the tube, then remove the block
- 7) Give the GasX
- 8) Get to the veterinarian ASAP
- 9) Monitor for further distension

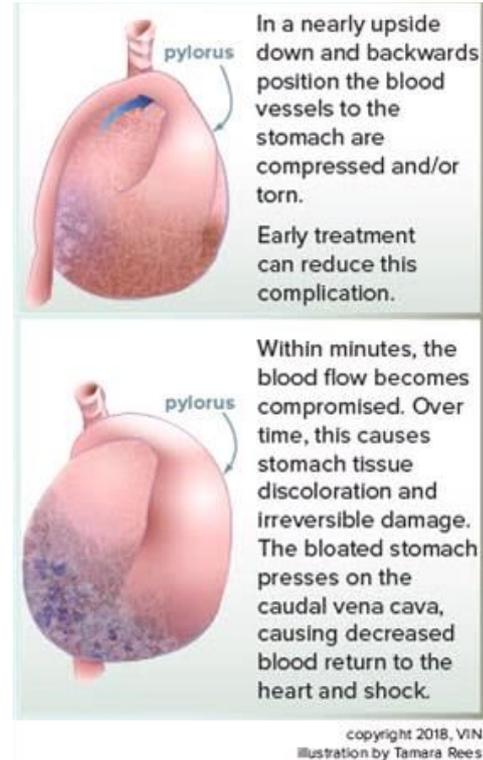
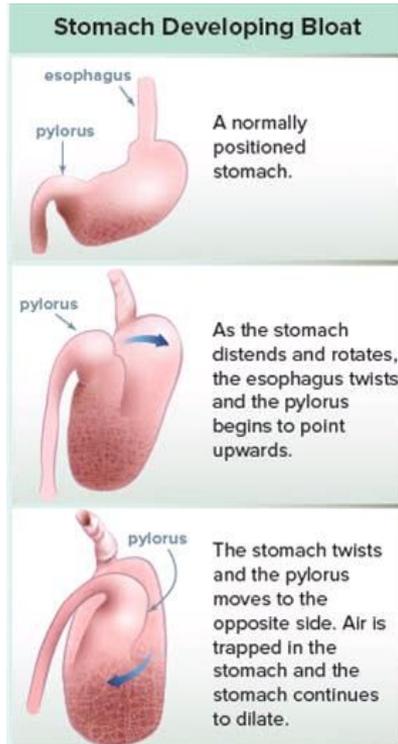
Radiographs



Surgery

1. A dog that has bloated with or without torsion, should have surgery to at minimum have their stomach tacked.
2. If torsion, this could result in a splenectomy and even part of the stomach needing to be resected.
3. A dog that is torted can die from a GDV
4. This is a difficult surgery for all involved and there are risks involved.
5. Typical work up includes
 - a. X-rays
 - b. Complete Blood Count
 - c. Biochemistry
 - d. +/- EKG for a baseline

What Does Bloat Look Like



Complications

1. Premature Ventricular Complexes (Heart Arrhythmia)
2. Dehydration +/- shock
3. Splenectomy
4. Hemoabdomen (if a vessel has been torn in the torsion process)
5. Gastric Resection
6. Dehiscence
7. Aspiration pneumonia
8. DIC
9. Peritonitis
10. Pancreatitis
11. Ileus
12. Death

Recovery

1. Strict rest for the next 14-21 days
2. Small, frequent meals (every 6-8 hours)
3. Bland diet (prescription food or homemade)
4. Leash walks to go potty
5. Medications as prescribed
6. A stomach tack was done and will always be in place but it doesn't prevent bloat from happening. All it prevents is the torsion (the bad part of a GDV)

Preventing Bloat and Reducing the Risk

1. Know your pedigrees! If a close relative has bloated, your dog is at a higher risk. It doesn't guarantee it will happen.
2. Temperament (being more easy going/happy vs anxious)
3. Eating 2 or more meals per day
4. Calcium rich meat meal within the first 4 ingredients (meat/lamb meal, fish meal, chicken by product meal, bone meal)
5. Adding food with higher water content to meals (canned food, people food, dehydrated raw food, or simply adding water and allowing the kibble to soak some)
6. Prophylactic Gastropexy (Educate puppy buyers that this is good!)

Resources

1. MiniVet Guide (great information on placing a tube!)
2. Youtube (great way to learn how to tube)
3. VeterinaryPartner.com
4. Nature's Farmacy Bloat Kit
5. Veterinary Medical Center of New York
<https://www.vmccny.com/gastric-dilatationvolvulus-bloat>
6. Merck Vet Manual
7. Your veterinarian