

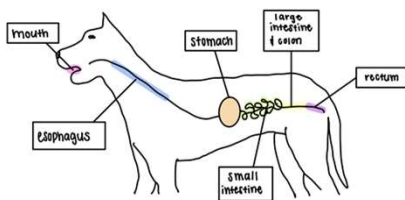
Where Did My Socks Go?

1

Objectives

- Be able to describe general canine gastrointestinal anatomy.
- Be able to identify common items that could cause obstruction.
- Be able to explain the effects an obstruction can have on their pet.
- Be able to identify treatments for an obstruction.

2 These are the objectives that the students should be able to fulfill after completing this lesson.

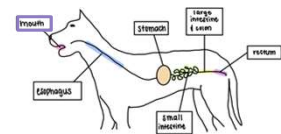


oral cavity→esophagus→stomach→small intestine→large intestine→rectum

3 This is the main passageway for ingested food (and items) as they travel through the dog's body. While there are other parts of the passageway that could be identified, these are the main components that should be known.

Oral Cavity

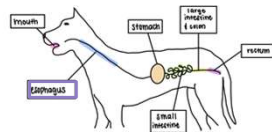
- Teeth are used to chew the food (or other objects) eaten
- The mouth has molecules called enzymes which help to break the food into smaller pieces
- The oral cavity also contains saliva, which makes it easier for food to move down the esophagus



4 The oral cavity is the beginning of the digestive tract and is where the teeth tear and chew food into smaller pieces. Students may notice that dogs have different teeth than humans do. This is because historically dogs are carnivores therefore needed sharper teeth to tear the meat they were eating.

Esophagus

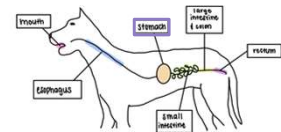
- The esophagus is a muscular tube that allows food to pass from the oral cavity (mouth) to the stomach



5 Moving onto the esophagus, this tube connects the oral cavity to the stomach. Being it is muscular it can stretch for different-sized food particles that are being swallowed, although things can still get stuck here. The area between the oral cavity and the esophagus are the oropharynx and laryngopharynx.

Stomach

- Storage- The stomach can expand and hold large amounts of food at one time
- Digestion- The stomach contains gastric acid that uses enzymes to break food down into smaller particles

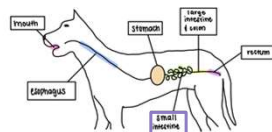


Fun fact: A dog's stomach acid is 100 times stronger than a human's

6 The stomach has two main functions storage and digestion. Their stomach acid is 100 times stronger than human's because they need to be able to digest bones if they are swallowed. If there are issues with the stomach then food may not be properly digested.

Small Intestine

- 3 parts: duodenum, jejunum, ileum
- Food can be further broken down here
- Nutrients that were broken down in the stomach are absorbed as they pass through the small intestine
- These nutrients are then shuttled through the body to be used by different organs and body systems

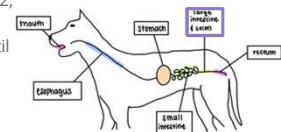


Fun fact: The small intestine can be 3 to 15 feet in length depending on the size of the dog

7 The three parts of the small intestine are the duodenum, jejunum, and ileum in that order. The small and large intestines are the most common areas where obstructions occur. The jejunum is the longest part of the small intestine.

Large Intestine

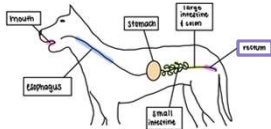
- 3 parts: colon, cecum, rectum
- Water and salts are absorbed here
- Bacteria produces vitamins K & B1, 2, & 12
- Waste products are stored here until they are ready to be expelled



8 The three parts of the large intestine in the order that ingesta flows through them are the cecum, colon, and rectum. Ingesta may not always flow through the cecum though. This is where water and salts are absorbed. Vitamin K helps the blood clot and vitamin B helps with normal growth and metabolism.

Rectum

- Storage- The rectum acts as a storage space for stool until it is time to defecate
- Release- The rectum connects to the anus which is the opening that stool is released through



- 9 The main functions of the rectum are storing and releasing stool. Stool obstructions can occur when the dog becomes constipated or has other issues that prevent the dog from being able to release stool.

What is an obstruction?

- An obstruction occurs when a part of the digestive tract is partially or completely blocked
- This prevents any water, food, or stool from passing through the GI tract
- The most common part of the GI tract to be obstructed is the small & large intestines

Symptoms

- Vomiting
- Loss of appetite
- Difficulty pooping
- Bloating
- Painful abdomen

- 10 While obstructions can occur due to the dog eating something they are not supposed to, as previously mentioned a stool obstruction can also occur. It is important to understand that these symptoms do not always mean that the dog has an obstruction. There could be another issue, that is why it is important for your dog to see a veterinarian if they are showing these symptoms.

What they can eat

- The most common obstruction in canine patients is foreign objects (socks, underwear, small toys, corn cobs, stuffed animals, towels/wash cloths, etc)



- 11 These are all examples of foreign objects that dogs like to eat which can cause obstructions. There are many other things that dogs can get into and ingest that can cause harm to them. Therefore, it is important to pick up things and make sure that anything that your dog could eat is not in reach to them.

Effects

- If an obstruction goes in for too long it can cause the tissues in the GI tract to die
- Depending on what is causing the obstruction, it could puncture through the intestines and cause the contents to spill into the abdominal cavity.

- 12 Some effects you may see if your dog has an obstruction include: puncture of the intestines and gastrointestinal tissues dying. Keep in mind that these things can happen if the problem is not caught and solved early on.

Diagnostics- how do we find out?

- Radiographs (x-rays)
- Ultrasound
- Endoscopy (camera going into GI tracts through the oral cavity)
- Exploratory surgery

13 These are tests that can be done to confirm that there is an obstruction or foreign body. These are things that the veterinarian may suggest. Radiographs are photos of the inside of your dog.

Treatments

- Surgical methods
 - Exploratory abdominal surgery
- Non-surgical methods:
 - Endoscopy retrieval
 - Induced vomiting (done with veterinarian supervision)
 - IV fluids
 - Bland diet
 - Small frequent meals
 - Anti-nausea medication

14 The two main kinds of treatments for an obstruction are surgical and non-surgical. Depending on what is seen in the diagnostics most veterinarians will try the non-surgical treatment methods first before opting to do surgery. However, there are cases when the veterinarian will decide that surgery is the only treatment option.

Questions?

Activity Time!