

## Causes of Colic

*What is happening in the horse's digestive tract?*



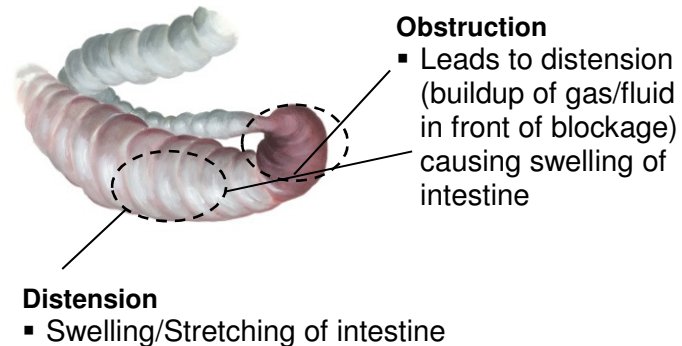
## TYPES OF COLIC

### **OBSTRUCTIONS (blockages)**

Flow of food/fluid/gas becomes interrupted by an obstruction

Obstructions\* can include:

- Physical obstructions: impactions (digesta becomes “stuck”)
- Functional impactions: reduction in peristalsis



### **SPASMS (spasmodic colic)**

Peristalsis is the normal contraction of muscle layers in the gut to mix and move food along the digestive tract. When there are abnormal contractions of the muscles it can cause spasms.

*Causes for Abnormal Contractions (sustained/uncoordinated)*

- High intake of highly digestible carbohydrates (i.e. lush pasture, concentrates - ‘grain’)
- Obstruction due to ‘dry’ mass of feed – gut will contract/spasm in an attempt to move the dry mass along

### **DISTENTION (stretching of the gut)**

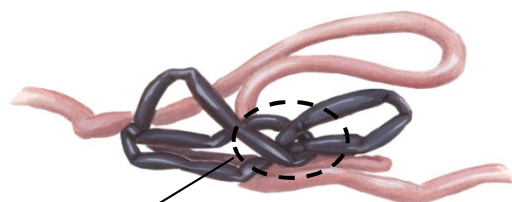
When the wall of the digestive tract is stretched due to a buildup of food, fluid or gas. Distension can be secondary to other colics such as obstruction, where the digesta buildups behind the blockage causing swelling.

*Causes*

- High intake of highly digestible carbohydrates (undigested carb reaches the cecum/large colon and causes rapid production of gas)
- Other colics can lead to secondary distension (i.e. obstructions, ileus)

**STRANGULATION\*** (cut off of blood supply = death of intestine)

- **Twisting/Torsion** – twisting or knotting of the intestine or twisting of some other structure around the intestine (lipoma –tumour)
- **Intussusception** – folding of the intestine onto itself (like closing of the barrel of a telescope)
- **Entrapment** - intestine becomes “trapped” within other spaces in the gut (i.e. hernia, a tear through the mesentery)



**Strangulation**

- Causing death of strangulated intestine

\* Requires surgery

**FACTORS THAT CONTRIBUTE TO COLIC**

**1) MOBILITY OF THE DIGESTIVE TRACT**

The gut is only held into place by a thin sheet of tissue called the mesentery in 3 locations so the gut can be mobile! This can lead to:

- Displacement (portion of the gut moves out of its normal position)
- Entrapped
- Twists/Torsions

*Under normal circumstances, when the gut is filled with forage it keeps the colon in place*

**2) FERMENTATION IN THE HINDGUT**

Bacteria in the horse’s cecum and large colon ferment forage and in the process create gas. If there is too much gas production, it can cause distension.

**3) DEHYDRATION**

When the horse becomes dehydrated, the digesta becomes ‘more dry’ and there is a higher risk of ingesta and fecal balls become stuck in the intestines and blocking (blocking the intestine).



**Take Home Message:** Feed your horse a diet that is high in forage and supply plenty of fresh water to keep digesta moving properly through the gut. Minimize changes to avoid overproduction of gas from bacteria.