

Equine colic

- The colic simply means abdominal pain in horses - it can be caused by gastric ulcers, bladder stones, twisted bowels and more.
- Colic in a horse can be deadly, but it is treatable, manageable and preventable.
- Very few horses that colic need surgery, but every colic should be treated as an emergency because some that seem harmless can worsen quickly.

Causes of Colic

- **Gastric Ulcers** - Gastric Ulcers are the number one cause of colic in horses. It does not require surgery and is mild to moderate in pain. GastroGard is the only FDA approved treatment for gastric ulcers by preventing acid production. You can prevent ulcers with Ulcergard. An easy prevention for this type of colic is to keep more food in the stomach (free choice roughage and minimize sweet feed).
- **Anterior Enteritis** - Anterior Enteritis is caused by bacteria and creates inflammation of the small intestine. The horse may have a fever, ranging from mild to moderate in pain.
- **Large Colon or Gas Colic** - Gas colic can be mildly painful, the horse could be bloated and just needs to pass gas.
- **Large Colon Impaction** - A Large Colon Impaction is mildly painful and responds to banamine. Horses with an impaction tend to have decreased manure; the piles are too small and dry. This is often seen in winter when horses don't want to drink a lot of water.

- **Colon Torsion** - Colon torsions are moderately to severely painful for the horse, most common in mares up to six months post foaling.
- **Enteroliths** - Enteroliths are common in southern states with lots of sand, They can be clinically silent since you cannot check through a rectal exam nor an ultrasound. It is the only colic surgery where a vet can physically show the cause of pain.

Types of colic in horses

There are many different types of colic that horses can suffer from. the list below is not exhaustive, but covers the most common examples.

Spasmodic colic: Also known as gas colic, pain is caused due to a build up of gas in the horse's gut due to excess fermentation within the intestines or a decreased ability to move gas through it. It is commonly caused by a change of diet, a lack of roughage or parasites. The clinical signs are generally mild and respond well to pain relief and spasmolytic medications, such as buscopan.

Impaction colic: This is when a blockage occurs in the intestine. It typically responds well to medical treatment in the form of pain relief, fluids and laxatives, but some cases will require surgery. If left untreated, severe impaction colic can be fatal.

Sand colic: Most typically seen in horses kept on sandy pastures, especially when there is limited grazing available. The horse ingests sand (and dirt) which accumulates in the gut. It can lead to an impaction or it can irritate the lining of the

bowel, causing diarrhoea. The weight and abrasion of the sand or dirt causes the bowel wall to become inflamed and can in severe cases, leads to peritonitis.

Twisted gut: There are various parts of the horse's gastrointestinal tract that may twist upon itself, leading to an interruption in blood supply to that section. A twisted gut is extremely painful for the horse and requires emergency surgery.

Tumours and previous damage to the gut wall caused by parasites can also result in colic.

Clinical findings

Horses will typically display some or all of the following:-

In mild cases:

- Lip curling.
- Flank watching.
- Restlessness.
- Pawing the ground.

In moderate cases:

- Posturing to urinate frequently.
- Lying down and getting back up.
- Lying on their side for long periods.

In severe cases:-

- Violent rolling.
- Sweating.

- Rapid breathing.
- Injuries to body and face from rolling and thrashing around.

Treatment

Colic may be managed medically or surgically. Severe clinical signs often suggest the need for surgery, especially if they cannot be controlled with analgesics. Immediate surgical intervention may be required, but surgery can be counter-indicated in some cases of colic, so diagnostic tests are used to help discover the cause of the colic and guide the practitioner in determining the need for surgery. The majority of colics (approximately 90%) can be successfully managed medically.

- **Analgesia and sedation**

1. The most commonly used analgesics for colic pain in horses are NSAIDs, such as [flunixin meglumine](#), although opioids such as [butorphanol](#) may be used if the pain is more severe.
2. Butorphanol is often given with [alpha-2 agonists](#) such as [xylazine](#) and [detomidine](#) to prolong the analgesic effects of the opioid. Early colic signs may be masked with the use of NSAIDs, so some practitioners prefer to examine the horse before they are given by the owner.

- **Nasogastric intubation and gastric decompression**

[Nasogastric intubation](#), a mainstay of colic management, is often repeated multiple times until resolution of clinical signs, both as a method of gastric reflux removal and as a way to directly administer fluids and medication into the stomach. Reflux must be removed periodically to prevent distention and possible rupture of the

stomach, and to track reflux production, which aids in monitoring the progression of the colic. Its use is especially important in the case of [strangulating obstruction](#) or [enteritis](#), since both of these cause excessive secretion of fluid into the intestine, leading to fluid back-up and distention of the stomach. Nasogastric intubation also has the benefit of providing pain relief resulting from gastric distention.

- **Fluid support**

Fluids are commonly given, either orally by nasogastric tube or by intravenous catheter, to restore proper hydration and electrolyte balance. In cases of strangulating obstruction or enteritis, the intestine will have decreased absorption and increased secretion of fluid into the intestinal lumen, making oral fluids ineffective and possibly dangerous if they cause gastric distention and rupture. This process of secretion into the intestinal lumen leads to dehydration, and these horse require large amounts of IV fluids to prevent hypotension and subsequent cardiovascular collapse.

Intestinal lubricants and laxatives

In addition to fluid support, impactions are often treated with intestinal lubricants and laxatives to help move the obstruction along. Mineral oil is the most commonly used lubricant for large colon impactions, and is administered via nasogastric tube, up to 4 liters once or twice daily.

Nutritional support

Horses are withheld feed when colic signs are referable to gastrointestinal disease. In long-standing cases, [parenteral nutrition](#) may be instituted. Once clinical signs

improve, the horse will slowly be re-fed (introduced back to its normal diet), while being carefully monitored for pain.

- **Endotoxemia prevention**

Endotoxemia is a serious complication of colic and warrants aggressive treatment. Endotoxin ([lipopolysaccharide](#)) is released from the cell wall of gram-negative bacteria when they die. Normally, endotoxin is prevented from entering [systemic circulation](#) by the [barrier function of the intestinal mucosa](#),

Fluid support is essential to maintain blood pressure,

[Laminitis](#) is a major concern in horses suffering from endotoxemia. the risk of laminitis by decreasing blood coagulability and thus blood clot formation in the capillaries of the foot.

- **Case-specific drug treatment**

Specific causes of colic are best managed with certain drugs. These include:

- Spasmolytic agents, most commonly [Buscopan](#), especially in the case of gas colic.
- Pro-motility agents: [metoclopramide](#), [lidocaine](#), [bethanechol](#), and [erythromycin](#) are used in cases of ileus.
- Anti-inflammatories are often used in the case of enteritis or colitis.
- Anti-microbials may be administered if an infectious agent is suspected to be the underlying cause of colic.

- [Phenylephrine](#): used in cases of [nephrosplenic entrapment](#) to contract the spleen, and is followed by light exercise to try to shift the displaced colon back into its normal position.
- [Psyllium](#) may be given via nasogastric tube to treat sand colic.
- [Anthelmintics](#) for parasitic causes of colic.
- **Surgical intervention**