

Understanding Colic

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The experience of having a horse go down with acute colic is one that most horse owners find alarming. Many owners feel powerless when such a large and beautiful animal is showing extreme distress and in severe cases, risks physical injury in its attempts to roll or relieve the acute gut pain. On average, a horse will suffer from a painful colic about 3 times during its lifetime. Up until 20 years ago, over 90% of colic cases were caused by heavy burdens of Bloodworm larvae, but nowadays, with effective worming programs to target these worms, the incidence of worm related colic has dropped to 2% or has been eliminated on well managed horse properties.

What is Colic?

Colic is a general term that has been used for hundreds of years to describe any cause or degree of pain in the abdomen of a horse.

We now know that 'colic' is most commonly caused by digestive disturbances, but abdominal pain can originate in the liver, urinary tract, uterus or other internal organs.

Unfortunately, the horse's digestive layout predisposes it to digestive disturbances due to changes in feed, with increased gas production that expands the large bowel to cause pain, increased motility of the intestines, and blockages due to food mass compaction. The symptoms of colic can range in severity from a mild discomfort, to an extremely intense, localised and painful form, which can be life threatening. Studies indicate that about 10% of colic cases are fatal, often associated with extreme distress and physical injury. A horse with intense abdominal pain appears to lose all awareness and self preservation instincts by going down, rolling and knocking its legs in an attempt to relieve the pain.

Historically, there were a number of 'colic' drenches or 'treatments' available, often potions containing plant extracts with sedative and often relaxant properties to ease pain and muscle spasm. However, these preparations are only effective in the types of colic related to bowel spasm and low-grade blockages. Colic caused by heavy Bloodworms infestations, sand accumulation, intestinal infections, twists of the bowel and digestive upsets may not respond to simple 'colic' drenches and these cases can be fatal if not properly diagnosed and treated by a veterinarian.

What the Horse Feels

The pain associated with colic can vary from a vague, dull, persistent gut ache to a sharp, fluctuating pain with periods of relief between the attacks, such as occurs in spasmodic colic. In severe cases, the pain can be so intense and agonising, that the horse will roll, sweat and thrash around with self destruction in an attempt to relieve the pain and discomfort. This can lead to further injury and may worsen a strangulation, displacement or mal-position, or overfill condition affecting the bowels. The horse may develop severe shock, with vascular deterioration and death.

This is a RED ALERT – you must summon a vet immediately.

A silent 'belly' sound is the worst sign associated with colic and is a grave to serious condition.

First aid for colic includes making the horse as comfortable as possible and walking the horse to relieve gas build-up until signs reduce or veterinary help arrives to diagnose and treat the cause

MANAGEMENT TO REDUCE THE RISK OF COLIC

1. Always feed only good quality horse food at all times, avoiding mouldy or poorly cured hay and chaff in particular. Finely cut cereal chaff has been associated with a risk of impaction colic in horses. A long cut, 'rough cut' or coarsely shredded white chaff stimulates more chewing, increased moisture from salivation and better preparation of the fibre for digestion. **Do not feed left-over damp feeds that may have gone sour, musty or fermented.**
 2. Avoid working a horse within 30 minutes of providing a full hard feed. However, 500g dampened lucerne fed 30 minutes prior to exercise can help reduce the risk of gastric ulcers and associated colic.
 3. Ensure that feed bins and hay racks are provided to reduce the risk of sand ingestion on soils containing fine sand.
 4. Limit access to cold water to 1-2 litres as a first drink for a horse that is hot and resting after hard work or long distance exercise.
 5. Regularly check a horse's teeth when brought into training and repeat at 6 month intervals.
 6. Prevent access to all poisonous plants, especially those that persist under drought conditions.
 7. Regularly worm with a broad spectrum paste or liquid formulation every 6-8 weeks to control the major internal parasites. Two wormings, 3 weeks apart will help to break the Small Strongyle lifecycle. Rigorous pasture and stable hygiene to reduce manure contamination improves the effectiveness of worming by 5-10 times in controlling worm burdens.
- About 30% of colic cases are caused by impaction in the Large Intestine due to over feeding of grains and/or dry roughages.
 - About 10% of colic cases are potentially fatal.
 - The incidence of strangulation colic has increased by 4-5 times over the past 20 years.
 - There are at least 14 causes of colic related to poor quality feeds, feeding habits and poor feeding management in horses.

Understanding Colic

Summary of the common causes of colic, the relative severity of the signs, and immediate management required

Cause	Result	Intensity of Colic	Immediate Management
Heavy Worm Burdens (Small and Large Intestine)	Ascarids (Large Roundworms) in foals 6-36 weeks of age may cause intestinal irritation and physical blockage of small intestine.	Mild to severe pain. 'Pot bellied' appearance, often foals and weaners fail to thrive, lose condition and stop eating in severe cases.	Consult vet before treating with a worming compound at the full dose rate - a full dose may kill all the large worms and block the small bowel. Worm foals from 4-6 weeks of age, then regularly every 6-8 weeks.
	Intestinal Threadworms in foals 3 days – 16 weeks of age can cause intestinal irritation and severe, dehydrating diarrhoea	Often low grade to mild initially, but can become acute with dehydration and risk of collapse and death.	Consult vet. Foal may need support treatment with fluids and electrolytes. Worm out mares one month before foaling, on day of foaling and young foals if necessary.
	Tapeworms – young horses and adults at pasture. Can cause intestinal erosion at the ileo-caecal valve	Low grade to mild colic – often history of low grade colic at 2-4 week intervals.	Consult a vet. Worming with a wormer to target tapeworms may help to avoid further attacks. Strategic worming in mid April and mid October helps to break the tapeworm lifecycle and aids control.
	Large Strongyles – (Bloodworms) larvae in major abdominal arteries	Mild to severe colic. Blood vessel rupture if arteries severely damaged.	Consult a vet if colic is severe. Worming at 6-8 week intervals will help break the lifecycle and ensure clean pastures and yards by regular manure collection to limit recontamination.
Sand Ingestion (Large Intestine)	Accumulation of fine particles of sand in base of caecum and large intestine causes pressure necrosis and devitalisation of the gut wall – leading to rupture and peritonitis.	Mild colic if sand causes obstruction, developing into severe colic if peritonitis develops due to bowel leakage or rupture.	Fine beach or river sand is the most likely to compact. Increased risk when horses harbour heavy burdens of resting small larvae of Strongyle worms, which reduce motility of the large intestine. Regular sand removal with a suitable laxative preparation is recommended.
Gas Accumulation (Flatulent Colic) (Large Intestine)	Highly fermentable fibres, such as lush grass or lucerne, cause accumulation of gas and inability to move it through the intestine.	Spasms of pain as gas expands in large intestine during movement. Fresh, wet lucerne or clover most likely cause of 'bloating' and gas build up.	Walking the horse for 10-15 minutes will often increase gut movement to allow gas to move through intestine. Relaxant medications will relieve spasms and reduce discomfort and bouts of colic pain. Consult your vet.
Intestinal Blockage (Large Intestine)	Large amounts of dry highly fibrous hay ingested quickly without adequate chewing and water intake can compact in the large intestine. In cold weather, minis and ponies must be fed dampened hay.	Usually mild colic initially, but if impacted mass dries out, total blockage can cause severe colic and loss of appetite, and inability to pass droppings.	Diagnosis by a veterinarian based on history is essential, often requiring an internal examination through the rectum, a job only for an equine vet. Walking the horse may relieve initial discomfort, but continued discomfort may need drenching with oil to soften and move the obstruction, relaxant drugs and in severe cases, abdominal surgery to remove the obstructive mass.
Dilation (Stomach)	Rapid intake of grain or finely milled feeds, especially in a horse that 'bolts' its feed.	Mild to severe colic. Causes increased gastric fermentation with gas that dilates the stomach.	Walking the horse will often help the gas to escape back up to the mouth. Severe cases need to be treated by a vet by passing a stomach tube to relieve gas so as to prevent rupture of the stomach. Feed hay first and avoid feeding large amounts of grain above 2.5kg per meal to a 500 kg horse.
Displacement/Torsion Colic (Large Intestine)	High grain and low roughage diet can reduce intestinal movement.	Usually intense pain with sweating and rolling, which may cause injury.	Most common colic requiring surgical correction. Walk horse initially, restrict excessive rolling, seek veterinary advice. Always feed at least 35-40% hay or roughage with grain based diet.
Spasmodic Colic (Stomach and Small Intestine)	Intake of very cold water immediately after hard exercise when horse is standing.	Spasms of pain, varying in intensity. May result in altered blood flow to the gut.	Walk the horse to generate body warmth. Give 1-2 litres water initially after hard exercise or feed dampened hay after hard work. Alternatively, offer lukewarm water with 10g salt/litre after exercise.
Intestinal Inflammatory Disease	Rapid ingestion of concentrates, especially pelleted feeds.	Low grade to mild gut pain. Poor absorption of feed – may persist for a few days.	Diagnosis by a vet – often pain relief is required. Avoid feeding pellets unless diluted by 50:50 with dampened, wet chaff to a hungry horse.