

# Baker & McVeigh Equine Hospital CAPE (PTY) LTD

Dr. J. McVeigh B.V.M.S M.R.C.V.S. - Principal  
Dr. A.G Cameron B.V.M.S M.R.C.V.S - Partner  
Dr. D. Timpson B.V.Sc M.R.C.V.S - Partner  
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Dr. E. Alsop B.V.Sc Cert.E.M (Intmed) M.R.C.V.S  
Dr. B. Gillespie B.V.Sc BSc



P.O Box 55290, Sunset Beach, 7435

Tel: +27 (21) 552 3450

Fax: +27 (21) 552 3225

Email: [cape@mcveigh.co.za](mailto:cape@mcveigh.co.za)

Website: [www.bakermcveigh.com](http://www.bakermcveigh.com)

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## COLIC-One vindaloo too far?!

Colic- most horses will suffer from a bout of colic at some point in their lives. It is a word dreaded by horse owners, but is a loose term to cover a whole manner of different causes of belly ache or 'abdominal pain'. The majority of cases resolve quickly. Colic can range from mild spasms, to impactions, to complete volvulus/ rotation of the gut, requiring life saving surgery. Early veterinary intervention can, quite literally be the difference between life and death.

### What is colic?

Colic is a word used to describe signs that indicate belly ache in the horse. The abdominal pain can arise from any of the organs within the gastrointestinal system. These include the stomach, small intestines (duodenum, jejunum, ileum), large intestines (caecum, large colon, small colon), liver, spleen, kidneys and peritoneum (the lining of the abdominal cavity).

### How do I know my horse has colic?

#### **Signs of mild colic**

- Pawing or scraping the ground.
- Turning the head to look at the abdomen ('flank watching').
- Kicking or biting at the abdomen.
- Stretching out as if needing to urinate.
- Restlessness - getting up and down frequently

If the bout of colic progresses, the symptoms your horse shows will worsen.

#### **Signs of severe colic**

- Sweating.
- Rolling.
- Sitting down like a dog.
- Lying on its back.
- Inability to stand.
- Rapid respiration rate (sometimes with flared nostrils; normal rate = 8-20 breaths per minute).
- Elevated pulse rate (more than 52 beats per minute).
- Red discolouration of gums and eyes.



*'Toxic' mucus membranes in a very sick horse with colic. Notice the dark pink discolouration with a darker purple 'pen line' around the teeth.*

*Normal pink healthy mucus membranes.*

### **What causes colic?**

There are many possible causes of colic and often it is impossible to determine the exact cause. Here are just a few of the causes:

Environmental factors:

- Change in diet.
- Changes in stabling and/or bedding.
- Change in exercise level.
- Change in the weather

Physical factors:

- Teeth problems
- Scrotal hernias in colts/stallions
- High worm burdens
- Post foaling colic
- Late pregnancy colic
- Impactions/blockages with food, sand or a foreign object
- Twisting of the intestines
- 'Lipoma' - small balls of fat that wrap around the intestines

Various medical conditions:

- Infection within the liver, spleen or kidneys
- Infection within the peritoneal cavity and the peritoneum, 'peritonitis'
- Inflammatory bowel disease
- Tumours
- Proximal enteritis



*A lipoma. Notice the white ball of fat within the centre of the picture.  
This has wrapped around the gut and cut*

*Intestine completely blocked by worms.*

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*off the blood supply. The very dark gut  
is now dead (the circle of gut at the bottom  
of the picture). Healthy gut is seen behind.*

## **What should I do if my horse has colic?**

While some cases resolve with simple care and management by the owner, others require veterinary attention and possibly surgery (although this is a very small amount, roughly 10% require surgical intervention). Unfortunately, a small number of horses with colic do not recover.

**The success of surgical treatment is heavily dependent on the length of time between the first signs of colic and veterinary intervention. Any unnecessary delay will greatly reduce the chances of recovery. It is therefore essential to recognize when veterinary attention is needed.**

### **If your horse is only showing signs of mild colic:**

- Remove hay and feed (not water) and monitor closely. If you can take a temperature, pulse and respiration every 30 minutes and keeping a record of these (Normal values can be found on the emergencies fact sheet June 2012).
- It may be helpful to walk your horse as the exercise will encourage gut function and help keep your horse relaxed.
- Check the stable for sharp objects that may injure your horse if it rolls and remove them. Add extra bedding.

Traditionally horse owners have been instructed to stop a horse with colic from rolling. If the colic is mild and your horse simply wants to lie down and rest this will do it no harm.

- If your horse is becoming more violent and is trying to lie and roll then your vet should be called. At this point walking your horse may help to prevent it rolling. However - it is safer for your horse (and you!) to roll in its stable than to go down in the yard. If you have a large sand paddock then it may be advisable to turn the horse out here.

### **If your horse is showing signs of severe colic:**

- Contact your vet immediately and describe the signs and duration of the colic.
- Do not administer any drugs, including wormers, unless instructed to do so by your vet.
- Do not put yourself at risk of injury if your horse is rolling - stay well back

## **What will happen when the vet arrives ?**

Your vet may want to initially observe the horse free in its stable as some very stoic horses won't show colic symptoms when they are being held. Whilst watching the horse your vet will ask a series of questions including:

When was the horse last seen normal

Have droppings been passed and if so what are they like

How long has the horse been colicking for and is it getting more painful, is it intermittent?

Have you recently changed any of the horse's routine management

Have you wormed the horse recently

Has the horse had colic or colic surgery previously

All of these questions will help the vet build up a 'history' of the horse, which will enable them to treat the horse.

The vet will then perform a **clinical examination**, including respiratory rate, heart rate, rectal temp., listening to gut sounds, and checking mucus membranes. If the horse is violently painful, the vet may administer a sedative straight away or they may then sedate the horse at this point to continue the examination.

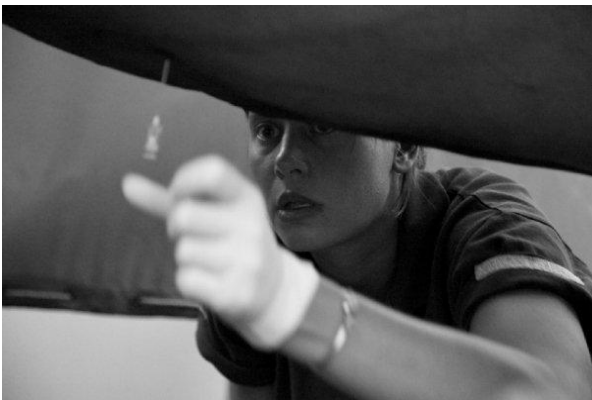
A **rectal examination** will be performed to help identify problems with the gut. Only about 30% of the gut can be reached this way, but it provides a huge amount of information to the vet.

A **stomach tube** will then be passed through the nose and down the oesophagus into the stomach. This will determine the presence of food, gas or fluid within the stomach. Horses cannot be sick, so the release of trapped gas or fluid is very important as this can cause distension of the stomach, which in turn leads to pain, and they can even rupture.

At this point the vet may administer fluids down into the stomach also. This is done for several reasons. If there is an impaction, the fluids will help soften this. If the horse is dehydrated it is a way of administering fluids. It is also a way of 'challenging' the horse. If there is a blockage, the fluid will not be able to pass through and this damming back of fluid within the stomach will make the horse painful, indicating that there is a blockage.

A **blood sample** may be taken along with **faecal samples** for sand and worm egg counts.

A sample of abdominal fluid may also be taken (a 'belly tap'). This is achieved by placing a spinal needle into the abdomen-'**abdominocentesis**'. This is normally very well tolerated by the horse.



*Abdominocentesis being performed*



*Normal peritoneal fluid should be clear and pale yellow*



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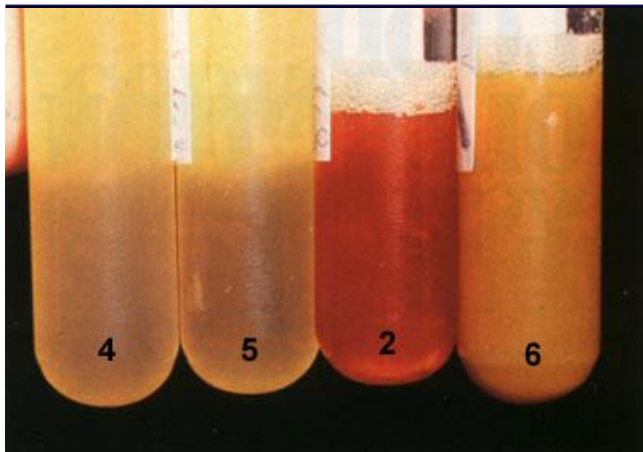
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*4 and 5. Cloudy peritoneal fluid from increased cell and protein content*

*2. Blood tinged peritonea fluid. This is known as 'serosanguinous' and tells the vet that there is vascular compromise to parts of the intestines, with maybe even dead bowel present*

*6. Abdominal rupture. The peritoneal fluid is contaminated with food material/ingesta*

## **What will happen next?**

Your vet, using the findings from the examination, will decide on the best treatment for your horse. This may be treatment with drugs or they may advise that the horse is admitted to hospital facilities, or in a few rare circumstances the need for surgical treatment may be advised straight away.

If the colic is mild and your vet recommends drug therapy (medical treatment), you will need to check your horse regularly to ensure that the signs of colic are reducing. Colic is a dynamic problem and constantly needs assessing.

If the signs of colic persist, call your vet. The horse will most likely need examining again, as above. At this point admittance to a veterinary clinic may be advised. This has the added benefits of removing the stress from the owners and letting the vets monitor the horse allowing for more intensive treatment, eg. Intravenous fluids, regular nasogastric drenching, lunging, other medical treatments. If surgery is then required, the horse is just metres away from the surgical facilities rather than a whole truck ride away.

If the horse is admitted to a hospital facility, your vet may perform further tests including:

An **ultrasound examination**. Ultrasound of the horses abdomen can be used to look for abnormalities within the abdominal cavity including:

Excessive peritoneal fluid

Distension of small intestine

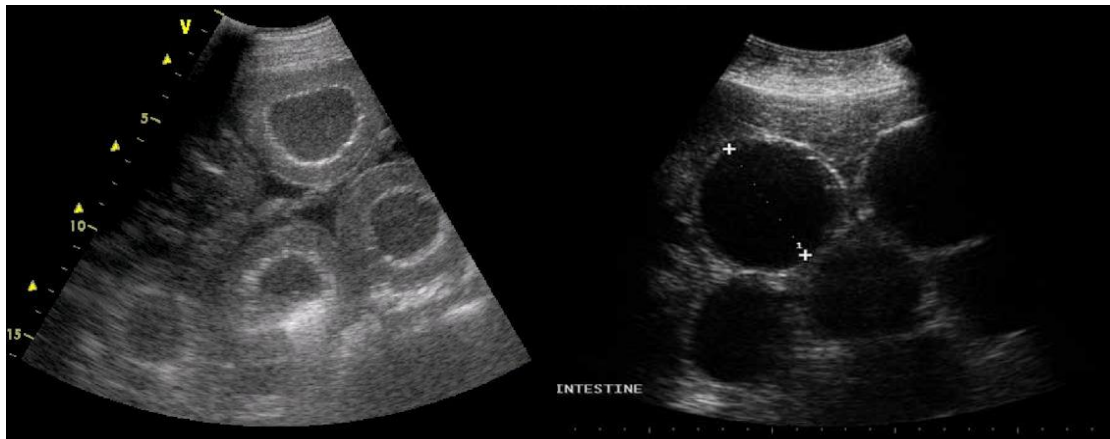
Displacement of the large intestine between the spleen and kidney

Stomach distension

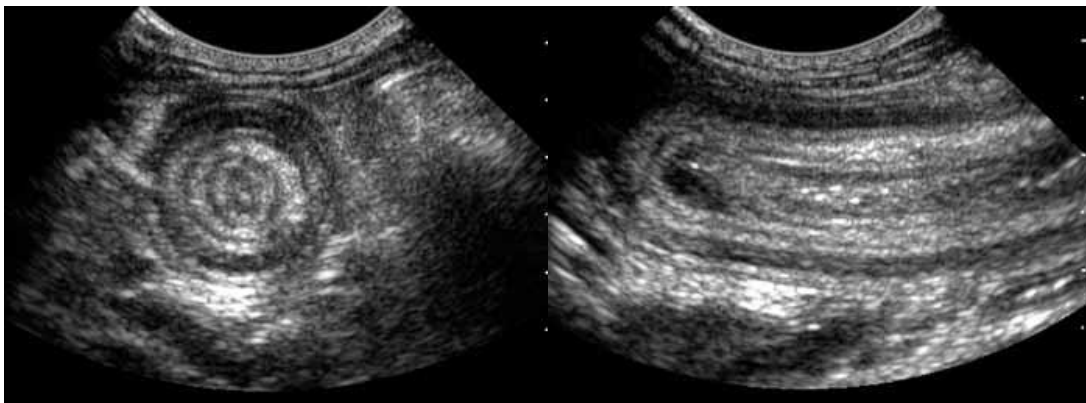
Intersusceptions

Heavy sand and worm burdens

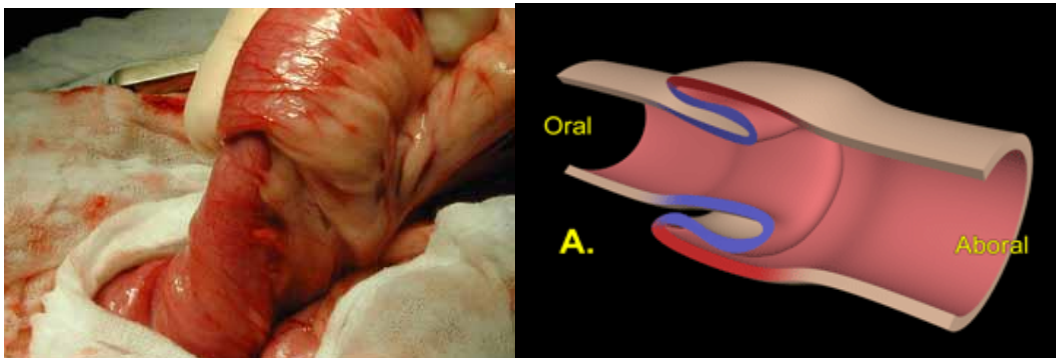
Intra abdominal abscesses



*Image of the small intestine with enteritis. Distended loops of small intestine. Note the very thickened walls.*



*Images of an intersusception (explained below). The picture on the left is a cross section, the right, a long section.*



*The intersusception at surgery.*

*A diagram of an intersusception where the gut slide into itself. This can be a complication of horses with worm burdens.*

If surgery is the recommended treatment, then this should be carried out without delay as early recognition of the need for surgery greatly improves the horses survival rate.

As part of the preparation for surgery, the horse will receive antibiotics, painkillers, anti endotoxic drugs and maybe fluids and colloids to help the horse cope with the impending anaesthetic.

Once the surgery has been completed, and the horse is on its feet, your vet will contact you. This is when the real hard work begins. Post operative colic care is very intensive and can require a lot of medical therapy. If recovery is uncomplicated, the horse will usually stay in the hospital for 7-10 days.

Complications can and do occur. These may include:

**Post operative ileus-** The guts stop working for many different reasons. Horses with ileus need to receive drugs called 'prokinetics' to try to stimulate them to work. The horse also needs a stomach tube passing approx. every two hours to prevent fluid build up in the stomach.

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**Endotoxaemia-** This is a common but very serious complication. The horse's gut is filled with bacteria, which when the horse is healthy help to break down their food stuff, as horses are 'hind gut fermenters'. When the gut lining/bowel wall dies and the intestinal flora is disturbed, these bacteria break down, releasing endotoxins which then enter the bloodstream with negative effects including hypotension which in turn leads to poor perfusion of vital organs, sepsis, bacteraemia, temperatures, abdominal pain and laminitis.

**Laminitis-** Due to the endotoxaemia.

**Wound infection-** The surgical wound can become infected, leading to a discharge and the prolonged need for antibiotics.



*Colic surgery being performed*

## How can I prevent my horse from getting colic?

Remember that horses are predisposed to colic because of their abdominal anatomy and the way their gut functions.

Although some colic conditions are unavoidable, there are steps you can take to reduce the chance of your horse developing colic.

### Feed and water

- Provide plenty of clean, fresh water at all times.
- Make dietary changes gradually over a couple of weeks.
- Divide daily feeds into 2 or more smaller rations to avoid overloading the digestive system (horses should be fed little and often).
- Avoid feeding from the ground in areas of sandy soil. Sand can cause colic if eaten accidentally. You can test for sand in the faeces easily, by hanging up fresh faeces in a bag with some water added. The sand will settle out and be visible and palpable.

### Routine health care

- Ensure that your horse's teeth are checked regularly.
- Follow a regular worming programme recommended by your vet.
- Only give your horse medications and oral treatments after consulting your vet.

### Paddocks and stabling

- Keep to a routine - sudden changes in management are a common cause of colic.
- Pick up manure from paddocks regularly (this will help reduce worm infestations).
- Keep paddocks clear of ragwort, fallen tree branches or debris that your horse could accidentally

eat.

- Do not overgraze in sandy soils.
- Watch for your horse eating its bedding, especially if it is box rested for a period of time. Straw bedding may need to be changed to shredded paper or shavings.

### **Exercise**

- Have a regular exercise regime and only change intensity on a gradual basis over a couple of weeks.
- Develop a daily routine and try not to change it abruptly - especially when the horse is away from home.
- Reduce stress, resulting from a heavy show season, lengthy travelling, overcrowded paddocks, etc.

