

colic

feeding & management



What is colic?

Colic can be somewhat loosely defined as abdominal pain and may range from mild to life threatening. It can fall into a variety of categories, depending on the specific underlying cause, while many cases are never fully understood due to the various trigger factors and wide range in severity.

Adaptation to a new concentrate or forage feed, particularly if there is a significant difference in the protein, starch and/or sugar level, is now thought to take a minimum of three weeks. As such, it is recommended to make feed changes slowly over 2 - 4 weeks in order to lessen the challenge to the gut.

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Different Types of Colic

Impaction - Caused by a blockage in the intestine

Spasmodic - Characterised by increased intestinal contractions

Tympanic (gaseous) - A build-up of gas in the intestine

Sand - Inflammation or blockage of the intestine resulting from ingested sand

Colic Symptoms

- Sweating
- Kicking or biting at the stomach
- Lying down or rolling repeatedly
- Uncomfortable, reluctance to eat
- Reduced or no passing of droppings
- Lack of gut noises
- Excessive gut noises/gurgling.

If you suspect that your horse has colic, contact your vet straight away.

Risk Factors

There are numerous factors that can increase the risk of colic, most of which are closely associated with management and feed type.

1. Meal Size

Larger meals move more quickly through the digestive system meaning the horse is less able to fully utilise the feed and increasing the risk of starch and sugars over-spilling into the hindgut. For this reason, maximum meal size should be limited to 0.4kg per 100kg bodyweight.

2. Dietary Changes

Dietary change appears to be the strongest and most consistently reported risk factor when it comes to colic. Changes in batch or type of forage or concentrate, management changes, such as stabling and turnout time, and the quantity and frequency of feeding can all be associated with an increased risk in colic.

The risk of colic is significantly higher two weeks after a change in forage and/or concentrate feed, with multiple changes in either throughout the year, increasing the risk further.

3. High Levels of Cereals or High Starch Feeds

The consumption of more than 5kg of concentrates per day has been associated with a greater than 6 times increase in colic risk as have diets including more than 2.7kg of oats. Unfortunately, those horses on high starch or cereal diets are often also further compromised by having sub-optimal forage intake, often restricted turnout time and higher levels of exercise.

Cooking cereals by micronisation or extrusion, to gelatinise the starch content, improves utilisation in the foregut and so reduces the risk of undigested starch entering the hindgut where it can cause problems.

4. Forage

It is generally found that a recent change in forage is more harmful than a recent change in grain or concentrate, probably because this represents the largest part of the diet.

There is also, unsurprisingly, an increased risk associated with forage of poorer nutritional and hygienic quality, along with limited grazing.

5. Hydration Levels

Dehydration is one of the most common causes of colic for horses that are travelling and working hard. Dehydration compromises the bacterial population, normal gut function and motility, which emphasises the importance of electrolyte supplementation in working horses.

Risk periods

Changes in management tend to occur simultaneously with the seasons, typically autumn and spring, and, as such, the risk of colic may be increased. As a change in forage (grass/hay/haylage) can increase risk most significantly, it is important to be aware of practices that can reduce this:

Spring/Summer

Typically a time of transition from hay/haylage to grass, which represents a major change in moisture and fibre levels. As the fibre content in lush spring grass is much lower than in hay or haylage, this is a major change for the digestive system to cope with.

- Introduce to spring pasture slowly and/or increase turnout time gradually.
- Continue to offer hay/haylage in the paddock or bring the horse in for a few hours with access to hay/haylage to boost fibre intake levels.

Autumn/Winter

Similarly to spring, the main consideration is a change in moisture content, as well as a change in nutrient levels.

- Again, the main defence for this is to make the forage change-over gradual, where possible, ideally over 3 - 4 weeks.
- Damping hay initially will ease the transition from grass, with its high moisture content, to hay with a low moisture content. With haylage, this may be less of a concern as its moisture content is higher than that of hay.
- Grass will always offer significantly more nutrients than hay/haylage and this needs to be acknowledged by making changes over a long period of time.

Colic Surgery

If major resections have occurred the subsequent diet should take account of the remainder of the gut and the feeding regime required will depend on the type of surgery performed. If less than 50% of the small intestine is removed, typically no special requirements are necessary. The site of the surgery in the hindgut and amount of gut removed will influence the choice of diet.

For hindgut resection:

- As the hindgut is primarily responsible for fibre digestion, if it has been compromised, forage and pasture must be of good quality so choose soft leafy earlier cut hay, which is easier to digest, rather than that which is coarser and later cut.
- If necessary, provide additional good quality fibre sources such as, Alfalfa Blend, Alfalfa Plus Oil and/or Ultra Grass in a separate bucket as forage alternatives.

General Feeding Recommendations

- With the exception of oats, if feeding cereals, only use cooked cereals, preferably those which have been micronised or extruded to make their starch content more digestible. Oats are generally fed "raw" as they are easily chewed and their simpler starch structure is more easily digested than that of other cereals.
- Make any dietary changes slowly over 2 - 4 weeks
- Feed plenty of fibre
- Fibre helps maintain a healthy microbial population
- Pushes out any excess gas which sits in the gut
- Increases pH of hindgut compared to starch
- Retains water which will reduce incidence of dehydration
- Keep meal sizes small
- Where possible, keep starch and sugar levels low
- Feed digestive enhancers, like Digest Plus prebiotic, during periods of high risk

Feeding Recommendations - Tympanic (gaseous) Colic

- Hay is preferable over haylage which, like grass, ferments more quickly in the hindgut producing more gas.
- Take care with access to spring or rich pasture.
- Avoid long spells of inactivity and keep the horse moving to encourage gut motility. Exercise and turnout on poorer grazing, where the horse has to move about to "search" for grass, are beneficial.
- Where possible, provide ad lib forage, as keeping the fibre moving through the gut helps to remove gas.
- For good-doers, divide the hay into small rations throughout the day to keep forage passing through. Small-holed nets and hanging several nets around the stable will also extend eating time and keep the horse moving/foraging.
- Avoid feedstuffs that ferment more quickly and therefore produce more gas in the gut. Feed a meadow hay - not too soft and green but also not too stalky and fibrous - instead of haylage.

Feeding Recommendations - Impaction Colic

- With any sort of impaction, dental health is always an essential consideration. This cannot always be helped, particularly with the older horse so, for these horses, we need to ensure that any fibre sources provided are easy to manage.
- Another contributing factor of impaction colic can be a lack of water intake/moisture in the diet. Using buckets in preference to automatic feeders can help to monitor this.
- This can be of particular concern during the winter months where water consumption tends to be reduced.
- Plenty of water and physical movement (e.g. turnout and/or exercise) will help to promote gut motility, keeping things moving.
- If feeding hay, ensure it is soft and digestible; haylage can be an option as it is typically more digestible, and grass is the most suitable forage source being the most digestible of all.

- Feed the recommended amount of an appropriate compound feed or balancer to provide a fully balanced diet. Where weight gain is required, choose Top Line Conditioning Cubes and consider adding Outshine high oil supplement to provide additional concentrated calories and keep meal sizes manageable.

- Because the bacteria in the hindgut are the horse's principle producers of B vitamins, colic and/or surgery are likely to compromise the microbial population and therefore the supply of these important vitamins. Supplementing with a probiotic followed by a prebiotic, like Digest Plus, can help restore the bacterial balance, while Foal Assist Plus liquid can provide a useful B vitamin boost along with a range of key minerals and trace elements.

For small intestine resection:

- Since the small intestine is where starch and sugar are digested and absorbed, when this has been compromised, dietary starch and sugar levels need to be kept as low as possible, in the first instance, so avoid mixes and look for feeds formulated to contain reduced amounts of starch.

- Soaked high fibre feeds, like Speedi-Beet or Fibre-Beet (plus Lo-Cal or Performance Balancer) or Keep Calm are ideal.

If the ileum is affected:

- The ileum is the part of the small intestine where the majority of the absorption of fats and fat-soluble vitamins, like vitamins A, D and E, takes place. Calcium is also absorbed here and vitamin D influences the efficiency of calcium uptake so any problems may have a knock on effect on the horse's metabolism.
- If the ileum has been compromised, the vet may need to inject these vitamins and dietary levels of calcium may need adjusting/increasing.
- Coarse forages should be avoided, even after full recovery.

If the ileum is unaffected:

- Vegetable oil or Outshine high oil supplement may be fed as a concentrated source of calories to help keep meal sizes small.

For any resections try to provide small concentrate meals and keep feeds as digestible as possible.