



## Colic: Causes and prevention

Colic is responsible for 1 in 3 emergency equine veterinary call-outs and is a major cause of death or euthanasia in horses. Here at Oakham Veterinary Hospital we have teamed up with the University of Nottingham and The British Horse Society to bring you a series of informative articles about this important condition. Topics covered include:

- What is colic?
- Types of colic
- Recognising colic
- Colic: Causes and prevention
- Colic: What to do
- Colic: What will happen when the vet comes
- Critical colic cases
- Colic: The decision to refer
- Colic: Costs and insurance cover

In this article, we focus on the causes of colic and how to reduce the risk of colic in your horse.

### ***The horse's natural environment***

Horses have evolved over 57 million years to thrive in an environment that provides:

- A diet based almost entirely on forage
- Opportunity for continuous grazing ('trickle feeding')
- Limited starch and sugar intake
- Continuous movement
- Low risk of sudden changes in diet
- No large meals

Research has shown that management practices that diverge from this natural environment increase the risk of colic.

### ***Risk factors for colic***

Risk factors for colic have been identified in numerous studies. These include a number of factors that we cannot change in an individual horse (inherent risk factors), and others that are under our control.

#### *Inherent risk factors*

- Age
  - Some types of colic are more common in older horses, other types more commonly occur in young horses.
- Gender
  - Mares (particularly those that have just foaled) and stallions are at increased risk of particular types of colic.
- Breed
  - Arabs, Thoroughbreds and miniatures are at increased risk of colic.
- Height
  - Taller horses are at higher colic risk.
- Colic history
  - Previous colic increases the risk of future episodes.

You cannot change the age, gender, breed, height or colic history of an individual horse. But there are colic risk factors that you can influence, many of which are related to differences between domesticated and natural equine environments. Management-related colic risk factors are listed below, along with the preventive measures that you can take.

#### *Management-related risk factors and colic prevention*

<b>Management-related colic risk factor</b>	<b>Preventive measure</b>
<ul style="list-style-type: none"><li>• No/little/reduced time spent at pasture</li><li>• More hours stabled</li></ul>	<ul style="list-style-type: none"><li>• Provide as much grazing/turnout time as possible (whilst not allowing excessive weight gain)</li></ul>
<ul style="list-style-type: none"><li>• Recent change of diet</li></ul>	<ul style="list-style-type: none"><li>• Make changes gradually, preferably over 3–4 weeks</li></ul>
<ul style="list-style-type: none"><li>• Large intake of concentrates (hard feed)</li></ul>	<ul style="list-style-type: none"><li>• Provide plenty of forage (grass, hay, haylage)</li><li>• Hard feed:<ul style="list-style-type: none"><li>• No more than necessary</li><li>• Split into multiple feeds</li><li>• Maximum 0.5% bodyweight per feed (e.g., maximum 2.5 kg per feed in a 500 kg horse)</li><li>• Low starch/sugar content</li></ul></li></ul>

<ul style="list-style-type: none"> <li>• Inadequate water intake</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure continuous access to clean, fresh water</li> <li>• If water is likely to freeze: <ul style="list-style-type: none"> <li>• If possible, provide warmed (not hot) water (horses tend to drink more if water is not too cold)</li> <li>• Alternatively, break and remove ice to ensure water does not freeze</li> </ul> </li> <li>• If there is more than 1 horse, ensure water source is large enough to avoid competition or provide additional sources</li> </ul>
<ul style="list-style-type: none"> <li>• Dental problems</li> </ul>	<ul style="list-style-type: none"> <li>• Provide regular dental care (vet or qualified equine dentist [BAEDT* or category 2 WWAED* member])</li> </ul>
<ul style="list-style-type: none"> <li>• Poor parasite control</li> </ul>	<ul style="list-style-type: none"> <li>• Consult your vet about parasite control</li> </ul>
<ul style="list-style-type: none"> <li>• Change in exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Make changes to exercise/turnout regime gradually (unless immediate box rest is necessary because of injury)</li> </ul>
<ul style="list-style-type: none"> <li>• Multiple carers</li> </ul>	<ul style="list-style-type: none"> <li>• Minimise number of carers</li> <li>• Ensure all carers know each horse's habits and routine</li> </ul>
<ul style="list-style-type: none"> <li>• Stereotypic behaviour (e.g., crib-biting, windsucking)</li> </ul>	<ul style="list-style-type: none"> <li>• Maximise time at pasture</li> <li>• Ensure forage is always available; if this is not possible, feed forage at frequent intervals</li> <li>• If supplementary feed is necessary: <ul style="list-style-type: none"> <li>• Choose a high-fibre feed/add chopped fibre to each meal</li> <li>• Use low starch/sugar feeds (feeds with added oil may be appropriate)</li> <li>• Divide into multiple small feeds</li> <li>• Maximise opportunities for social interaction with other horses</li> </ul> </li> </ul>

\*BAEDT, British Association of Equine Dental Technicians; WWAED, World Wide Association of Equine Dentists

Horses that have recently been transported are also at increased risk of colic, so it is a good idea to check horses frequently for signs of colic after travelling.

It should be recognised that what appears to be a single change in management can lead to multiple colic risk factors. For example, a horse that is taken off pasture and stabled full time will simultaneously be exposed to:

- Reduced grazing
- More hours in the stable
- Change in diet
- Change in exercise

Horse kept at pasture



Horse kept in stable



- Reduced grazing
- More hours in stable
- Change in diet
- Change in exercise

It may not always be possible to follow all advice listed above. In particular, it may be difficult to provide turnout/time at pasture, for example because of limited turnout, or a recent injury. However, being aware of and trying to reduce as many risk factors as possible will reduce your horse's overall risk of colic.

If you would like to estimate your horse's risk of colic, go to the University of Guelph's '[Colic risk rater](#)' which allows you to enter information about your horse's current management and learn how you can reduce the risk of colic. In addition, more information on reducing the risk of colic is available on The [British Horse Society's](#) website.

*This newsletter was written by the Colic Team (John Burford, Janet Douglas, Gary England, Sarah Freeman) at the School of Veterinary Medicine and Science at the University of Nottingham. The contribution of Gemma Pearson, BVMS, Cert AVP (EM), MScR, MRCVS to the section on stereotypic behaviour is gratefully acknowledged. The newsletter forms part of our practice's commitment as a Vet REACT Colic Champion. The REACT Now to Beat Colic campaign, which is coordinated and funded by the School of Veterinary Medicine and Science at the University of Nottingham and The British Horse Society, aims to help horse owners to combat the life-threatening condition of colic. The REACT resources are based on research funded by the University of Nottingham and World Horse Welfare. Other materials available as part of this campaign include practice talks, Facebook posts, and free REACT factsheets and mini-guides.*