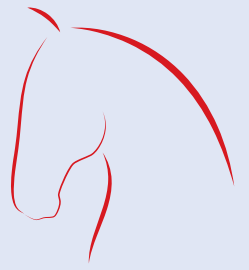


## Understanding Equine Colic

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The modern equine has evolved into a highly specialized organism over hundreds of millions of years from the once small dog sized forest browsers to the impressive and majestic beast that we all love and adore today. As the horse developed into the plains grazers of modern times it has developed an extraordinary but sometimes frustrating digestive system which allows it to thrive on an extremely high fibre diet.

In order to thrive on such a diet horses have naturally become what is known as trickle feeders, that is they graze almost continuously for 17 or 18 hours per day breaking only in the early hours of the morning for a well-earned rest. The constant entry of small amounts food to the digestive tract allows the time needed for the very specialized large intestine to process the large quantities of fibre necessary to sustain the energy and nutrient requirements of the modern horse.

a contributing factor to the horses over representation as the sufferer of colic.

Common signs of colic in the horse include rolling, continuous or intermittent pawing, lying down for excessive periods, lying down repeatedly, turning head towards flank, repeatedly curling upper lip, backing



into a corner, kicking at abdomen, standing in stretched position, frequent positioning to urinate and a lack of defaecation for greater than 24hrs.



In addition to the processing of fibrous foods the horses large intestine has become an important fluid storage organ from where large volumes of water can be reabsorbed to maintain hydration and blood volume. This role in fluid balance and fibre processing is both important for the performance of the horse but can be



Currently between 1 and 4 horses in every 100 horses will suffer from a bout of colic, which may come in the form of mild abdominal discomfort to fatal ruptures or twists of the bowel. Fortunately the majority (83%) of cases will be the milder forms treatable by medicine alone but unfortunately in these cases a specific diagnosis of the cause cannot be established. The difficulty in finding a

specific cause can be both frustrating for treatment and for prevention of further disease.

With the discovery of the “mectin” group of wormers there has been a marked reduction in the number of colics related to verminous or parasitic causes but vigilant worming programs using correct dose rates must be maintained to benefit from these drugs now and into the future.

Many other risk factors for colic have been examined in the horse; many of these include but are not limited to breed, age, type of food fed and whether the horse has had previous bouts of colic, but probably the greatest risk factor for the horse has been domestication.

selected by the horse for quality using highly tactile lips, then are ground into small particles by powerful jaws and teeth working together to provide the greatest amount of contact of the food with the digestive tract.

While highly specialized, the equine digestive tract works best if it has consistency in supply and quality of the food provided to it for processing. The feeding of large meals with a limited ability to choose the quality of the fibre ingested place a great strain on the balance of the equine digestive system both by altering digestive capacity and also fluid balance within the system. This can lead to nutrient entering areas of the gut where they are fermented to irritants instead of being absorbed.



With domestication be it for work or for pleasure, we have imposed a highly artificial set of conditions upon the delicate balance of the equine digestive system. We ask them to take time out from their continuous grazing regime to work for us. In turn we add grains and fats to their diets to better meet the energy demands we now place upon their bodies. We feed these high-energy concentrate meals a couple of times a day. We restrict movement by placing them in stalls or small paddocks to be fed and limit their freedom to choose and select their diet. Access to water can be restricted during exercise and often hay replaces green grass as the major source of fibre in the diet, which further decreases their relative water intake.

The horse’s gut was designed for the slow continuous processing of grass, not larger meals of concentrates. An extreme adaptation to continuous feeding is the lack of a gall bladder, which normally stores bile to be released with a meal to aid digestion; instead it trickles into the intestine constantly in line with the horses natural feeding habit in which grasses are meticulously

This poor initial processing of food in animals with dental disease or alterations in the fluid balance can lead to drying of the faecal mass and impactions or obstructions occurring. Sudden changes in feed quantity or quality or feeding hay that has got wet or even a the change in the hay from one bale to the next can all be enough to upset the balance and lead to abdominal pain or what we know of as COLIC.



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