



EQUINE ULCER CONDITIONS

Ulceration is an industry wide problem. Clinical signs of ulcers include colic, diarrhoea, poor appetite, teeth grinding, salivation and poor physical performance. However, in many cases these signs are missing, and the only way of detection is through gastroscopy. Unfortunately, as the name implies, this can only investigate the stomach and it is becoming increasingly apparent that ulcers occur along the whole length of the gut.

Ulceration is caused by a number of factors but the two main culprits are excessive acid in the stomach and stress, with the former impacting on the latter.

The horse continuously generates acid from the fundus layer of the stomach. Under normal conditions this is partially neutralised by saliva produced by chewing feed, with excess acid absorbed onto the fibrous material entering the stomach.

However, with an exercising animal, fed high levels of concentrate and with limited access to grazing this can lead to two ulcerative conditions.

Squamous Gastric Ulcer Disease (SGUD): This occurs in up to 90% of performance horses and the reason is fairly obvious. The stomach of the horse has two areas, separated by a band. The upper layer – the squamous mucosa – does not contain any secretory cells and is not fully protected by the mucus lining that covers the fundus mucosa – the secretory area. Feed with a high starch or cereal content does not stimulate much saliva production or absorb much acid. Also, as it is fed in discrete meals, there are periods where there is nothing to bind the acid. So when we exercise our horses, acid sloshes up into the squamous region and burns the stomach lining. It sounds crude but that is what happens.

Equine Gastric Ulcer Syndrome (EGUS): This is more complex. Feeding high levels of starch is a major cause. Bacteria in the stomach ferment the starch forming lactic acid which increases the acidity of the stomach and this encourages the growth of acid-loving bacteria such as *heliobacter*. They can penetrate the mucus lining – especially in areas where stressful conditions compromise mucin secretion – and infect the stomach wall. The infection leads to ulceration and this, more than SGUD, can lead to perforation. Additionally, releasing a highly acidic mix into the small intestine can overwhelm the buffering capacity of the gut and allow infection to progress along its length.

Treatment includes medication to inhibit acid production, antacids and barrier protectants, such as sucralfate, that try to strengthen the mucus linings.

Pectins, especially those with high esterification, demonstrate high mucoadhesion along the whole gut, can stimulate mucin release and, in the case of beet pectin, produce emulsions that improve inclusion into the mucosal layer.

Lucerne has been shown to have a positive effect in lowering acidity in the stomach, even when fed with concentrates, an effect that can last 6 hours.

Fibre-Beet Mash contains these ingredients. It also contains phospholipids that improve emulsification. As such it may have a significant role to play in offsetting ulcers both in the stomach and the intestine.

And because it is a combination of three super-fibres, feeding Fibre-Beet Mash alongside a high energy concentrate won't mean compromising energy, rather the prebiotic effects reported in research articles will maintain gut health and provide quality energy for the performance horse and acts as an excellent conditioning fibre for those horses that drop weight due to gastric ulcers.