



## FEEDING THE RECUPERATING HORSE

There is plenty of information on the management of horses' post-operative, or post treatment, and clinical care but far less on feeding during recovery and recuperation. The feeding of horses with biochemical/physiological conditions such as cushings or IR is well documented, but where a horse has been subjected to compromised feeding, for whatever reason, returning it to full nutritional health is a relatively new area of study and has leant heavily on the concepts of human parenteral and enteral nutrition.

Basically, parental nutrition consists of the supply of nutrients intravenously and is therefore using nutrient components such as amino acids and sugars to provide protein and energy.

Preferable is enteral nutrition. As the term implies this is the supply of nutrients into the gastro-intestinal tract, either through feeding or, where this is not practical, via a tube.

There have been a few reviews on the impact of enteral nutrition in the horse but they start with the understanding that, where possible, early feeding is best. Under normal conditions the horse can go without feed for up to 72 hours without any negative signs, but sick, injured and cachectic animals should receive feed as soon as possible. In natural starvation the physiology and biochemistry of the body alters its emphasis to compensate for loss of nutrition, from which it can recover when feeding resumes. Where a horse suffers tissue damage, metabolic stress or inflammatory/immunity processes recovery from starvation is less certain and therefore it is important to introduce enteral nutrition at the earliest opportunity (Carr & Holcombe, 2009).

One of the main features of the GIT is the role of its lining to act as a barrier to pathogenic invasion. As post trauma infection can be a major concern, the role of feed to maintain the architecture of the villi and gut linings. It has been shown that an empty gut encourages the translocation of bacteria across the gut lining in intensive care patients (Hernandez et al, 1999). The gut lining, a mucosal layer, has been reinforced in human enteral nutrition with feeding of uronic acid (Thirawong et al, 2007). Uronic acid is the major component of pectin and further work has shown that some pectins can also stimulate the secretion of the gut mucosa (Shingo et al, 2013). As beet pulp is one of the major providers of pectins, as uronic acid, it may have a significant role in enteral nutrition.

It has been recommended that, if enteral feeding has been delayed it should be introduced over 5-10 days starting at around 50% maintenance (Witham & Stall, 1998) and that fibrous material, such as lucerne or oat fibre, would be ideal.

Within a review by Magdesian (2003) the author suggested the use of fibre sources of high digestibility for the enteral nutrition of horses recovering from critical gastrointestinal illness. For the most part he recommended feeding small feeds every 4 hours. Following up in the review was greater detail depending on the type of disorder. For example, in the case of enteroliths, restriction of alfalfa to less than 50% to reduce magnesium intake was recommended. In the case of small intestine disorders, it was recommended to initially avoid bulky feeds such as oat hay, and to feed alternatives such as grass and alfalfa leaves.

**This being so, Barastoc Fibre-Beet Mash would be an excellent feed for enteral feeding.**

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