

Acidosis in Horses

What is acidosis?

Horses have a limited capacity to digest starch in the stomach and intestines. Feeding too much starch can "overload" the digestive capacity in the intestines and the excess starch will flow undigested to the hind gut, where it is fermented by the microbial organisms that live in the hind gut. These organisms normally produce volatile fatty acids (VFA) that are used by the horse for energy. When high NSC feeds are fed, excess amounts of starch can flow into the hindgut, and the organisms can produce lactic acid. The lactic acid causes a rapid decrease in pH (<4), i.e. increased acidity or acidosis, which is the same as occurs in feedlot cattle.



The rapid decline in pH causes death of the microbial organisms, release of microbial toxins, and reduced fermentation in the hindgut. These conditions can lead to laminitis and colic, and reduced appetite, and deficiencies in B Vitamins.

How do I know my horse has acidosis?

Feet problems such as lameness, laminitis (founder), ringbone or navicular disease

Tail rubbing due to the level of acidic material in the droppings causing irritation

Loss of appetite and diarrhea

Rancid smell from droppings due to the amount of dead microbial flora being passed

Mouth problems such as sores (mouth ulcers) and teeth sensitivity (evident when eating hay)

For more information or to order CoolStance/PowerStance, please call 803-647-1200 or e-mail Claudia@stanceglobal.com



What causes acidosis in horses?

The most common cause of acidosis in horses comes from the rapid introduction of grains to the diet. Any feed that contains grains will increase the starch component of the diet and as previously described with “overload” digestion in the small intestines causing changes in the bacterial species in the hind gut, resulting in lactic acid build up and acidosis.

How diet helps acidosis

Diets that are low in starch and sugar fructans or preferably grain free may be more easily digested by the horse and provide a more natural diet. Some feed process grains to help them become more digestible, CoolStance coconut meal is 100% grain free and contains low levels of starch and sugars (NSC 11%).

Recommended Stance horse feed for acidosis in horses

Horses require digestible energy (DE) both for maintenance of body functions and for performance. Most hay and pasture can provide sufficient DE for maintenance, and low levels of activity, however horses cannot eat enough of these feeds to provide energy for higher levels of performance. For most performance horses, it is necessary to feed a high DE feed to provide the extra energy. Most traditional energy feeds are based on grain or grain based by-products which contain nonstructural carbohydrates (NSC), i.e. sugar and starch. Overfeeding of these feeds, coupled with under work is a major cause of many of the metabolic disorders including laminitis, colic, EMS and fizzy behavior.

To avoid acidosis, select feeds with a balanced profile of non NSC (oil and fiber), and NSC (sugar and starch) energy which provide <12% total NSC

The **Stance Equine Feeding System** outlines several feeds

These include

Cool Fibre contains a low NSC (7%), high level of digestible fiber, and MCT from coconut oil, and can be used to dilute high NSC grain based feeds (not available in the US)

CoolStance contains <12% NSC, which reduces the amount of fermentable sugars and starch.

CoolStance and **PowerStance** contain MCT in the coconut oil.

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