

The Role of Nutrition in Horse Colic and Laminitis

Laminitis is inflammation within the sensitive laminae of the feet. It can occur for many reasons, but as a nutritional problem it is commonly linked to grain-rich diets, ingestion of too much rich pasture, and obesity. Grain overload or a diet rich in high-carbohydrate feed (grain or lush pasture) initiates a series of metabolic and endocrine (hormone) disturbances in the body. A diet abundant in carbohydrates upsets normal intestinal bacteria, allowing more endotoxins from harmful bacteria to be absorbed into the bloodstream than can be neutralized by the liver.

The most common laminitis relates to nutrition and diet. Rapid intake of starches or fructans (a sugar) stored in pasture plants can cause laminitis. Fructans are the primary reserve carbohydrate stored in cool season grasses like orchardgrass, bromegrass, and timothy. Sugar content is highest when grass is in the vegetative state (early spring and during re-growth); during periods of cool nights and warm sunny days (fall or early spring); after a hard freeze; and during drought conditions. Careful pasture management by horse owners with sensitive horses is essential. Good pasture management entails not overgrazing, limiting grazing time, and/or using a grazing muzzle.

Grazing should also be limited during times of environmental stress on plants such as drought. It is important not to over graze pastures as the lowest stems often contain the highest amount of sugar. Avoid grazing on pastures with lots of seed heads as they also contain high amounts of sugar. Introducing horses to lush spring pasture gradually will reduce the chance of laminitis.

To begin grazing (and reduce the chance of laminitis), start easing the horses onto the pasture in 15 to 30 minute increments. Gradually increase the amount of time in the pastures over the course of several weeks.

Colic can be caused by digestive upsets. Some pasture forages, like legumes, can cause gas in the digestive system when quick diet changes are made. So make dietary changes slowly over time, including slow induction to pastures.