

A Natural Approach to Laminitis

By Lisa Ross-Williams



Photo courtesy of Marjorie Smith

Laminitis and Founder. Most horse owners have heard of these insidious conditions and many have had personal experience themselves. In fact, according to Dr. Chris Pollit, Director of the Australian Equine Laminitis Research Unit at Queensland University, chronic laminitis and founder are the 2nd biggest killer of horses after colic.

A common belief is that laminitis is a hoof problem but in reality it is a whole body issue which shows up in the hoof. It therefore makes sense that it is increasingly being found among hoof care providers and holistic experts that horses living a more natural life are much more resistant to this condition. A horse with natural bare feet, allowed 24/7 turnout with little to no chemical usage and a strong immune system due to a balanced diet are at the least risk. By understanding the basics of laminitis and founder, what triggers can be and a holistic approach to prevention and treatment, owners are not at the total mercy of this dreaded disease.

Often laminitis and founder are referred to in the same context; however this is a wrong assumption. In order to get a better grasp at this, one must understand some basic definitions.

- **Laminae** is the connective tissue which attaches the hoof wall to the coffin bone.
- **Laminitis** is inflammation of the laminae and this process follows certain stages in development.
 - **Developmental stage** is the initial phase within the first 24-40 hours (depending on the cause) in which inflammation of the laminae is beginning.
 - **Acute stage** is when foot pain is obvious due to the major inflammation and pressure increase within the hoof capsule.
 - **Chronic phase** is when the laminae are beginning to give way, releasing their hold on the coffin bone.
- **Founder** occurs when the laminae can no longer hold the coffin bone in place and it moves to an unnatural position within the hoof.

- o **Rotation** happens when only the toe or tip of the coffin bone has rotated downward.
- o **Sinking** happens when all the laminae release causing the whole coffin bone to drop down.
- **Mechanical founder** usually happens over time due to unnatural force on unbalanced hooves causing tearing of the laminae.



Coffin bone penetration
Photo: Dr Tom Teskey

Signs of laminitis and founder are usually easy to spot by an observant caretaker and often but not always appear only in one or both front feet. During the developmental state, the horse may appear a little “off”, depressed and may show signs of other issues such as a fever, slight dehydration or colic. Pain begins during the acute phase and shifting of weight, holding up the limb, lying down or the classical founder stance may be observed. This stance is when the horse places his front feet forward and rocks back on his hindend to shift the weight off the painful toes. Often times, the hoof will be warm and exaggerated pulses might be felt over the fetlock. Once moving to the chronic and founder stage, physical signs in the hoof will be observed such as flaring, stretched white line, depression or softness near the coronary band, ridges in the hoof wall, abnormal flat or bulging sole and in some cases, penetration of the coffin bone through the sole. Although this sounds gruesome it’s important to know that just because a horse has a laminitic attack does not always mean that the condition will move to full founder. More about that later.

Common Triggers

Although a trigger can often be determined, it’s usually is just the “straw that breaks the camel’s back” and the horse was a laminitic candidate to begin with. Later in this article natural practices to over-come these cumulative issues will be covered, but first some common triggers are below.

- Grain Overload is a fairly common trigger. Many have heard of horses getting into a feed bin and ingesting grain resulting in a high concentration of starch. This causes an over-population of hindgut bacteria such as *Streptococcus bovis*, *Streptococcus equines* and *Lactobacillus spp* which not only lowers the ph of the intestines but also kills off other good gut bacteria.
- Grass Founder is fairly common in ponies, minis and easy keepers, those with either insulin resistant problems and the hardy breeds such as Arabians and Mustangs as well as Cushings horses, This is caused by the fructan or sugar in the lush pasture grass and somewhat along the same lines as grain overload in that the high sugar causes an increase of the *Streptococcus* bacteria which leads to digestive

upset and low gut pH. During certain times of the year or growing conditions, the fructan content can sky-rocket. Even some hays can have higher sugar content depending on the type and growing conditions.

- Use of some medications such as some steroids, antibiotics and even vaccinations can be a laminitis trigger.
- Gastrointestinal conditions such as colic, colitis or enteritis can also be a factor.
- Other serious illness which may release toxins into the body such as retained placenta or other serious infections have a major link as a trigger.
- Metabolic issues involving glucose uptake problems is yet another major trigger in laminitis cases. In horses with glucose uptake problems, such as insulin-resistant and Cushing horses, the body can redirect the glucose to major organs at the expense of the extremities and hooves. Laminae starved of glucose are inferior and weak making them more susceptible to inflammation and separation.

Natural Care as a Preventative

As stated earlier, natural care principles can lower the risk of laminitic attacks and therefore is a great prevention. The first one is feeding a low starch/sugar diet. It is this author's belief that feeding diets high in starch and sugar such as grain and molasses based feeds set a horse up for insulin resistant problems in the future. A rice bran base is an excellent choice to both help prevent the issue and appropriate for insulin and Cushing's horses. Keep in mind that just because a label says the product is low starch, does not mean this is true; you must read the ingredients, looking for grains, molasses and artificial sweeteners.



Naturally kept horses are less at risk.

Be knowledgeable about appropriate grazing times and elevated sugar hays for high risk horses. Normally, the safest times to graze are early morning and on overcast days. Also when grass is in the growing stage of leaves and not seeded as well as not under stress from drought or lack of proper soil nutrients. High risk times are just the opposite with late afternoon and evening being dangerous as well as stressed plants from improper care. If possible, also stay away from high fructan hays such as the warm season crops such as Timothy, Orchard and Brome and stick with the cool season grasses such as Bermuda and native prairie mixes. More great information about this on www.safergrass.org. It's also very important that the horse is receiving his needed vitamins and minerals to make sure he is able to maintain a

strong immune system and healthy hooves.



Stretched white line
Photo: Dr Tom Teskey

Ensure your horse has balanced feet, preferably barefoot, which reduces the chance a mild laminitic attack will progress to founder. In a balanced healthy foot, there is no unnatural pressure pulling at the hoof wall. To get a better idea of this principle, place your fingernail on a hard surface and push down. The pull you feel in the underlying tissues is the same as a horse with long, over-grown hooves which stretch the sensitive laminae. Creating a more natural environment is also paramount as movement is crucial in building strong hooves and body which will be more resistant to damage.

Cut out unnecessary chemical and pharmaceutical treatments. As mentioned earlier, some medications and vaccinations can be a trigger for a laminitic attack or can set the horse up as a candidate because of toxins within the body. Frequent over-use of chemical worming products can upset the good gut bacteria raising the chance of a digestive upset.

Holistic Approach to Healing

The conventional and holistic approach to the care and healing of a laminitic horse differs. Conventional medicine often looks at this as a hoof problem and therefore concentrates in “fixing” that hoof with corrective shoeing, numerous drugs and stall confinement. A natural caregiver understands this issue must be addressed as a whole, or holistically. Therefore a healing regimen encompasses numerous basic guiding principles, the first being “respect nature’s power of healing”. Laminitis, although a very emotional and stressful experience for both horse and guardian, is not a death sentence. Most horses can return to a normal life with the proper care. Although covering the whole healing regimen is outside the scope of this article; the following basic points are the most important.

Make an immediate diet change so it’s a support and not a hindrance. Cut out all fresh grass, all grains, molasses, overly processed concentrates, all legume hay (for now) and switch to free-choice low sugar grass hay. If the horse is not used to eating grass hay, take 4-6 days to change over allowing the gut bacteria to balance. Proper vitamins and minerals are paramount to healing and growing a new healthy hoof, so ensure your horse is on a vitamin/mineral mix designed for grass hays, using rice bran and flax as a carrier. Vitamin C is also beneficial for inflammation and boosting the immune system; adding 2-4 Tbs of crushed rose hips is an excellent source with also provides copper which is important for hoof growth and is lacking in most horse’s diets.

Creating a more natural environment is another important step in healing as movement is crucial. Provide turnout 24/7, spreading hay in small piles to motivate the horse to move. Avoid extremely soft footing or deep shavings but do provide the

horse a soft comfortable place to lay down when he needs a break. Contrary to conventional advice, lying down is not detrimental to the horse and instead gives his painful feet a break. Once the horse begins to move more comfortably, providing him a calm companion will allow him mental as well as physical stimulation.

Remove the shoes if shod and find an experienced natural hoof care provider to begin the trimming rehabilitation process. Although this person will be your partner during the process, it's important the caregiver get educated about the process. Request your hoof care provider explain the basic trim principles and research the valuable barefoot trimming resources available; one such website is www.barefoothorse.com which is very user friendly and easy to understand for the everyday horse owner.

The initial trimming goal is to help the horse feel more comfortable and to give support to the coffin bone and laminae. This includes removing flares toward the bottom of the hoof and excess hoof growth which stresses the already weak laminae. Toes are shortened (brought back) often to inside of the stretched white line and the whole bottom of the hoof is rounded over reducing any edges which exert undue pressure. The heels are lowered according to the level of flaky sole which will change the steepness of the hoof angle at the toe. **Do not trim into fresh sole.** The sole at the toe area is normally left alone for coffin bone support and frequent trimming, every 2-4 weeks is necessary for the initial rehabilitation process. These are guiding principles but it must be remembered each horse is an individual and the trim must be done accordingly.



Healing of a foundered hoof. Notice healthy new growth at 4 month mark.

In addition to the above care practices, numerous supportive options are available. Because laminitis involves pain and inflammation, an herbal solution such as Better than Bute or BTB by Equi-Global (www.emeraldvalleyusa.com) can be beneficial without the side-effects of conventional NASIDS like Bute. Try to give only the minimum dose to be effective for only as long as needed. Products which contain Devil's Claw should NOT be given to pregnant mare.

Homeopathy can also be beneficial in supporting the healing process and the remedies are picked according to the horse's individual symptoms. If inexperienced in the use of homeopathy, a professional should be consulted. Some common laminitis remedies include:

- **Aconitum napellus** should be given immediately upon symptoms or preferably following a known trigger.
- **Belladonna** is appropriate when the horse exhibits sweating, full-bounding pulse and throbbing arteries. This can be given together with the Aconitum

- **Nux vom** is beneficial in cases involving toxicity
- **Calcarea fluorica** can be given either in the beginning of the chronic phase and may be able to reduce tissue involvement.

Potency and dosing of remedies will depend on the horse's symptom and vital force level.

Chinese Herbalism is another great option and Dr. Joseph Thomas, PhD (For Love of the Horse www.forloveofthehorse.com) has created effective herbal solutions for the different stages of development. Dr Thomas states, "Laminitis follows a stage course so we must learn to "listen" to our horse's behavior and movement to understand where each stage begins and ends. This path will take us to effective choices for their care and treatment."

There are other supportive options available depending on the horse's needs. Some horses benefit with the short-term use of Styrofoam pads which help support the coffin bone from below. Available at www.hopeforsoundness.com. Protective boots can also give some support and protection for painful hooves to encourage movement but should not be used constantly as the hoof must breathe and begin to callous over. There are numerous boots on the market and two common ones are the Sabresneaker and Boa Boot.

Laminitis can be a devastating condition but it does not have to be a death sentence nor crippling for life. Most often, this condition can be prevented in the first place by adopting a more natural equine lifestyle, thereby reducing the possible triggers or conditions which make the horse a candidate. If the condition does strike, following a holistic approach can result in a sound and rideable equine partner in normally 6-9 months.

References:

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- ***Laminitis Update. Pete Ramey (2005)**
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About the Author: Lisa Ross-Williams is a natural horse care consultant, freelance writer, clinician, and host of the **If Your Horse Could Talk** show. Lisa has immersed herself in extensive research, hands-on experience, and attending many clinics and seminars including natural horsemanship, hoof care, massage & stretching, essential oils, animal communication, iridology, and nutrition. She has completed the Basic Veterinary Homeopathy course through the British Institute of Homeopathy and working on her certification course in Iridology. Her herd of six have been some of her best teachers. Lisa has dedicated herself to educating horse owners to a more natural approach through her company, If Your Horse Could Talk, including her extensive website, www.naturalhorsetalk.com, the show webcasts, consultations, and clinics.