



Laminitis - literally inflammation of the laminae - has reached epidemic proportions in domesticated horses. Conventional approaches tend to concentrate on the factors, which *trigger* the inflammation, the most common of which is rich feed e.g. spring grass. Conventional treatments for laminitis range from preventatives like food additives intended to stabilise the hind gut, to various mechanical solutions - the most damaging of which is raising the heels and nailing on so-called 'orthopaedic' shoes.

The Strasser Approach

Coffin bone rotation with separation (aka *founder*) is a long time in the making. Laminitis does not always end up in rotation of the pedal bone with separation of the bone from the hoof capsule. Inflammation may be triggered by a number of things, e.g. feed, chemicals, hormones, mechanical stress. In an otherwise healthy hoof, and if the trigger is removed, the inflammation need not cause major damage to the laminar connection. Other pre-existing conditions are necessary for this to happen. In a healthy hoof the pedal bone is ground parallel and the coronet has a 30 degree slope. In this position, force is distributed equally on all parts of the bone and the laminar horn and corium.

However, when the pedal bone is forced to become steeper (e.g. wedge pads) the weight comes down further forward than usual which chronically overstresses the frontal region of the laminar corium. The steeper the pedal bone, the more the tip is forced downwards and the more the corium is overstressed. This leads eventually to separation of the bone from the hoof capsule in the toe region - either through the mechanical levers of quickly growing heels or the gradual indentation of the sole by the pressure of the pedal bone pushing down upon it.

A horse may have steep hooves for some time without problems if it is used on soft ground, or is shod. For a while the shoe prevents the pedal bone from **visibly** separating from the hoof wall because the solar vault cannot draw flat.

But, shoes (as well as contraction, vibration, lack of movement etc) reduce blood supply, particularly in the toe region. (See ILX) Poorly nourished corium lamellae are structurally altered even within an outwardly

healthy looking hoof, and cannot produce good quality laminar horn.

Even without the effects of steep bone alignment, the interlocking of the sensitive and insensitive laminae is compromised. The laminar suspension is more prone to oversteering and less able to maintain the horse's weight in the hoof capsule. Obviously a steepened bone alignment will speed up this process. As the laminar connection becomes, over time, more and more unstable any inflammatory trigger can tip the horse into full rotation and separation.

Any metabolic disturbance can trigger laminitis. The presence of a toxin in the poorly nourished and damaged laminar corium causes a severe inflammatory response. Wound secretion seeps out to mix with horn production, resulting in a horn quality that is too poor to suspend the horse's weight (especially with unnaturally steep bone alignment) and the corium and horn lamellae separate.

As a result, the connection between the pedal bone and hoof wall is lost (most usually only at the toe) and the pedal bone sinks down onto the sole where its sharp frontal edge presses onto, and damages the solar corium.

The least painful part of the foot, and the area where there is usually still a fairly solid connection, is in the lateral and heel regions. The horse shifts its weight back onto its heels and its hind quarters - into the classic founder stance. Whilst this slightly relieves the pain in the front feet it causes over-stressing of the heels of both back and front feet, and of the joints, muscles, ligaments and tendons in the back and hind quarters.

What can be done?

It is important to realise that the foundered horse is a sick animal but founder need not be a death sentence. After steps to remove the cause of the inflammation and to cool the feet (standing in cold water is best) the foundered horse needs:

Restoration of natural hoof form and function :-

By restoring a ground parallel coffin bone and hoof mechanism the degenerative cycle of chronic founder can be broken. Once weight is evenly distributed across the pedal bone, hoof capsule, coronet and laminar corium, the damage can start to repair and a good quality connection begin to grow down from the coronet.

Circulation :- Movement on level, non-concussive ground is vital to ensure the flow of nutrients and oxygen to the damaged tissues in its feet.

Proper nutrition :- Most chronic laminitics are already nutritionally deprived and starving a sick animal is, at best, counter-productive.

Holistic support : - The horse's heart, metabolic organs and muscular-skeletal structures are already under enormous strain. Chemicals such as anti-inflammatories can interfere with natural healing processes and they have toxic side effects.

Further Information:

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