



LIPHOOK
EQUINE HOSPITAL

Laminitis

Laminitis is a painful and potentially devastating disease that causes pathological changes in the anatomy of the foot that can lead to long lasting, crippling changes in function



Laminitis

Prompt veterinary treatment and **appropriate management** are essential to reduce this disease's long term effects. Many people will own or work with horses all their lives and never encounter laminitis however, when it does occur it can be heartbreaking.

Simply put, "laminitis" is inflammation (-'itis') of the laminae, and is caused by damage to the bond between the pedal bone (coffin bone/P3) and the hoof wall. This bond comprises of the sensitive laminae (on the bone side) interdigitating with the insensitive laminae (on the hoof side). The exact reasons as to why this failure occurs are numerous and much research still continues to better understand the processes involved.

What can cause laminitis?

- **Endocrine associated laminitis** is one of the largest areas of research into laminitis. The two metabolic disorders of note are Equine Metabolic Syndrome (EMS) and Pituitary Pars Intermedia Dysfunction (PPID/ Equine Cushing's disease).

EMS: These horses are often overweight or have excessive fat storage in abnormal areas leading to insulin resistance. Some horse are now known to have abnormally metabolic active fat when they are not overweight leading to the insulin resistance as well. The resulting high levels of insulin can lead to laminitis. EMS can be diagnosed by various tests including : An Oral Glucose Challenge Test to assesses the insulin response to a meal of glucose, an insulin tolerance test or a single blood sample to assess adiponectin (a fat derived hormone associated with insulin resistance). Please refer to our EMS pamphlet for further information.

Equine Cushing's Disease: This can be seen in any horse but more often it is seen in older horses and ponies. It is due to an enlarged pituitary gland at the base of the brain. Dysfunction of this gland results in higher than normal levels of ACTH and other hormones which can lead to laminitis. Again a blood test carried out by your vet can diagnose this condition and enable treatment and management regimes to be instigated.

- **Supporting limb laminitis** is due to excessive unilateral weight bearing. This most often occurs if a horse is suffering from significant lameness on the opposite limb.
- **Endotoxaemia associated laminitis** can occur secondarily to colic or retained foetal membranes after a mare has foaled.



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How do you spot laminitis?

The *classical* signs of laminitis are easily recognised and include the horse or pony rocking back onto its heels in order to take the weight off the painful laminae at the toe. The horse or pony may be seen to be weight shifting between limbs, the hoof wall will feel warm and bounding digital pulses can be felt in the lower limb.

Other signs indicative of laminitis include stiffness at walk especially on turning, or discomfort when being ridden over hard ground. However, individual cases may show all, some, or none of these signs. Worryingly the “development phase” of laminitis will have been well under way for up to 40 hours before any clinical signs are seen. As your horse begins to show clinical signs it is said to be entering the “acute stage”. If you do see any of these clinical signs it is imperative to **contact your vet** as soon as possible. The sooner the progression of this disease can be stopped the greater the likelihood that your horse will return to athletic function. As the disease progresses the inflamed laminae lose strength and with it the ability to maintain the position of the pedal bone. This stage is known as the “chronic stage” and can last indefinitely. It can result in continuous low grade lameness, and in severe cases sloughing of the hoof wall or the pedal bone can rotate to such an extent that it prolapses through the sole.

Treatment:

The immediate concern should your horse or pony start to show signs of laminitis is it's comfort, so contact your vet immediately. Your vet will prescribe pain relieving anti inflammatory drugs. This may be combined with a mild sedative (acepromazine) to ensure your horse stays calm and quiet, encouraging them to rest.

You can help the comfort of your horse by providing a stable for box rest, with a deep shavings bed, preventing excessive walking and movement (that may result in increased forces travelling through the laminae), reducing the chance of rotation or sinking of the pedal bone occurring. Your vet can provide greater support to the pedal bone and further improve your horse's comfort levels by applying foot pads.

If there is any concern that the pedal bone has already moved then radiographs may be required to see just how much movement has occurred. This also allows your vet to work in conjunction with your farrier to determine if specialist trimming or shoeing is required. Although this treatment and management will help improve the clinical signs of laminitis it will not treat the cause of the laminitis which is imperative to prevent recurrence.

Treatment of laminitis can be a long process and in severe cases is not always successful. It is a very serious condition, second only to colic as a cause of death in horses. **Prompt treatment and diagnosis of any underlying endocrine disorders can make a huge difference to the outcome** so if you are in any doubt speak to your vet sooner rather than later.



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Laminitis 1st Aid:

