

Laminitis

A year-round problem

Laminitis is an extremely painful inflammatory condition of the feet in which there is weakening of the sensitive tissues (laminae) that bond the hoof wall to the pedal bone within the hoof.

In mild cases, quick diagnosis and appropriate treatment can resolve the problem. In more severe and prolonged cases, the laminae may lose their blood supply, resulting in loss of support between the pedal bone and the hoof wall.

This can lead to separation of the pedal bone from the hoof, with rotation and/or sinking of the bone within the foot. In severe cases, this can lead to penetration of the pedal bone through the sole of the foot, with irreversible, fatal consequences.

Recognising Laminitis

Laminitis is characterised by lameness, usually sudden in onset, in one or more feet. Frequently both front feet are affected, but it can also affect hind feet.

Clinical signs include a pottery gait, stiffness/reluctance to move on firm ground and the lameness is often exaggerated when turning. The feet will often (but not always) feel warm and physical examination will reveal increased digital pulses.

After an episode of laminitis, divergent growth rings around the feet are often visible as the hooves grow out.



Feeling for digital pulses.

Divergent growth rings.

Image: Dr D Pollard, AHT

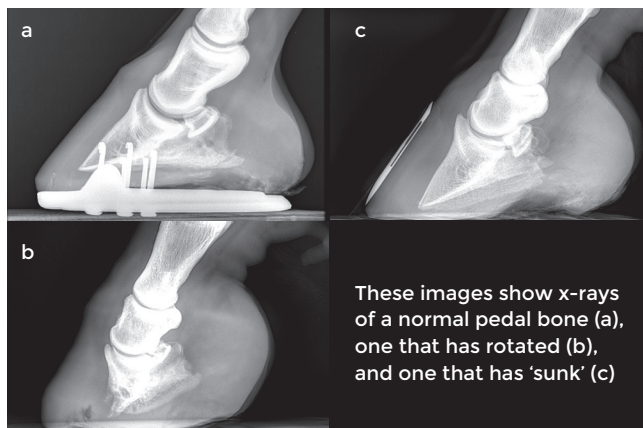


A pony with laminitis shifting weight from one foot to the other.
Image courtesy of Dr D Pollard, AHT

Diagnosing Laminitis

Many of the above signs are usually seen on veterinary examination. These are considered along with an assessment of the horse's history. X-rays of the feet are usually taken to assess the position of the pedal bone in relation to the hoof capsule. This can be done at your yard to minimise stress for your horse or pony.

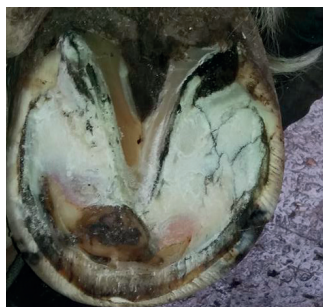
Sometimes the pedal bone will rotate or sink, which carries a much worse prognosis for recovery. It is also possible to assess the thickness of the laminar tissues, which may give an early warning sign before the position of the pedal bone has moved.



These images show x-rays of a normal pedal bone (a), one that has rotated (b), and one that has 'sunk' (c)

Common causes of Laminitis

- Obesity - being overweight, even slightly, is one of the most common causes of laminitis.
- Too much carbohydrate (starch and sugar) in the diet – e.g. spring grass, excessive concentrates
- Equine Cushing's disease (also known as Pituitary Pars Intermedia Dysfunction or PPID) results when normal mechanisms which control hormone production by the pituitary gland are damaged and causes excessive hormonal production. This results in a variety of clinical signs, including laminitis.
- Equine Metabolic Syndrome (EMS) – usually seen in overweight middle-aged native ponies – occurs when normal response to the hormone insulin is disrupted, resulting in high insulin and glucose blood concentrations, altered energy metabolism, changes to fat composition and damage to blood vessels, particularly those in the feet, which can cause laminitis.
- Poor foot shape - long toes, foot imbalance and leaving too long a period between trimming/shoeing.
- Concussion - hard ground can cause further damage to weakened laminar tissues.
- Toxic - Any disease process in the rest of the body that may result in the horse becoming toxic - e.g. infection, colic, foaling, etc.
- Stress - A period of stress, such as change of environment, can contribute to a bout of laminitis.
- Overload - If a horse is unable to use all four limbs equally, it may result in one or more of them being overloaded, which after time can result in laminitis.



Recurrent abscesses are more likely to occur in feet compromised by chronic laminitis.

Image: Dr D Pollard, AHT



Consistent weight and body condition scoring identifies weight gain before it negatively impacts your horse or pony.

Treatment

It is important to identify the cause of the laminitis, otherwise prescribed treatment may not work properly. This will involve reviewing the horse's history, assessing the horse's foot shape, and trimming/shoeing history, and diagnosing any predisposing diseases, such as Cushing's and EMS, with blood tests and other clinical tests.

The horse or pony should immediately be put on strict box rest, on a deep bed that reaches to the stable door (deep shavings, hemp or sand). Your vet will prescribe anti-inflammatory medication and pain relief (e.g. bute and/or a combination of medication). Cold therapy should be applied, standing the affected feet in a mix of ice/cold water as often as possible; otherwise cold hosing or ice-boots can be used effectively.

Diet and farriery

A low calorie diet is essential. Remove hard feed and grass from the diet; feed only a low calorie balancer and 1.5% of the horse's body weight in hay, soaked for 4 hours and distributed in small feeds throughout the day, preferably double-netted.

Good hoof care is critical in the treatment of laminitis and your farrier should consult with your vet. In the early stages, the object is to stabilise the pedal bone with appropriate trimming and/or shoeing. Frog and sole support can be provided in the form of pads, hoof/sole casts, etc. Regular trimming, continued sole support and the use of specialist shoes can minimise the risk of further rotation.

Prevention

Laminitis can be prevented by...

- Keeping your horse a healthy weight, without 'fat pads' on its body. Use body condition scoring methods and a weigh tape regularly to monitor for any changes in weight.
- Maintaining a controlled diet – discuss with your vet the most appropriate way to reduce your horse's weight/avoid any unwanted weight gain.
- Regular shoeing, with appropriate trimming of the feet.
- Monitoring for signs of other diseases and acting on those signs quickly, e.g. lameness, Cushing's, EMS, infections, colic, etc.

Laminitis is an emergency. Contact your vet immediately if you suspect a case.

Discuss with your vet how to spot early signs and how to feel for a digital pulse. Previously affected horses must be monitored closely and managed vigilantly to prevent recurrence of the disease.

Contact us on 01638 663150 to speak to a member of our team.