

Laminitis



WorldHorseWelfare

*What it is, how to prevent it and
what to do if you suspect your horse has it.*



www.worldhorsewelfare.org/laminitis

What is laminitis?

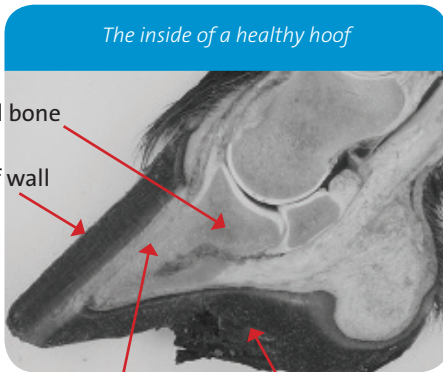
Laminitis is an extremely painful condition that can affect any horse, pony, donkey or their hybrids (collectively referred to as horses in this leaflet). It is an emergency and you must contact your vet immediately if you think your horse might be suffering from laminitis.

Laminitis refers to a condition of the feet in which there is painful inflammation and weakening of the sensitive tissues (laminae) that bond the pedal bone (the main bone within the hoof) to the hoof wall.



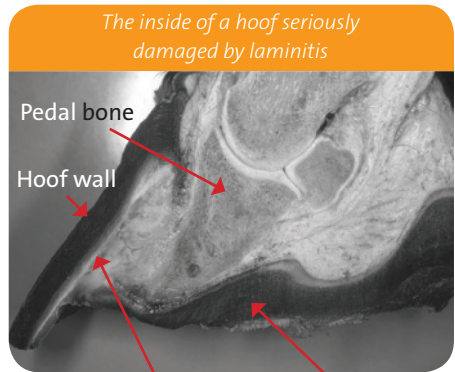
This image shows separation of the hoof wall from the underlying structures – note the pink area around the toe where gaps can be seen

The weight of the horse pushing down on these weakened tissues can cause the pedal bone to separate from the hoof wall and rotate or drop towards the sole. In severe cases the pedal bone may penetrate through the sole of the foot.



Laminae

Sole of foot



Laminae

Sole of foot

The images above show the difference between a healthy hoof (left) and one seriously damaged by laminitis (right). In the laminitic hoof, note the rotation of the pedal bone towards the sole of the foot, almost to the point of penetration, and the resulting changes between the hoof wall and the bone.

Acute laminitis

Refers to the early stages of the disease where there are clear clinical signs but the pedal bone has not rotated or sunk within the hoof. Acute cases, if treated promptly and effectively, can be prevented from developing into chronic cases.

Chronic laminitis

Refers to cases where the pedal bone has moved within the hoof. Affected animals may suffer ongoing problems, such as lameness or recurring abscesses, and will show signs of long-term changes to the hoof structure.

Why should I be concerned?

Laminitis causes severe pain and lameness. Horses that have suffered from laminitis previously are at risk of future episodes; a horse suffering from chronic laminitis will require special care and attention for the rest of its life.

The intensive veterinary and farriery treatment required by laminitic horses, along with the ongoing care and changes to management that owners must undertake, can be lengthy and expensive.

In many cases, even with the very best care and attention, the hoof damage is so severe that the horse cannot be made comfortable; in these cases, euthanasia is sadly the only option.



Acute laminitis is a veterinary emergency: contact your vet immediately

What causes laminitis?

Laminitis is a very complex disease, which can result from numerous different risk factors. However **two main causes have been established:**

- 1. Hormonal disorders:** Factors that disturb the normal balance of hormones can lead to laminitis. Recent research suggests that two diseases - Equine Metabolic Syndrome (EMS) and Pituitary Pars Intermedia Dysfunction (PPID, also known as Cushing's Disease) – cause most cases of laminitis in the UK and around the world. Unless another cause is clear, your vet is likely to suggest having your horse tested for underlying metabolic conditions such as these. Hormonal imbalance can also be caused by excess body fat and certain steroid medications.
- 2. Inflammatory response:** The inflammatory response occurs following carbohydrate overload (e.g. gorging on concentrate feedstuffs) and inflammatory diseases such as colic, diarrhoea or retention of the placenta after foaling.

How do I prevent laminitis?

When it comes to laminitis, prevention is most definitely better than cure. Efforts to prevent laminitis are particularly important for smaller animals, those whose weight has increased in the past three months, animals who have suffered from laminitis previously and those with EMS or PPID.

The first step to preventing laminitis is ensuring your horse is the right weight. You can do this by regularly fat scoring and providing an appropriate diet and adequate exercise. To learn how to fat score and for information and advice on weight loss and management visit: www.worldhorsewelfare.org/right-weight



Overweight animals are more likely to suffer from laminitis

Prevention of laminitis is essential to avoid pain and suffering for the horse – and expense and heartbreak for the owner

Diagnosis of any underlying metabolic conditions will significantly help ongoing management and prevention of further attacks. Horses with PPID may benefit from medication to manage the condition. Your vet will be able to offer advice on what is appropriate for your horse.

If your horse has suffered from laminitis in the past it is essential that you follow the advice of your vet and farrier to reduce the risk of the disease recurring. This may include reviewing your horse's diet and exercise regime, more regular trimming of the hooves, and daily checks of your horse's mobility and digital pulse.

If the worst happens how do I recognise laminitis?

Laminitis can affect any or all of the horse's feet, although it is most common in the front feet. There may be no single conclusive sign of laminitis, but there are a number of possible indicators. By checking for these regularly, you can catch laminitis early and give your horse the best possible chance of recovery.

Look out for:

- Signs of pain, such as reluctance to move, facial tension, or lack of interest in surroundings, some of which may be particularly pronounced if more than one limb is affected
- Excessive heat in the feet

- Strong digital pulse (a pounding pulse may be felt at the back of the fetlock – see our online video ‘How to check your horse’s pulse’ for more details)
- A pain-relieving stance, with the front limbs placed in front of the body and weight shifted to the heels. Refer to the front cover image for an example.
- General stiffness
- Alternate lifting of the feet when resting (weight-shifting)
- A ‘pottery’ walk, with the heel set down before the toe
- Lameness that is exaggerated by turning on a hard surface

Chronic laminitis

In cases of chronic laminitis, there will be changes to the hoof. Signs to look out for include:

- Horizontal ridges around the outside of the hoof, which are wider at the heels
- A depression at the very top of the hoof, which can be felt by running a finger down the leg and onto the hoof wall
- Flat or convex (curving towards the floor) sole – in a healthy horse the sole should be concave.



This image shows the horizontal ridges around the hoof which are often seen in horses with chronic laminitis

Photograph courtesy of Andrew Poynton FWCF

The underside of a healthy hoof – note the concave appearance with the sole curving gently inwards



The underside of a laminitic hoof – note the convex appearance with the sole bulging outwards



Photograph courtesy of Andrew Poynton FWCF

What should I do if I suspect my horse might have laminitis?

Contact your vet immediately: acute laminitis is a veterinary emergency. Whilst waiting for the vet to arrive, do not move your horse unnecessarily, as forced exercise can cause more damage. However, leaving a horse on grazing may make the condition worse so, if possible, keep your horse or pony in a deep-bedded box with access to hay and water. If you do need to move them to the stable whilst waiting for your vet, only do so if this is a short distance away and let the horse walk there slowly and carefully. If the stable is a further distance away, try to make them comfortable in the area they are already in rather than moving them, including restricting their grazing access if necessary. Your vet can then offer further advice once they arrive.

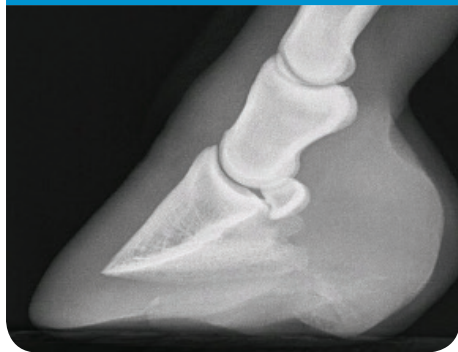
Contact
your vet
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How is laminitis treated and managed?

Treatment and management of laminitis can be a long and expensive process that may involve any or all of the following:

- Medication to relieve pain
- X-rays to determine whether there is any damage within the hoof, the extent of the damage and the treatment options available. Additional x-rays may be required to monitor treatment

This x-ray shows a healthy hoof – note the angle of the last bone (the pedal bone) within the hoof capsule



This x-ray shows signs of advanced laminitis where the bones have sunk within the hoof capsule – note the lower position of the bones and the dark shadow between the pedal bone and the hoof wall, indicating severe separation of the structures



- Therapeutic trimming and/or shoeing to relieve pressure on the toe, prevent further damage and realign the hoof
- Box rest to minimise movement and prevent additional damage, with deep bedding to relieve pressure and provide support
- Changes in diet to ensure the horse maintains the right weight and, where relevant, to help control any underlying conditions
- Dressings for abscesses and infections caused by damage to the hoof
- Daily monitoring of feet and digital pulse
- Changes to exercise in order to prevent further damage to the foot or to control weight
- Regular attention from both the vet and farrier

This list is not exhaustive so other options may be suggested by your vet and farrier. Even if your horse has never had laminitis, these specialists can offer advice on steps you can take to prevent it occurring.

What is the chance of recovery?

Complete recovery from acute laminitis is possible. It is most likely when veterinary attention is received rapidly after signs develop, usually accompanied by specialist farriery.

However, if hoof damage occurs it may lead to ongoing problems. Previously affected horses must be monitored closely and managed vigilantly to prevent recurrences. Remember that laminitis is an extremely painful condition and any repeat attacks must be treated as an emergency, just as the first bout was.

For horses experiencing repeated episodes despite treatment and appropriate management, it may be necessary to consider their quality of life. Your vet can discuss this with you but in cases where management is not proving effective, it may be kinder to have the horse put down than to allow it to suffer repeated painful laminitic attacks.



Laminitis: the future

Whilst laminitis is sadly still an extremely common cause of pain and lameness in horses, the good news is that in many cases it can be prevented - by following the advice outlined in this leaflet and speaking with your vet and farrier. With ongoing research it is hoped that we will understand more about the factors that predispose a horse to laminitis so that even more effective preventative measures can be taken and more horses can be spared the suffering caused by this debilitating condition.

Where can I find out more?

Speak to your vet and farrier who will be able to offer advice specific to your situation.

Visit www.worldhorsewelfare.org/laminitis where you will find some useful videos.

Call our advice line on 01953 497238.

Visit www.careaboutlaminitis.org.uk to find out about 'CARE about Laminitis' - a World Horse Welfare-funded research project at the Animal Health Trust that aims to discover risk factors and provide clear and logical guidance to help avoid the disease.



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