



What Is Laminitis And How Can You Recognise It?

Laminitis is a severe inflammation of the sensitive laminae of the foot. The sensitive laminae exist to support the pedal bone inside the hoof. When laminitis occurs, some of the laminae die off, which results in an unstable foot. The pedal bone may then rotate within the foot, or in more severe cases the pedal bone may sink within the foot. Either way, your horse or pony will be suffering severe pain in the toe region of the foot. Laminitis is usually recognised by pounding digital pulses (throbbing), often hot feet, and a typical stance (legs outstretched). Most frequently, laminitis will occur in both front feet, however, it can occur in just one foot, as well as in all four feet or just both hinds. The horse will try to assume a position of comfort by avoiding weight-bearing on the toe region. The most severe pain can be seen when the pony is asked to turn, and almost invariably the horse will be rocking back, thus throwing the weight in the heel of the foot, or onto the hind legs if only the fronts are affected.

The truth about the causes

1. Obesity. Overweight horses are much more likely to develop the condition than their thin counterparts. There is some evidence that hormones, produced in the fat deposits of horses, act in a similar way on the body, as described below. These horses often develop insulin problems for life, and Metabolic Disease is the term used to describe this hormonal disturbance (see 8).

2. Overeating. Foods rich in sugars or rapidly fermentable feeds can release the toxins responsible for laminitis. The most common feeds that fall into this category are cereals, coarse mixes, and rapidly growing or fertilised grass.

3. Toxaemia. Any illness which involves toxaemia. This may be a bacterial infection or following the ingestion of plant or chemical toxins. A womb infection, after shedding the afterbirth too slowly, is a common cause of laminitis in mares after giving birth.

4. Cushing's Disease. This is a condition which follows an abnormality affecting the pituitary gland in the horse's brain. The tumour results in over-production of certain hormones that will have an effect on many body parts. As explained above, a transient form of this disease may occur in obese horses (Metabolic Disease). In severe cases, it results in the horse failing to shed its winter coat.

The coat becomes long and matted and, eventually curly. The horse drinks, urinates and eats increased amounts, while sweating excessively and losing weight. Many horses with Cushing's disease will suffer laminitis. The disease's advanced signs are easy to recognise, but many early sufferers are not as easily identified.

5. Poor foot care. Regular shoeing or trimming is vital to keep your horse healthy. A common predisposing factor in developing laminitis is infrequent shoeing, resulting in poor hoof quality and long toes. This could result in mechanical stresses in the toe part of the foot, where laminitis causes inflammation of the bond between foot and pedal bone.

6. Weight-bearing laminitis. When the horse is severely lame on one leg and has to put all his weight on the contra-lateral limb, founder in the weight-bearing limb may occur. This is particularly common in hind feet.

7. Concussive laminitis (road founder). When horses are subjected to fast or prolonged work on hard surfaces they may develop laminitis as a result of trauma to the laminae, particularly if their horn quality is poor.

8. Hormonal problems Other hormonal problems. Animals who are "good doers", may have an under-active thyroid gland, or have an abnormal peripheral cortisol enzyme system. The latter condition, recently described, has been called obesity-related laminitis or Metabolic Disease. A genetic predisposition for this disease is likely. Others develop laminitis when they are in season.

9. Stress. Worming, vaccination, travelling or separation from a regular companion can trigger an attack of laminitis.

10. Drug induced laminitis. Although some wormers at very high dose rates can precipitate laminitis, the most common drugs that cause laminitis are corticosteroids. It is certainly preferable to use short-acting steroids when treating horses, as they can be stopped if any untoward signs develop. The most severe and unresponsive cases of laminitis the practice have dealt with have been in animals that received long-acting injections of these drugs. On the other hand, steroids can be life-savers, and should be employed if necessary

Commonly held misconceptions about Laminitis

- 1. Drinking.** Drinking cold water after exercise may cause colic but not laminitis.

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2. Allergies. There is little evidence that hypersensitivities are causally related to the development of laminitis. Treatment of allergies with steroids can induce laminitis. For this reason, House & Jackson do not advocate the use of long-acting injections for the treatment of allergies such as Sweet Itch. Instead, the use of oral treatments (Prednisolone) is safer, and can be withdrawn if laminitis develops.

3. Pregnancy. Pregnant animals can develop laminitis just as easily as barren animals.

4. Oestrus. There may be a relationship between oestrus and laminitis in some animals, however, these cases are rare, and changes in diet and management may prevent this.

6. Supplements. Many supplements and herbal mixes are marketed by shrewd companies, with claims that they can reduce the occurrence of laminitis. These claims are, in most cases, outrageous and unfounded and the only effect is to make horse owners so poor that they cannot afford to feed their animals excessively. Vitamins and minerals may need to be added to your horse's diet if you are trying to reduce its weight.

The Do's and Don'ts of Laminitis

Do's

1. Do call House & Jackson as soon as you suspect your horse has laminitis. Early medical intervention can prevent longer-term serious damage. The vet is likely to prescribe painkilling drugs and drugs that will help the blood supply in the foot.

2. Do bring your horse into a stable, on a nice thick woodchip bed, as soon as signs of laminitis are noted. The horse requires absolute rest to prevent rotation and sinking of the pedal bone.

3. Do ensure that your horse is put on a diet of mainly fibre foods. If he is overweight, make sure that you reduce his weight slowly. Many native ponies will not lose weight unless they are taken off straw bedding. The House & Jackson equine nurses are available for dietary advice, and it is free! The practice scales are there for all clients to use. Why not ring reception to book one of these free services.

4. Do provide your horse with frog support. The sore part of the foot is the toe, and by applying gentle pressure to the frog the horse is made more comfortable and further damage to the foot can be prevented. Frog support can be achieved by using bandages under the frog, a deep woodchip bed or Styrofoam pads under the heel area of the foot. Our vets can make custom-made supports to give your horse the best chance of recovery.

5. Do have your horse or pony trimmed or shod regularly, because overgrown feet can be a serious problem if laminitis develops. When the horse has developed laminitis, be mindful not to have the shoes pulled or have the horse re-shod when it is still very sore.

6. Do ask our vet to check your horse if he develops a long curly coat, which he has difficulty shedding. This may be a sign of Cushing's disease, which can predispose the horse to developing laminitis.

7. Do make sure that, if your horse is still uncomfortable seven to ten days after developing laminitis, you have his feet x-rayed to assess the extent of the damage to the foot, and to allow further treatment to continue. Further treatment may consist of pads that we can apply to the feet, in order to apply pressure to the areas of the foot that require it. It may be necessary for the horse to be shod under veterinary supervision to avoid long-term damage.

8. Do make sure you do not just present your farrier with an old set of x-rays. Recent x-rays, sometimes x-rays after trimming, and close co-operation and discussion between the practice and the farrier will ensure the best results.

9. Do make sure that your horse's history is fully related to the attending vet. Underlying conditions, such as Cushing's disease, infections etc., will have to be treated to give your horse the chance to have the most successful outcome.

10. Do try to keep the doses of painkillers that your horse is on to a minimum. As soon as the horse starts looking better, painkillers should be reduced, so that the horse does not move around more because it is made to feel better than it actually is.

11. Do be aware that many of the herbal and nutritional supplements that are marketed as suitable for treating and preventing laminitis are rarely proven and should definitely not replace good management and conventional drugs. Many of them are good money-spinners for the companies producing them, but can be dangerous if relied upon.

Don'ts

1. Do not put icepacks around the feet, or cold hose the feet if your horse is suspected to have laminitis. The cold will result in a further shrinking of the blood vessels, less blood supply to the foot and more long-term damage. If anything, warm soaks of the foot may be more beneficial.

2. Do not give your horse any exercise until it is fully recovered from an episode of laminitis. It is usually necessary to rest your horse from two to four weeks after it has become completely sound to avoid any serious damage in the foot. Returning the horse to work early may seem to give improvement, but is likely to do more harm than good.

3. Do not be fooled! A horse with laminitis starts moving more freely after it has been walked out for a few minutes. However, a horse may look more comfortable for now, but further exercise will result in more pain the next day.

4. Do not remove your horse's shoes in the early stages if it has developed laminitis. The shoe gives the horse's foot protection and avoids more pain than necessary. If the feet are terribly overgrown or the shoes do not fit, our vet may decide to remove the shoes because they are not providing the necessary support.

5. Do not let your horse become overweight at any time,

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because being overweight is one of the major factors in horses developing laminitis. You may need to take him off straw bedding, or turn him out with a muzzle.

6. Do not ask your farrier to fit specialised shoes, such as heartbar shoes, without x-rays. Because the pedal bone can be displaced in cases of laminitis, it is impossible for your farrier to apply the pressure in the right area. If pressure is applied in the wrong place, this can result in crushing of the tip of the pedal bone, or serious damage to the flexor tendon, which attaches to the bottom of the pedal bone.

7. Do not anticipate that your horse should be better within days of developing laminitis. Although many cases of laminitis do improve tremendously over the first couple of days, particularly if the right medication has been given early on, many cases of laminitis will require long-term treatment and remedial shoeing to allow the foot to return to some normality.

8. Do not starve your horse when it has developed laminitis, total starvation can cause severe liver problems particularly in obese ponies. Instead, reduce the weight of your horse slowly and gradually by mainly providing fibre foods. A good mineral balance must be provided to horses with laminitis. If small quantities of food are being fed, it may be necessary to supplement the horse with a small amount of vitamin/mineral mixture.

9. Do not get your horse up too frequently if it is lying down with foot pain. There is good evidence that horses who rest properly (and lie down a lot) recover better from episodes of laminitis.

10. Do not allow your horse to eat large quantities of readily fermentable feed in a short space of time. Fermentation in the large intestine of the horse, and release of toxin from bacteria in the large intestine is probably the most common cause of laminitis. It is, therefore, very important that your horse is fed by the trickle feed method. This means that turnout for a couple of hours on lush pasture could be far more dangerous than turnout with a muzzle for a whole day on the same pasture.

11. Do not withdraw the drugs that your horse is on to help it with the blood supply in the foot, any earlier than your vet suggests. These drugs are an important part of the healing process, and withdrawing them too soon may lead to compromised healing.

Considerations for the laminitic

Laminitis is a serious condition that causes a lot of suffering to horses and ponies. Prevention is the most vital strategy to avoid this, but sadly it is not always successful. The most difficult part of laminitis treatment is the prediction of whether or not a horse will recover, and if so over what space of time. X-rays are vital instruments to make some of these predictions. Unfortunately, the success of treatment cannot be guaranteed at the outset. Owners have to ask themselves at every step of the way during laminitis treatment whether they are doing the right thing, financially and ethically. Euthanasia should be considered if treatment is expected to be protracted or unfeasible.

Modern treatment and shoeing methods have allowed House & Jackson to successfully treat some laminitics that would have been considered hopeless only a few years ago. It is important that owners understand the commitment needed to embark on some of these treatment routes. We are privileged to work with some of the most talented farriers to allow us to deliver this fine-tuned therapy. Shoeing for laminitics aims to achieve two goals

1. To support the pedal bone and prevent further damage.
2. To make the horse more comfortable.

It is unrealistic to expect to achieve this second goal of comfort in every case within a few shoeings.

Luckily, many cases of laminitis will make a full recovery without extreme expense. It is important to consider the future riding career of any pony with severe laminitis. Retirement in comfort may sometimes be the only realistic goal of treatment in severe cases.