

Laminitis
ALTERNATIVE VETERINARY MEDICINE CENTRE

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LAMINITIS

Laminitis is an ever-present and very worrying threat to native ponies in Britain. It can also (more rarely) affect larger horses, under certain circumstances. The condition can be very distressing and it can prove very refractory to treatment by conventional medical means. In a recent court case, I heard a veterinary expert state that only one in thirty cases recover (thankfully, natural medicine can expect **much better** than this). Apart from the misery of disease and pain, which may prove difficult to control by the use of conventional pain-killing and anti-inflammatory drugs, there is the added distress caused by long-term grass deprivation and 'imprisonment' in enforced stabling and by possible chronic foot changes, such as rotation of the pedal bone.

It is fortunate, for those horses that have been treated in an 'alternative' way, that natural medicine (particularly [homeopathy](#), [acupuncture](#) and [herbal medicine](#)) can often bring rapid and lasting relief, **through a process of healing**. Stimulation of healing processes is the business of such therapies, rather than attempting to suppress pain (as in the case of anti-inflammatory drug treatments). Results can be outstanding and remarkably rapid, even in those cases which have proved refractory to conventional efforts, for many months. Two such patients, among others, brightened my life, in 2006. *Red* in Somerset and *Squirrel* in Berkshire (see [Case Histories](#)) are delightful patients who have enjoyed the fruits of an integrated natural medicine and dietary programme, with a rapid return to riding, where all hope had previously long been lost and whose human companions have permitted me to use their cases, for illustrative purposes.

Of course, it is necessary to have a veterinary surgeon to use these therapies in animals and it is a cause of deep regret that vets who use and understand these therapies are rare. Rarer still are those who can properly integrate a combined programme, using all three therapies together in a synergistic manner and who work regularly with horses.

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Affected animals

In practice, the condition of laminitis is mostly seen in native pony breeds such as Welsh and Shetland. It is not rare among donkeys. We do exceptionally see cases in all types of horses, for some of the reasons listed below.

The signs (symptoms)

A horse that is pre-disposed to laminitis and is in danger of an attack may have a thickened crest.

The first signs of laminitis are thoughtful and stiff movement, sometimes considered just to be an 'off day', before the more obvious signs set in. However, the signs are exaggerated on concrete or other hard surface and on tight turns.

In a more advanced case, the pony will tend to shift weight from one foot to another, lean back to relieve weight on the front feet, bring the back feet forward for the same reason, have great difficulty in turning and, in even more severe cases, refuse to move.

Lying down is an obvious (and intelligent) way for a horse or pony to relieve pain or discomfort in the feet and is, therefore, a poor indicator of severity.

A 'victim' who voluntarily moves about or even breaks into a trot is not in extreme pain. Even for those who are very unwilling to move, some gentle encouragement to move is important, for circulation reasons and to keep the musculo-skeletal system healthy.

The disease process

The basic local pathology is a sudden disruption of blood vessel function within the sensitive laminae of the feet. These are the structures which generate the horn of the hoof and which 'bind' the hoof capsule structure to the foot.

Triggers

The disease occurs in response to certain 'trigger' factors. Understanding these possible aetiological factors helps us to control or to prevent the disease and helps in choosing appropriate treatment.

1. Sudden change in the bacterial population and activity in the large bowel.
2. Unsuitable diet
3. Trauma - bruising or repetitive trauma

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4. Trauma - penetrating injury
5. Toxins ingested
6. Indirect effect of herbicides
7. Artificial nitrogenous fertiliser application (direct and indirect effects)
8. Heat
9. Frost (direct and indirect effects)
10. Shock / Stress
11. Fever
12. Toxaemia / Septicaemia
13. Anaphylaxis
14. Vaccination
15. Steroid / Cortisone administration
16. Disease, such as Cushings Syndrome

Examples and illustration of each of the above:

1) Sudden dietary changes will cause changes in the proportion of different bacterial populations in the hind gut of the horse or pony. If these changes involve the multiplication of the wrong types of bacteria or are too extreme and too sudden, then there can be a release of endotoxins, which can trigger the damaging effect in the blood vessels of the feet.

2) Examples of unsuitable diets, encouraging incorrect bowel fermentation and therefore higher risk, are:

- Diets containing readily-available sugar, a short-chain carbohydrate that encourages the wrong bacteria in a horse's, donkey's or pony's gut. Molasses or refined sugar, in any proportion in the feed, constitutes a severe risk. A serious risk can also be posed by 'stressed' (overgrazed) grassland and lush spring grass, both of which contain a high proportion of non-structural carbohydrate (NSC), which tends to accumulate in growing grass. The feeding of solvent-extracted oils is also to be discouraged.
- The high-quality of lowland or 'improved grassland' is a risk in itself, to many native ponies, **especially when it has been fertilised with artificial nitrogen compounds**. This is especially true, and a danger to **any** equine species, if the fertiliser has been recent.
- Too much cereal is a danger. It is more natural to feed no cereal at all.
- Hay or straw, which can often be overlooked in the aetiology, are a risk if there is a high nitrogen content. Late hay, made in July, probably

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represents a lesser risk, provided that it has been grown without artificial nitrogen fertiliser.

- Haylage is often made from just the type of grass that is a real risk to horses and ponies. It is usually grown with artificial nitrogen application. It also encourages different bacteria in the bowel, as a result of its partial fermentation.

3) Trauma from galloping on a 'metalled' surface, trotting on a road for a considerable time or trauma from a wrenched shoe, can give rise to the problem. Sudden changes in exercise pattern may also lead to the problem.

4) Penetrating injury, as from a misdirected nail or from treading on a flint or other sharp object or from damaging the horn and exposing the sensitive area can all act as triggers.

5) The ingestion of plant or chemical poisons can cause the bacterial changes described above or can trigger the local response directly.

6) It appears from a collection of observations, that the ingestion of plant material, which has been altered by exposure to herbicides (even if that herbicide is declared 'livestock safe' in itself), may have constituted a problem to several patients in my career. Horses and ponies have contracted laminitis, coincidentally with the spray treatment. One particular example is nettles sprayed intentionally or accidentally with 'glyphosate', which has been the chemical cropping up most often in this circumstantial context, and which is described as 'livestock safe' on the label.

7) The recent application of artificial nitrogenous fertiliser has given rise to some of the most distressing and difficult cases I have seen, in all equines, from large horses to small ponies and donkeys. It may be accompanied by very sudden disruption of the structures of the foot, with rapid 'sinking' of the pedal bone (see 'founder' below).

8) Overheating of the laminae has also caused trouble. I recall several patients (predominantly of Arab lineage, which may or may not be a coincidence) for whom over-enthusiastic application of hot shoeing techniques has caused a severe problem.

9) We have seen cases which have started in deep snow or in hard frost. The ingestion of frosted grass can constitute a risk in itself, but circumstances in many cases suggest that 'frostbite' may also be an aetiological factor.

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10-14) These five categories can all work in a similar way, by interrupting and disturbing the normal homeostatic, digestive and immune balance in the body. It is worth noting that toxæmia or septicæmia can even arise from undue retention of the afterbirth, in a brood mare.

15) The case of steroid-induced laminitis appears to be a separate and well-documented situation. The iatrogenic creation of laminitis in this way, in all classes of horses, is sadly not that uncommon. The risk attached to giving this type of drug to an equine means that its use should be very much a last resort and is not necessary when using natural medicine.

16) Cushings Syndrome results in high levels of circulating corticosteroids, which can predispose to or even cause laminitis, in affected animals. Whether this is the actual mechanism, it is well-established that cases of Cushings Disease are very prone to chronic laminitis.

Treatment

Conventional medicine has few options. Acepromazine is often used, to dilate blood vessels in the feet but its use is contentious, even in conventional circles. In my opinion, anti-inflammatory drugs are not very effective, in many cases. This opinion is based on the fact that most of the cases that I see have already been given these drugs, often without meaningful relief (of course, I don't see the successes!). The drugs are potentially toxic and it appears that they may possibly lead to a more refractory condition, sometimes with necrotic or septic complications in the hoof. Their administration usually also requires the feeding of some form of 'concentrates', in order to encourage ingestion of the drug, which may be unpalatable. This is undesirable from a dietary point of view. There may also be a downside to the use of these drugs, in that they are anti-inflammatory so can delay healing (inflammatory processes are part of the healing response). For this reason, many propose that they should not be used beyond the very short term, in order to bring about relief from the worst pain, where no alternative is promptly available.

Homeopathic treatment, on the other hand, appears to be enormously successful in most cases, causes no complications and is simple to dose (without having to give extra feed). It can also act with surprising speed, although some cases can be slow. The choice of precise remedy, for each individual case, can present a challenge, for all but the most experienced veterinary homeopaths but the results of a successful prescription repay the effort. The prescription must be suited to the precise 'constitutional nature' of the patient, to the way that symptoms are shown and to the aetiological factors present at the time, in that individual case. Happily, homeopathy can also provide useful benefit in those

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cases in which Cushings Syndrome is present, since it appears to be able to help to mitigate and control that serious disorder and can support foot health.

Herbs can be of enormous value but may also require supplementary feeding, to encourage ingestion. However, non-cereal, non-sugar feeds can be designed. The prescribing of herbal medicine for horses is also legally restricted to vets.

Acupuncture can have a valuable part to play in pain control and in helping the healing of the acute phase of the disease, depending upon the patient. It is, sadly, a more expensive option, as it tends to require several veterinary visits, for best effect. In my experience, its value is greatly reduced if it is used without properly-integrated concurrent internal medication, with herbs or and/or homeopathy.

Chronic laminitis

It is commonly believed that, once chronic and deforming changes have taken place in the foot, permanent disability and deformity is inevitable. This is happily untrue, in the vast majority of cases. Proper, enlightened foot trimming, long-term homeopathic medication and correct nutrition will create a 'healing spiral' (the reverse of the 'disease spiral' which leads to such deformity), which can often return the foot to normal or near-normal, over a period. The problem to overcome is usually the very negative factor of 'acceptance' of and resignation to a 'bad situation'. It is important to be positive and to visualise the restoration of a normal hoof, or else negative conviction and resignation will lead to half-hearted efforts and a lost cause. We have found that even dropped soles and rotated pedal bones can progress towards normality, given the correct attention, **without recourse to front wall resection or other drastic surgery**. While it would be difficult to describe the end result as 'normal', the ponies are often able to be ridden and worked in a near-normal way.

The tendency to laminitis is also believed to become more pronounced, after the disease has struck for the first time. Again, with proper attention to all the above details, we have found this not to be the case. We appear to see a **lessening tendency** over successive years, under consistent homeopathic care, rather than increasing susceptibility.

Homeopathic medicines

Medicines such as: *Aconitum*, *Agaricus*, *Arnica*, *Belladonna*, *Calc. fluor.*, *Crotalus*, *Fluoric acid*, *Ginkgo biloba*, *Graphites*, *Hypericum*, *Lachesis*, *Nitric acid*, *Nux vomica*, *Sabadilla*, *Sarsaparilla*, *Secale*, *Silica*, *Sulphur* and *Thuja*, have all played their part in previous successful cases, selected according to the individual patient's symptom picture, prevailing circumstance and structural

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changes. In proven susceptible ponies, some form of preventive homeopathic medication is probably necessary, for life, especially during the grass-growing seasons.

Herbal medicines

It is difficult to distinguish between herbs as an essential part of equine nutrition and herbs as medicines. No matter what the correct analysis may be, herbs can prove very helpful in controlling the pain of laminitis and in aiding foot structure. A wide variety of native herbs are beneficial, in the care of patients. In particular, as a first-aid pain-controlling measure, *willow bark* has proved very beneficial, even in quite low doses. However, this herb should not be given in conjunction with conventional non-steroidal anti-inflammatory drugs.

Diet

A [diet](#) free of refined or added sugars and cereals is vital. Restricted grass and hay intake are important, in the first instance, but an early return to some grass intake (with homeopathic medication to render this safe) is important, for digestive and mental health reasons. This also impacts on the exercise issue. However, the grass or hay **must not** have been fertilised with artificial nitrogen. At the **AVMC**, we feed limited grass (or hay) and 'straight' (unadulterated) foods, such as lucerne and cooked linseed. We totally avoid cereals and all manufactured feeds.

Founder

In the UK, the word founder is usually used to describe the chronic changes that occur in a hoof in which the pedal bone has rotated or, more usually, in which the pedal bone has dropped within the hoof capsule. In U.S. English, it appears to be virtually synonymous with the word 'laminitis'. Even these changes can be reversed to a large extent, in the majority of cases, with a carefully-integrated natural medicine programme and diligent, frequent hoof-trimming.

Prevention

Of course, in view of the tragic consequences of such a disease, [prevention](#) is a very important consideration and the duty of all owners of susceptible animals. In brief, prevention consists of avoiding the listed trigger factors, attending to a proper and species-suitable diet, maintaining a regular and sympathetic hoof-trimming programme and providing regular and consistent exercise. It also seems appropriate that the patient's back should be monitored and given [chiropractic manipulation](#) when necessary. All of this renders an attack of laminitis much less likely.

Summary

In contrast to the popularly-held belief that laminitis is an inevitable and virtually incurable condition of native ponies, this article shows that there are some serious misconceptions leading to this belief. It is not just the native pony that suffers laminitis nor is the disease as depressing a condition as one could be forgiven for believing, in current mythology. Proper holistic management and natural medicine can break the 'spell'. If the natural medicine intervention is early in the disease, before the more extreme chronic changes have set in, then the road is usually much easier.

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