LAMINITIS

*The **real** causes*

REDWINGS
HORSE SANCTUARY
Registered Charity
No.1068911

Incorporating Ada Cole
Memorial Stables

THREE THINGS YOU NEED TO KNOW ABOUT LAMINITIS

1

The pain of laminitis is similar to ripping off your toenail (now imagine that pain through your whole foot and trying to walk on it).

2

Laminitis is an emergency. ALWAYS call your vet if you suspect laminitis.

3

About 90% of laminitis cases are caused by either Equine Metabolic Syndrome or Equine Cushing's Disease.

WHAT IS LAMINITIS?

Myth: Laminitis only affects little fat ponies!

Fact: Laminitis can affect **any** horse.

Laminitis is an inflammation of sensitive tissues known as laminae in the hoof. These tissues provide support for the pedal bone within the horse's hoof. In turn, the laminae and the pedal bone together provide support for the whole weight of the horse. In a severe attack, fluid can drive the tissues apart, leaving the pedal bone with little support. The pedal bone can sink and rotate within the hoof and – in extreme cases – can penetrate the sole of the hoof.

Laminitis is more likely to affect the forelegs than the hind legs. However, in severe cases, all four legs may be affected.

Even just one episode of laminitis *that is not treated properly* can lead to permanent changes to the hoof. Your horse may never be able to be ridden again, or may need to be euthanased. This is why you must be aware of the signs of the disease and always call a vet if you suspect even just a mild episode.

Scientists in the horse world still do not *fully* understand laminitis. There is lots of research into the disease going on. Although this leaflet is based on the most up-to-date information it is recommended you keep an eye out for any new developments.

However, what we *do* know for definite is that laminitis causes extreme pain.

A healthy X-ray of a hoof.

An X-ray showing rotation of the pedal bone.

1. Pedal bone
2. Navicular bone
3. Short pastern
4. Long pastern

What causes laminitis?

Myth: A flush of fresh Spring grass is the most common cause of laminitis.

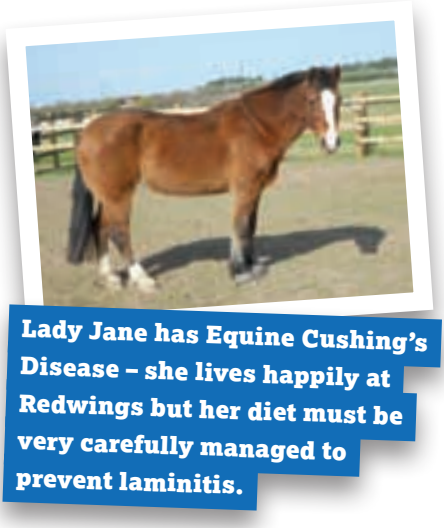
Fact: Up to 90% of laminitic horses have an underlying hormonal condition – either Equine Cushing's Disease or Equine Metabolic Syndrome. Spring grass is a trigger for laminitis in horses that already have these conditions.

Equine Cushing's Disease (also known as Pars Pituitary Intermedia Dysfunction or PPID) affects middle-aged or older horses and ponies. The symptoms of PPID are the result of too much cortisol (a hormone) in the body.

Signs of PPID are one or more of the following:

- A thick curly coat.
- Excessive drinking and urination.
- Laminitis (even just one episode can be a sign).
- Recurring infections.
- Abnormal fat distribution (a pot belly or fatty pads above the eyes).
- Sweating.
- A sleepy demeanour.

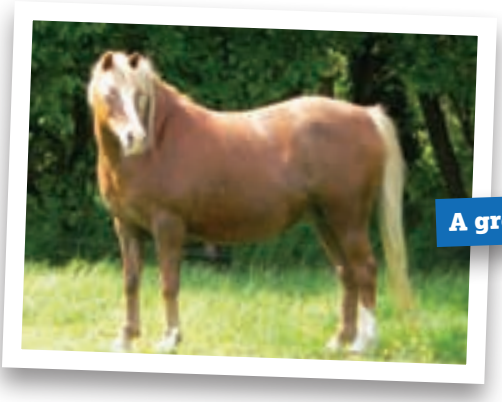
Please see our Equine Cushing's Disease information leaflet for more details.



Lady Jane has Equine Cushing's Disease – she lives happily at Redwings but her diet must be very carefully managed to prevent laminitis.

Equine Metabolic Syndrome is similar to Type 2 diabetes in humans. Scientists have found that fat cells actively produce hormones that can impair the actions of insulin. Insulin takes glucose from the bloodstream for use or storage in the cells.

Excessive fat cells can lead to a resistance to insulin which the body then compensates for by producing *more* insulin. This increase in circulating insulin is called hyperinsulinaemia. It is these changes in hormonal regulation that



A grossly overweight pony.

are thought to cause laminitis although the exact mechanisms are still not fully understood.

EMS affects horses that are obese. EMS is characterised by fatty deposits around the tail, shoulders and neck. These ponies are normally 'good do-ers' that have the 'ability to live on fresh air'! Native ponies are most at risk as they are efficient at storing fat during Spring and Summer, ready for harsh winters when food is less readily available. Today's lifestyles of plentiful food and rich grass leave them at risk of obesity.

Please see our Equine Metabolic Syndrome leaflet to read more.

Consult your vet if you think your horse has either of these conditions.

The other 10% of laminitis cases could be caused by:

- Concussion: trauma to the laminae in the foot, such as fast work on hard ground.
- Uneven weight bearing, due to lameness in the other leg.
- Endotoxaemia: endotoxins may be released into the bloodstream after an illness (such as colic or a retained placenta) or infection such as metritis (inflammation of the uterus) or pleuropneumonia (inflammation in the lungs). Endotoxins are toxins released into the body when bacterial cells in the body have been destroyed.
- Starch overload: an unauthorised trip to the feed room may end up in a case of laminitis! The body may find it hard to break down an overload of starch, which then ferments in the hind gut. This causes high levels of toxins to be released into the bloodstream, which in turn cause laminitis.
- Medicines: some medicines containing steroids may cause laminitis. You should be warned about this if steroids are prescribed for your horse, but if you are concerned please speak to your vet.
- Don't know! More often than not, a vet will know what has caused a case of laminitis, but some cases are just inexplicable.

WHAT ARE THE SIGNS?

Myth: Warm hooves are a sure sign of laminitis.

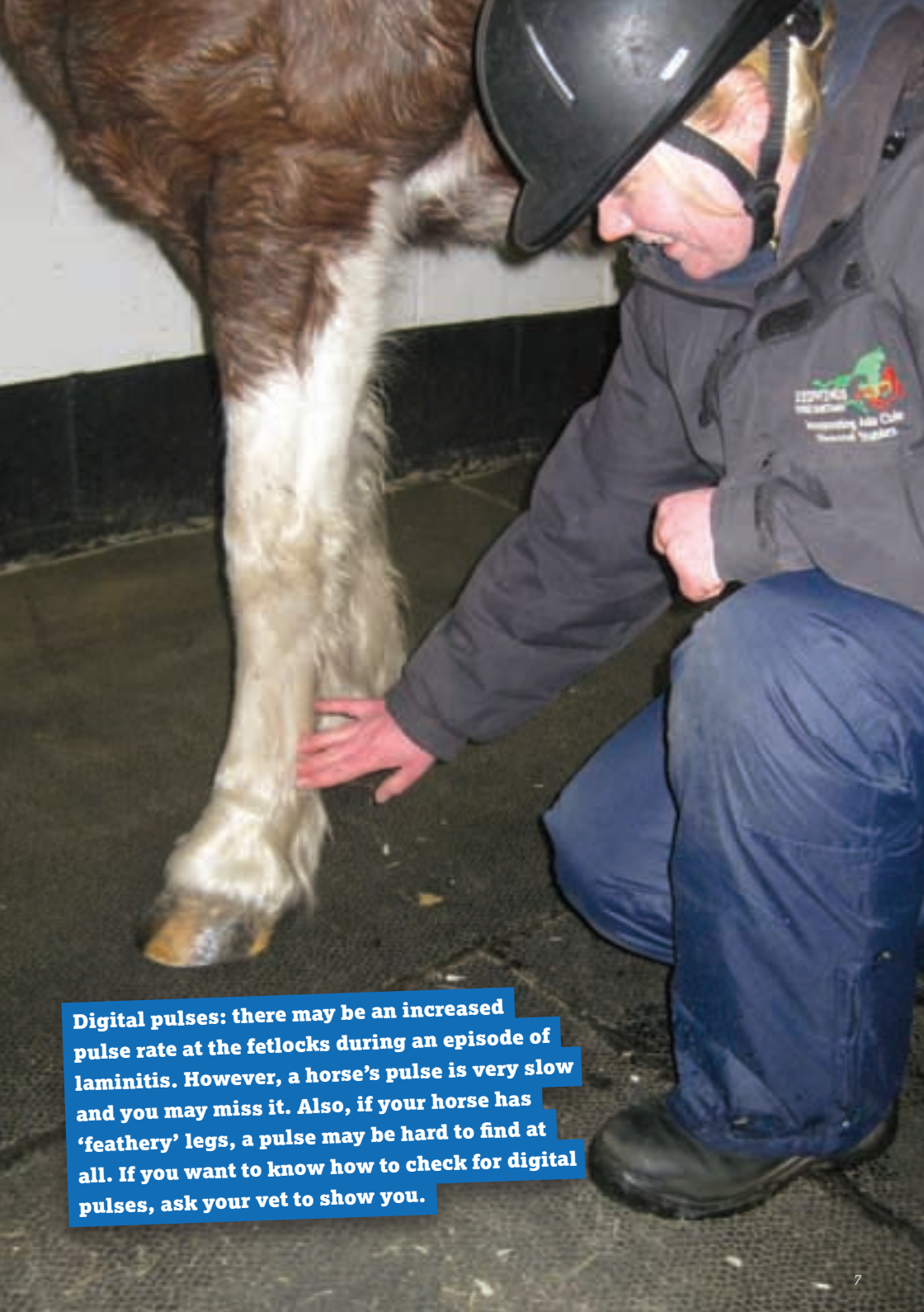
Fact: Hooves may be warm to the touch in a case of laminitis, but this is not always the case. Warm hooves are no longer thought of as a reliable sign of laminitis. A horse could have cold hooves but still be suffering from laminitis.

Warm hooves are NOT always a reliable sign of laminitis.

Signs of laminitis can be very subtle. Your horse could have **one or more** of the following:

- A slightly pottery gait.
- Taking shorter strides than normal.
- Walking 'carefully'.
- Walking 'heel before toe'.
- Reluctance to turn in a circle.
- Reluctance to walk forwards.
- Reluctance to bear weight on the affected hoof.
- Leaning back to take the weight off his front hooves.
- Laying down to take the weight off his hooves.
- Sweating.
- An increased respiratory rate. Make sure you know your horse's normal vital signs.

Know your horse's normal vital signs:
Temperature – 100–101°F (38°C)
Pulse – 32–42 beats per minute
Respiration rate – 8–14 breaths per minute
These vary between horses, so make a note of your horse's vital signs over the course of a week and keep a record.



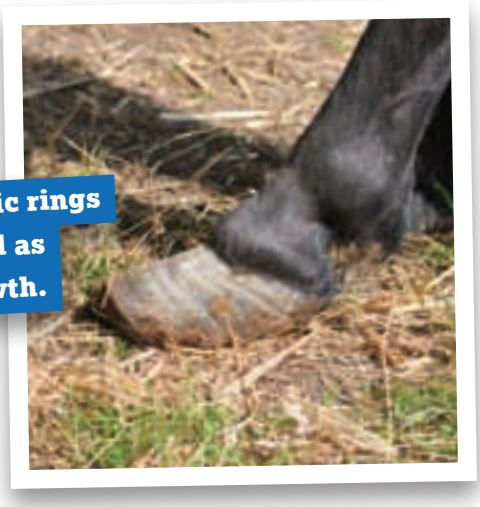
Digital pulses: there may be an increased pulse rate at the fetlocks during an episode of laminitis. However, a horse's pulse is very slow and you may miss it. Also, if your horse has 'feathery' legs, a pulse may be hard to find at all. If you want to know how to check for digital pulses, ask your vet to show you.

Severe bruising to the sole.

Signs can be so subtle that episodes of laminitis could go unnoticed. This is very likely in horses with EMS. Horses that have had several episodes of low-grade laminitis will have one or more of the following:

- A pottery gait, which you may think is normal for your horse.
- Bruising around the white line of the hoof.
- Laminitic rings on the hoof (a sign of abnormal hoof growth). The rings are wider at the heel than the toe.
- A convex shaped sole. The sole will look like it is flat.
- Widening of the white line.

If you notice any of these signs, call your vet. An X-ray may be needed to determine the position of the pedal bone in the hoof. Your vet and farrier will need to work together to give your horse appropriate foot care.



You can see laminitic rings on this hoof, as well as abnormal hoof growth.

TREATMENT AND PREVENTION

Myth: A horse with laminitis will get better with a few days' box rest. I don't need to call the vet – it's too expensive.

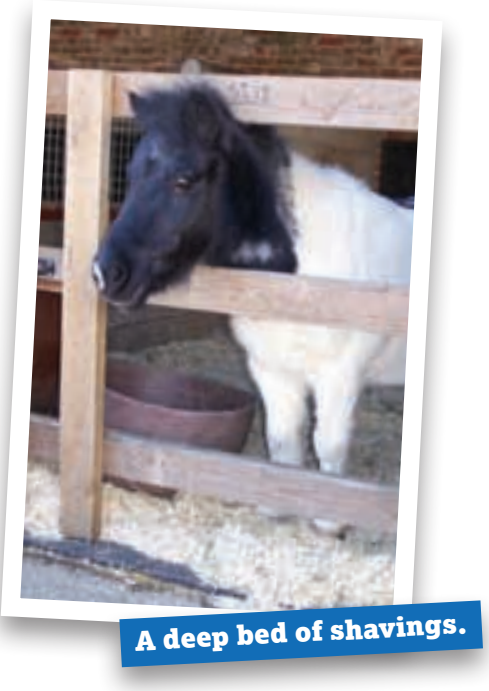
Fact: If you suspect even the mildest case of laminitis, you should consult your vet as soon as possible. It will cost you more in the long run if you do not get a vet to treat the disease promptly, and diagnose any underlying conditions such as Equine Cushing's Disease or Equine Metabolic Syndrome. Without veterinary attention, laminitis may change your horse's hoof permanently and he may never be able to walk pain-free or be ridden again.

What to do before the vet arrives

On the phone, tell the vet that you suspect laminitis and discuss the symptoms that you have spotted.

While waiting for the vet to arrive, you should immediately restrict your horse's movement. If he is willing to walk a short distance, move him to the nearest shelter or stable. If he cannot walk, cordon off the area where he is standing.

Give him a deep bed of wood shavings. Make sure the whole area – whether a stable, shelter, or cordoned off area of the paddock – is completely covered with bedding. Do not bed on straw because your horse may eat it! Wood shavings will provide some pain relief and support for the sole, and may encourage your horse to lie down.



A deep bed of shavings.

You must keep your horse on box rest for as long as your vet suggests.

When the vet arrives and what to do afterwards

- ***Myth:*** Walking a horse with laminitis every day will help it to get better.
- ***Fact:*** Walking a horse with laminitis **will** cause more damage to the hoof.

Your vet will assess the pain and severity of the laminitis your horse has and may provide pain relief and sole support.

Your vet may also advise box rest (movement restriction in a stable) for **several months**. It is really, really, really important that you keep your horse on box rest for as long as your vet has said. You can do more damage to the hoof by allowing the horse to move around. **Do not** exercise him under any circumstances. Even a short walk could cause movement of the pedal bone within the hoof.

Keep your horse mentally stimulated by investing in some stable toys.

If the horse does not improve, X-rays could be necessary. X-rays will show the position of the pedal bone in the hoof. Permanent changes to the hoof will require regular remedial farriery.

Your vet may test for Equine Cushing's Disease or Equine Metabolic Syndrome, and will also talk to you about diet modification, if it is felt that obesity is a factor in causing the laminitic episode.

REMEMBER: If there is ANYTHING you are unsure of, please ask your vet! There is no such thing as a stupid question when it involves your horse's welfare.

Prevention is better than cure!

Although you cannot prevent or cure Equine Cushing's Disease, the disease can be managed through extra care and medication. Horses with Equine Cushing's Disease can live a happy and fulfilling life. However, you **can** most definitely prevent Equine Metabolic Syndrome!

Preventing EMS requires a change for life. This means strict weight management. – i.e. fewer calories and more exercise! Although it may be hard to implement these changes at first, you will be doing your horse (and yourself) a huge, huge, huge favour.

Please read our Equine Metabolic Syndrome information leaflet for more detail on preventing EMS.

Strict weight management will prevent EMS.

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If you need more information, the Redwings welfare team would be happy to help. Please call us on 01508 481008 or email us at welfare@redwings.co.uk

Redwings Horse Sanctuary was established in 1984 and has grown to become the largest horse sanctuary in the UK, working to save horses, ponies, donkeys and mules whose future would otherwise be bleak. Its work has three themes: rescue and rehabilitation, specialist sanctuary care and prevention through education. The sanctuary currently provides more than 1250 horses, ponies, donkeys and mules with specialist sanctuary care and has 500 horses out on loan in Guardian homes.

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