SPRING EDITION 2013

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Equine MATTERS

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Inside this issue:

pony pages
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xL equine
Excellence in Practice

Practice Focus

In each issue of **Equine Matters** we feature a brief insight into a selection of the XLVets Equine Practices. Featured in this issue are Minster, Cliffe and Thrums.

THRUMS VETERINARY GROUP

Kirriemuir, Scotland

Thrums Veterinary Group has been in existence for over sixty years. The main practice is based in Kirriemuir, close to the scenic Angus Glens in North East Scotland, with branches in nearby Forfar and Blairgowrie. Our ten dedicated vets care for equine, farm and companion animals. We provide our own 24 hour emergency cover and firmly believe that this is a very important part of our overall service.

We are a first opinion practice, our equine patients ranging from children's ponies to competition horses. Our equine team offers a wide range of services from routine vaccinations and dentistry, to lameness investigations and pre-purchase exams. We offer digital radiography, ultrasound and video endoscopy. Our aim is to provide a first class service to our clients and their horses, offering prompt, professional care and advice, whilst still retaining a personal touch.

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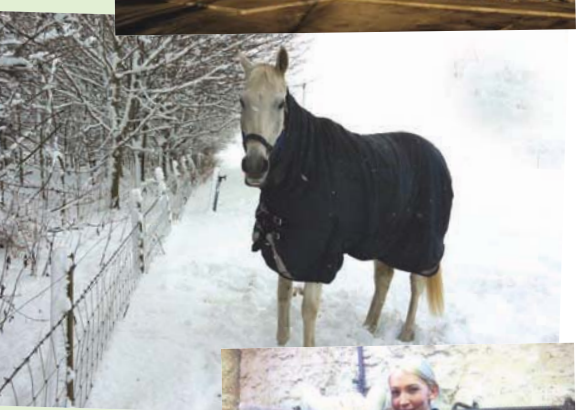

EQUINE Minster VETERINARY CLINIC

York, North Yorkshire

Minster Equine Veterinary Clinic is a specialist equine practice with a superb reputation providing quality professional care for horses in numerous equestrian disciplines. We are a highly experienced and qualified ten-vet team holding six RCVS certificates in a variety of disciplines, working from three sites across Yorkshire. We have a regular visiting consultant surgeon with over 30 years experience.

Our York clinic boasts excellent surgical and medical facilities including 14 stables and an in-house CEMO accredited laboratory. Our branch practices are primarily ambulatory providing services such as digital radiography, ultrasonography, static and overground endoscopy primarily to racing thoroughbred clients but also those from other equestrian sports. The Minster Equine Clinic provides veterinary cover to the York Racecourse, the Great Yorkshire Show, 3* British Eventing competitions and a variety of Point to Point meetings and Hunter Trials in North Yorkshire.

CLIFFE EQUINE

Lewes, East Sussex

Our six dedicated equine vets provide high quality care to horses throughout East and much of West Sussex. Our modern, purpose-built clinic has a large operating theatre for surgery, including orthopaedic, colic and laser surgery; hospitalisation facilities and a full range of diagnostic equipment, including digital radiography. We are well equipped to investigate poor performance and carry out lameness assessments. Cliffe Equine also offers a complete stud medicine service and is a BEVA registered practice for artificial insemination (AI) for fresh, chilled and frozen semen.

The Practice has two qualified Equine Dental Technicians (one vet and one nurse) who carry out routine and more advanced dental procedures. If required, we can sedate your horse to enable any work to be carried out safely and to an excellent standard.

We offer a 24-hour referral service, particularly for orthopaedic and medical problems, with vets who have achieved a further qualification in these fields.

Visit **www.cliffeequine.co.uk** or join the Cliffe Equine Facebook page.

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XLVets is a novel and exciting initiative conceived from within the veterinary profession. We are all independently owned, progressive veterinary practices located throughout the United Kingdom committed to working together for the benefit of our clients.

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THE EDITOR

Welcome to the 'Spring 2013' edition of Equine Matters...

...produced by XLVets Equine practices.

In preparation for the 2013 season we focus on poor performance; how it can affect horses and the diagnostic challenges of this complex condition, including three real life case examples.

In this issue the first in the 'Peak Performance' series asks the experts for tips for top performance in endurance riding.

We also feature the views of some member vets on the threat of infectious disease to the UK horse population.

On behalf of XLVets Equine I would like to wish you all a happy and healthy 2013.

Liz Mitchell MA VetMB CertEP MRCVS
Scott Mitchell Associates

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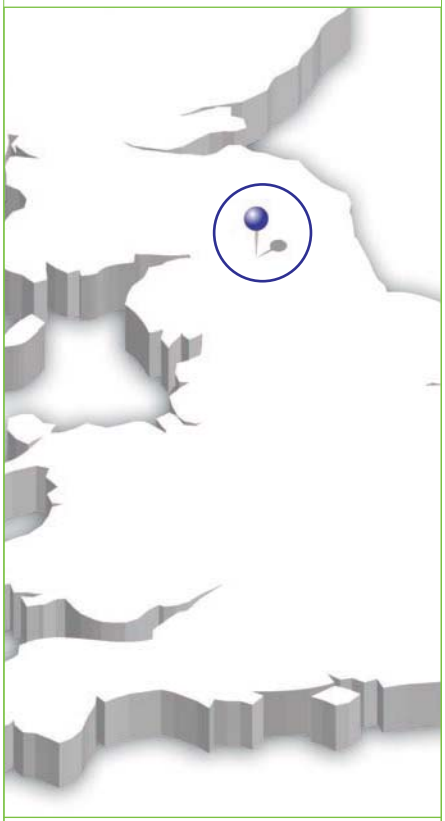
Colin Mitchell BVM&S CertEP MRCVS Scott Mitchell Associates

Poor performance

Scott Mitchell & Associates VETERINARY SURGEONS



Veterinary Surgeon	Colin Mitchell
XLVets Equine Practice	Scott Mitchell Associates

Whether racehorse, eventer, show-jumper or children's pony, at some point in most horses' careers, they are likely to be affected by poor performance. This can be defined as the performance of the horse not matching owner expectation or a reduction in performance compared with previous success and/or results.

The horse may show signs of disease obvious to the owner which might point towards a particular body system being the cause of the poor performance, for example - a cough and runny nose might suggest respiratory disease. However, most cases of poor performance presented to vets will require a detailed examination and possibly further investigations to identify the cause before a management/treatment plan can be implemented.

Before embarking upon any investigation, your vet may ask several questions to help identify if there is, in fact, a veterinary problem. Occasionally, the 'poor performance' may be due to:

1. **lack of ability of the horse, or, very occasionally, the rider;** for example the dressage horse unable to perform when ridden by the owner, but with a more experienced rider, the horse performs adequately;

2. **owner/horse mismatch;** for example, a new horse purchased for long distance endurance riding may not be suited to this discipline if he has never done any endurance riding or has a conformation unsuited to the sport;

3. **inadequate nutrition;** if the horse is overweight, or underweight, he may not be performing adequately;

4. **lack of fitness;** for example, a horse which is only walked for 30 minutes twice a week on roads, perhaps may not be ready to compete in a cross country/hunter trial event.

If a veterinary problem is suspected, your vet will examine the horse and then may suggest one or more of the following:

- blood tests
- watching the horse lunge/ridden
- inspect the saddle and tack
- endoscopy to examine the respiratory tract
- gastroscopy to examine the oesophagus and stomach
- scintigraphy (bone scan)

Dental examination of a pony to look for any abnormalities that may affect performance

The causes of poor performance can be categorised according to the body systems:

- musculo-skeletal - this is probably the most common reason for poor performance
- respiratory system - also a very common cause
- gastro-intestinal
- cardio-vascular
- systemic illness

Musculo-skeletal disease

Low-grade lameness, especially of the hind limbs can be slow in onset and surprisingly difficult for the owner/rider to detect. Similarly, fore-limb lameness affecting both limbs (bi-lateral) may not be as obvious as one may suspect, though both are a very common cause of poor performance.

Further investigation is warranted in a high proportion of cases and so nerve blocks/ joint anaesthesia, x-rays, ultrasound scans, scintigraphy and MRI scans may be necessary to localise and image the area causing the problem.

Back and pelvic problems can present to us as a reduction in performance, for example, sacro-iliac strains are common in horses which perform jumping disciplines, or have to move at speed. Back pain is often secondary to low grade lameness and so one must be aware that by treating the back pain we may not, in fact, be treating the cause.

Another musculo-skeletal reason for poor performance is recurrent exertional rhabdomyolysis (RER), also known as tying-up or azoturia. This is a milder form of the condition which many owners may have seen when a horse either at, or immediately after, exercise appears to be suddenly very stiff and in great pain. Diagnosis may be assisted by an exercise tolerance test - a blood sample is taken pre-exercise and again several hours after exercise. The muscle enzymes are measured in each sample and a comparison of the two may suggest RER.

Respiratory disease

This can be divided into upper and lower respiratory disease.

- Problems of the larynx and throat which cause restriction of the air flow into the lungs are examples of upper respiratory disease.
- Respiratory infections/inflammatory airway disease/recurrent airway obstruction (formerly known as COPD) are lung problems which are examples of lower respiratory disease.

Diseases of the upper and lower respiratory tract will require an examination with an endoscope to facilitate diagnosis. This may be done with or without sedation, or on a treadmill to simulate exercise. In the last few years, an endoscope has been developed which can be placed in the horse's nose and secured onto the tack allowing the horse to be exercised on a gallop at the same time as the images are viewed remotely.

Gastro-intestinal disease

Dental disease may lead to oral pain and poor performance. This would be most common in dressage horses. A thorough dental examination using a torch, mirror and sedation would identify most problems likely to cause pain. Further investigations may be necessary and can include x-rays of the head to image the teeth and identify fractures or infections.

Gastric ulceration is a common cause of poor performance. Signs may also include: irritable behaviour, variable appetite, poor condition, poor quality hair coat and mild recurrent colic.

Ulcers of the stomach can be viewed directly through a gastroscope - a relatively straightforward procedure carried out under mild sedation.

Cardio-vascular disease

Problems of the heart and circulation which cause poor performance are uncommon. If there is an abnormal heart rhythm, or a leaking heart valve, there may be insufficient blood flow at maximal exercise to maintain performance.

Heart murmurs are very common in horses, but heart disease causing poor performance is uncommon. This means that very few murmurs are clinically significant.

Many abnormalities of the heart can be identified during a clinical examination. Further investigation may involve blood tests, an ECG (at rest and/or at exercise) or an ultrasound scan of the heart.

Systemic illness

Viral infections, such as equine herpes virus (EHV) or bacterial infections such as Streptococcus equi 'strangles' may lead to systemic illness and poor performance. In the early stages of these infections, there may be other signs of the disease visible to the owner.

Conclusion

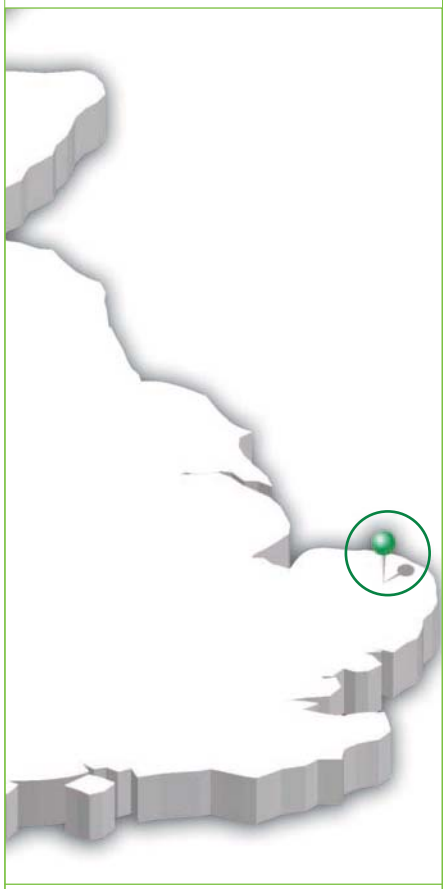
If your horse is performing poorly, contact your XLVets Equine practice to discuss the problem and begin an investigation. Only in a very small number of cases can a diagnosis be made at the first examination - usually a detailed and logical investigation must be carried out in an appropriate methodical manner so that common conditions are not missed.

Once a diagnosis is made, a treatment plan can be formulated and a prognosis for likely return to work can be given.

Chris Lehrbach BVMS MVM CertES(Orth) MRCVS
Chapelfield Veterinary Partnership

Lameness and back pain as causes of poor performance

Just as beauty is in the eye of the beholder, poor performance is in the eye of the performer or rider; it is different for every rider and dependent on the individual pursuit. Many animals suffer from poor performance, which can be caused by a range of medical problems, including cardio-vascular disease, neurological problems and orthopaedic injury. Poor performance can also be confused with a limit in the ability of the horse and/or rider.



Veterinary Surgeon	Chris Lehrbach
XLVets Equine Practice	Chapelfield Veterinary Partnership

Clinical signs

Lameness and back pain are intimately associated and surprisingly common problems in the performance horse. Despite being a common cause of poor performance, lameness is rarely the complaint, often because it may be mild and involve multiple limbs. Back pain is quite often suspected because of bad behaviour when tacked up or ridden such as bucking, rearing or head shaking. Physical signs are often subtle, but poor back and hind end muscling might be evident. Many patients have several problems, probably accumulating over time, which are initially tolerated. Eventually the increasing soreness results in the appearance of clinical signs.

Diagnostic investigations

Unfortunately, by the time the veterinary surgeon is called to assess a suspected poor performance, the patient has often been showing signs for quite a while and may have already been treated. Qualified equine physiotherapists (ACPAT members) are, in the author's opinion, one of the few para-professionals who are capable of undertaking a meaningful assessment of a case of poor performance prior to a veterinary examination.

In terms of veterinary orthopaedic (muscle and bone) investigations of poor performance, the initial assessment can be undertaken at home or at the clinic, depending on the facilities available. The aim of the initial assessment is to gauge whether or not a problem is likely to exist, rather than to actually make a diagnosis. Detailed history taking may seem onerous, but is enormously beneficial to the veterinary surgeon. Even if an owner feels that a particular area of the body is causing the problem, it is essential that a thorough physical examination is undertaken. Many patients have multiple sites of pain and if the investigation is focussed on the most obvious sign, then other significant problems will be missed. Following the physical examination, the patient may then undergo any or all of the following:

- walk/trot in hand on a firm surface;
- flexion testing;
- lunge exercise on a firm/soft surface;
- ridden exercise.

Each stage of the examination can provide important information, but with subtle problems, ridden assessment of behavioural components can be extremely useful (Figure 1).

Further investigations vary in their complexity and can include: nerve blocks, radiography, ultrasonography, bone scan, MRI and CT. The decision on which is appropriate depends on the facilities available, the vet's judgement, the owner's preferences and the budget. It is important that owners are aware of the options and their associated costs, which can be considerable. There are frequently several ways of reaching the same conclusion.

Figure 1 - Ridden assessment of a patient with poor performance may be the only means of seeing the abnormal behaviour

Common orthopaedic causes

Whilst clinical signs can be similar, there are many causes of poor performance, some occurring with greater frequency than others, often with few outwardly visible physical signs such as joint swelling. Some common conditions include:

Suspensory ligament injury

Common in any or all limbs, in young and middle aged horses and can vary from mild pain with little ligament damage, to marked pain with ligament swelling and fibre tearing. Ultrasound and nerve blocks are the most useful diagnostic tools. Medical treatment involves local anti-inflammatory injections, such as cortisone, along with shockwave therapy. Surgical treatment is really only of relevance to the hind limbs and involves removing the nerve branch supplying the area of injury (Figure 2), along with the cutting of any restricting soft tissues.

Figure 2 - Identification of the white nerve branch during surgery for a suspensory ligament injury

Sacro-iliac (SI) pain

As this structure is the main joint between the hind limbs and the back, considerable propulsive forces pass through these tissues. Often found in association with other problems such as suspensory injury, SI pain can be difficult to diagnose as the structures are buried deep within the pelvic tissues. Nerve blocks can help localise the pain and some injuries are detectable on a bone scan. Treatment can involve ultrasound guided anti-inflammatory injections (Figure 3) and may need to be repeated in recurrent cases.

Figure 3 - Ultrasound guided medication of a sacro-iliac joint using cortisone injected via a 10 inch needle

Kissing spines

A very common condition which can be present without necessarily causing constant back pain. Usually affecting the mid-lower back, underneath and behind the saddle, kissing spines can be diagnosed using nerve blocks, radiography (Figure 4) and in some cases a bone scan. Medical treatment, aimed at long term management, involves injecting anti-inflammatories into the sites of pain between the impinging bones, along with shockwave therapy. Cases which fail to respond can undergo surgery to remove some of the displaced bony tissue.

Figure 4 - X-ray image of kissing spines showing the bones coming into contact with each other, where ligament filled gaps should exist

Hock joint inflammation

Very common in middle aged horses and can lead to degenerative, arthritic changes if untreated. Usually involves the small joints of the lower hock. Patients will often develop stiffness, toe dragging and may become difficult to shoe. Nerve blocks are an effective means of making the diagnosis. Radiography is useful but some patients have little to see on x-rays. Treatment involves anti-inflammatory joint injections, along with remedial farriery. Patients with significant degeneration can have the small joints surgically fused, which can offer an effective long term solution.

Stifle joint injury

This is a large and complicated joint with many supporting tissues. Ligament and cartilage damage/defects are relatively common, particularly involving the inside, lower compartment. Nerve blocks help localise the pain, while radiography and ultrasonography are necessary to examine the tissues. If anti-inflammatory injections into the joint fail to work, keyhole surgery may be necessary to make a diagnosis and to treat the injury.

Foot pain

Foot pain is very common in thoroughbred and thoroughbred cross horses. Any breed or individual weakness in foot conformation such as collapsed heels (Figure 5) will be exacerbated if there are problems elsewhere. Nerve blocks will readily localise the pain to the feet, but a combination of x-rays, ultrasound and MRI may be necessary to localise the exact site of pain. Remedial farriery is very important in the long term management of foot pain (Figure 6), correcting any imbalances, providing support and acting as a shock absorber.

Figure 5 - Long toe and low/collapsed heel foot conformation is commonly associated with joint, bone, ligament and tendon injuries within the hoof capsule

Figure 6 - Remedial farriery takes many forms, this patient has been given more heel support and a shock absorber pad applied between the shoe and the foot

CONCLUSIONS

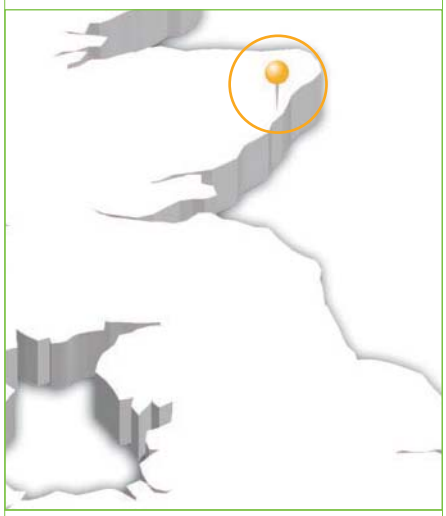
All treatments usually involve a period of rest ranging from weeks to months, followed by a controlled exercise programme tailored to the particular patient. Physiotherapy also plays an important role in rehabilitating many patients. Horses were never designed to be ridden on the surfaces on which they regularly exercise, so it is no surprise that so many sustain injuries. Whilst it is important that injuries are treated and given time to heal, it is also just as important to ensure that fitness work and core strength training are undertaken to minimise the risk of re-injury.

CASE STUDY...

Graham Hunter, BVM&S GPCert(EqP) CertEP CertAVP(ESO) MRCVS
Ardene House Veterinary Practice

Poor performance affecting the musculoskeletal system

Poorly performing horses frequently have a number of possible underlying causes, all contributing to some extent in the horse not working to previous, or expected levels. Detailed below is the case of Yorik, an eight-year-old novice dressage gelding who, since he was purchased one year ago, has never really did his job happily. The owner now feels he is possibly 'unlevel'.



Veterinary Surgeon	Graham Hunter
XLVets Equine Practice	Ardene House Veterinary Practice

Yorik was admitted to the hospital for a thorough clinical investigation. He was examined initially for lameness, involving walking, trotting and lunging in hand on soft and hard surfaces. He was also assessed whilst ridden and a number of problems were very apparent. He had asymmetric front feet both with very long toe low heel conformation (Figure 1). He also had severe mediolateral foot imbalances in all four feet and had a very upright hindlimb conformation. Yorik had a very rigid, tense back with a high resting muscle tone and was noticeably uncomfortable on palpation and reflex testing.

When trotted in a straight line he was slightly lame on his left hindlimb and on his right forelimb. When lunged on a soft surface, lameness was observed in the outer hindlimb in both directions and also the inside forelimb in both directions. He was also occasionally disunited with frequent bunny hopping when asked to canter, on both reins. This lameness pattern was replicated when he was examined under ridden exercise but with a greater reluctance to go forward and a high head carriage noted. It was suspected at this stage that Yorik was lame on all four legs and had a sore back. An extensive lameness examination was performed involving nerve and joint blocks. Many x-rays were taken and ultrasound scans performed where required.

Examination of Yorik's front feet revealed that he had pain in his heels and x-rays proved that he had navicular disease in both his front feet (Figure 2). Examination of his hindlimbs demonstrated that he was suffering from osteoarthritis of his distal tarsal joints (within the hock). This is commonly known as 'bone spavin' (Figure 3).

Figure 1. Yorik's poorly balanced left fore foot

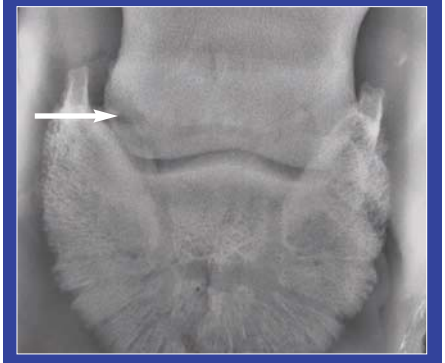


Figure 2. X-ray of Yorik's right fore foot showing a diseased navicular bone

Figure 3. X-ray of Yorik's left hock showing bone spavin pathology

Anaesthetic and imaging techniques were used to examine Yorik's back and he was found to have evidence of over-riding dorsal spinous processes, commonly known as 'kissing spines' (Figure 4).

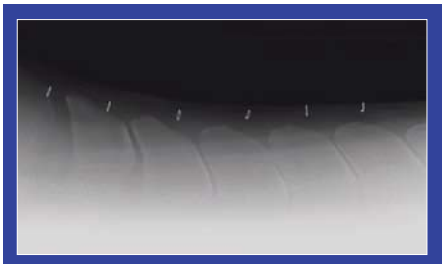


Figure 4. X-ray of Yorik's back showing kissing spines

Treatment of such a complex case is often difficult with a variety of different techniques being used to try to improve his overall pain levels and thus his ridden behaviour and performance. Surgery was performed on his back under standing sedation. This surgery is called an 'Interspinous ligament desmotomy' and involves cutting the ligaments between the spinous processes where pain has been detected.

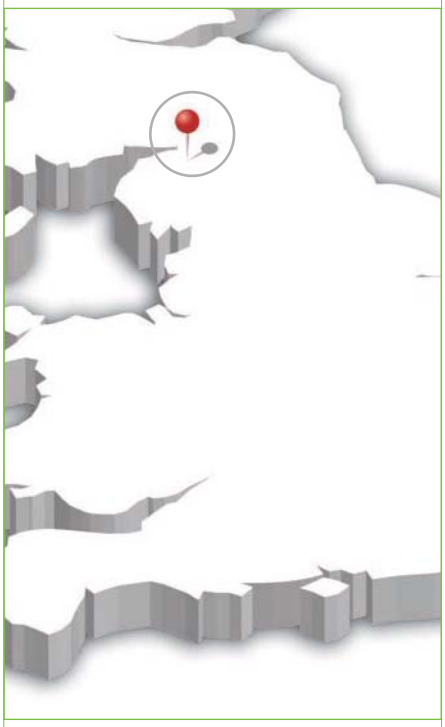
The hospital farrier trimmed and balanced all four feet, applying egg bar shoes to the front feet and normal shoes with length at the heels to the hind feet. The breakover point was pulled back in all four feet. His hock joints were medicated with corticosteroids and a tiludronic acid (Equidronate®) infusion was administered. It has been shown that Equidronate® is useful in navicular disease, bone spavin and some back conditions. A very strictly controlled rehabilitation programme involving physiotherapy was also employed.

Yorik is now three months down the line in his treatment programme and is back in ridden work. His lameness grades have all improved and he is tracking up much better. He appears, at present, comfortable under saddle in light ridden work.

We have many more techniques we can use in cases such as this which we will employ if, alas, poor Yorik should regress and struggle again.

Neaera Fletcher BSc(Hons) BVMS MRCVS, Paragon Veterinary Group

Poor performance: Dorsal displacement of the soft palate



Veterinary Surgeon	Neaera Fletcher
XLVets Equine Practice	Paragon Veterinary Group

Figure 1. Jet with the dynamic scope fitted

Jet, a five-year-old thoroughbred gelding racehorse had been showing good form up until July 2012. During the next three months, over three sequential races, the gelding came last, or finished well below the expected performance.

Jet had no major abnormalities of the larynx when examined using a flexible camera (endoscope) at rest. As part of the investigation of poor performance, a dynamic endoscope was used to remotely examine the gelding's larynx during training exercise on the gallops. The images showed that as the work intensified and the horse began to tire, the soft palate became unstable and finally displaced over the epiglottis of the larynx (figure 3). Dorsal displacement of the soft palate is a common condition of racehorses whereby the soft palate moves upwards over the epiglottis creating a functional obstruction of the airway.

Upper respiratory tract infection and inflammation can cause dorsal displacement of the soft palate. Other causes are thought to involve nerve damage or dysfunction of the nerves which supply the pharynx. The condition can be treated conservatively or surgically. Conservative treatment is often the first choice for younger horses and involves rest and anti-inflammatories. A tongue tie which stops the tongue pulling backwards can also help to prevent dorsal displacement of the soft palate, and some trainers also find it helpful to use a dropped noseband. Surgical procedures may be chosen when the horse is fully trained and racing, where faster return to training is preferable to a prolonged period of rest. Laryngeal tie-forward is a surgical procedure performed under general anaesthesia which involves the placement of strong sutures to tie the larynx in a more forward position. This forward position assists in preventing the soft palate from displacing.

The owners of Jet opted for a tie forward surgical procedure and we referred the gelding to XLVets Clyde Veterinary Hospital where the surgery was performed. The gelding was placed under general anaesthesia and an incision was made beneath the larynx. The larynx was then exposed to allow the placement of the sutures. One suture was placed each side of the larynx between the cartilage of the larynx and one of the bones which gives the tongue and larynx stability. Once in position and under tension, the incision site was closed. Before and after surgery, Jet received antibiotics to prevent infection. Jet was discharged the following day with a one week course of antibiotics and anti-inflammatories for pain relief. An x-ray was taken to make sure the larynx was in the right position. Feeding was given at shoulder height to prevent early stress on the incision site. The sutures were removed at 14 days, at which time Jet resumed training (starting with walking and slowly building up).

Jet recovered from the surgery without any problems and is currently in training and expected to race in the coming months.

Figure 2. Jet on the gallops where the images where taken of the soft palate displacing

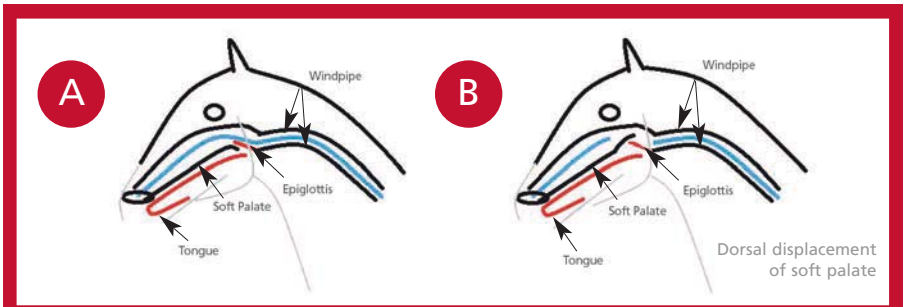


Figure 3. A schematic view of the larynx in its correct position (A) compared with a view of the larynx when the soft palate is displaced above the epiglottis (B) restricting airflow into the windpipe

Dr Emma Batson, Equine Manager
Merial Animal Health

Equine gastric ulcers: The hidden condition

Has your horse become difficult to work, grumpy in the stable or a picky feeder? Although about 60% of performance horses and 40% of leisure horses and ponies are affected by equine ulcers, it is still one of the most under-recognised equine conditions, with many animals still going undiagnosed.

The main reason for this lack of detection is the vague and non-specific nature of the symptoms, which are often put down to back pain or behavioural issues and general unwillingness to work.

The signs of ulcers include:

- poor performance
- girthing pain
- change in behaviour/reluctance to work
- picky appetite
- mild weight loss
- dull 'starey' coat
- recurring mild colic
- salivation and teeth grinding in foals

So why are horses prone to ulcers?

As 'trickle feeders' their stomachs are designed to receive a constant supply of food. Unlike people, who only produce acid when they eat, in the horse acid is released constantly into the stomach. However saliva (which neutralises the acid) is usually only produced when they eat.

In natural conditions the horse has a constant flow of food, acid and saliva passing into the lower part of the stomach. However with stabling, restricted feeding and exercise, the acid continues to flow into the stomach even when there is no food to soak it up. This means that the top part of the stomach, which has a 'normal' vulnerable skin lining can become exposed to acid splash, especially during exercise.

Management regimes can result in long periods with restricted food intake, so even after a short period of time acid can begin to overwhelm the lining of the upper part of the stomach and ulcers can start to form. Other factors include stress caused by travel, competitions, separation from peers and solitary confinement.

Diagnosis and treatment

Examination of the stomach via gastroscopy is the only definitive way to diagnose ulcers. The procedure is relatively simple, using a three metre video endoscope. Sedation is required, but disruption is minimal with the horse usually being able to travel within two to three hours and return to normal exercise the following day.

The most effective treatment is an acid inhibitor, omeprazole, which is the only licensed product for the treatment and prevention of ulcers.

Preventing ulcers

Following treatment it's important to minimise risk of recurrence. Even small changes can make a difference. For example, when grazing, horses are constantly on the move, so when they're stabled, splitting the forage into several nets or piles can help recreate more natural foraging. Variation such as haylage or chop which will also help encourage picky eaters and 'stressy' horses to eat.

Try not to exercise your horse on an empty stomach. They are not like us, feeding forage prior to exercise will help to form a 'mat like' barrier, protecting the upper part of the stomach from acid splash.

If you are travelling your horse solo, or stabling in new surroundings, try to take a companion. If this is not possible, special equine mirrors have been proven to help reduce stress in these situations.

For those horses where the risk factors remain high, due to the training regime or travel for example, trials have shown that an on-going preventative dose of omeprazole can help to prevent the ulcers from returning.

An owner's story

Joe is a seven year old KWPN cross gelding belonging to Barbie Clarkson from Hexham, a client of Scott Mitchell Associates. He had been successfully eventing in the 2011 season at BE100 level.

Barbie Clarkson eventing Joe successfully in 2011

In January 2012 Joe began preparation for the coming season. At this time he was jumping well as usual but had begun to show a bit of uncharacteristic grumpiness in the stable.

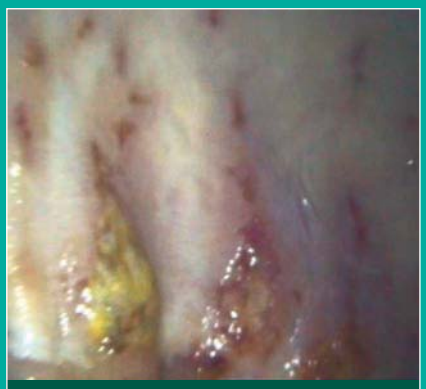
Despite being fed on conditioning feed at full rate plus haylage over the winter he had failed to put on any weight and his coat looked a bit woolly. His workload was increased with the aim of having him ready to event at the end of March. We took part in a number of jumping and dressage competitions over the course of ten days which involved quite a lot of travel.

Joe was then given a couple of days off, but on returning to work he objected in a very uncharacteristic way. He was happy to walk but as soon as I asked him for an upward transition he objected violently; he planted himself and kicked out.

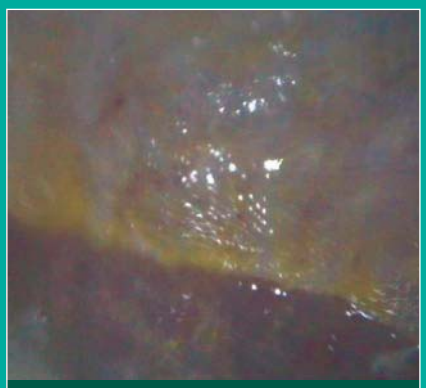
I persevered with the nappy bad behaviour thinking he was just being naughty but it got worse and eventually he refused even to walk out. An ACPAT registered physiotherapist checked his back etc. and found nothing wrong. His saddles were checked but all was fine there too. So there was nothing obviously wrong and he wasn't unsound.

I then saw an article in Scott Mitchell Associates' equine newsletter about gastric ulcers. It referred me to a website (www.equinegastriculcers.co.uk) which had a questionnaire on which I entered Joe's information. The results said to refer his case to my vet as he was at high risk of having ulcers.

I didn't really believe it other than reading other horse owners' feedback about bad behaviour in their horses and that sounded very like Joe. Basically, nothing veterinary - simply bad attitude from a horse which had always been easy to ride and who always enjoyed his work. I discussed this with my vet Colin Mitchell who arranged to perform a gastroscopy examination of Joe's stomach.



Joe's stomach had multiple areas of ulceration



Following treatment the ulceration had completely healed

Joe was diagnosed with multiple ulcers and given a course of GastroGard® (omeprazole), a fibre and oil diet and fibre fed 20 minutes prior to exercise was recommended. At re-scoping 6 weeks later, although his appetite had improved and he had gained weight, the ulcers had still not healed and it was suspected that the lesions had become infected. The GastroGard® was continued along with an antibiotic, and Joe was re-scoped 4 weeks later. The ulcers had healed well and we were advised to reduce the GastroGard® to 1/4 tube daily, a prevention dose, feed an antacid supplement, continue feeding forage prior to exercise, and work normally. He came back into work in August after treatment.

He has gained weight, looks well and has bags of energy. He's a clever, big moving horse and sometimes has a rather opinionated attitude but the nappiness and pain have gone, he is back to his normal self and hopefully ready to compete and move up to BE Novice level this year.

Having gastric ulcers cost us a year of competing, which is a shame, but at least we didn't have to run on wet ground risking injury elsewhere.

Liz Brown BSc BVSc MRCVS, Wright & Morten Veterinary Surgeons

What's that noise?

Guide to respiratory noises

Some horses make respiratory noise when exercised. This can range from a snort right through to a whistle. These noises are caused by turbulent airflow in the upper airway. Some noises such as snorting or high blowing have no deleterious effect on the performance of the horse. Others need further investigation and treatment as they may impair the function of the airway and can have a serious effect on the performance of your horse.

Airway structure

When your horse breathes in, air entering through his nostrils passes along the nasal passages and over the soft palate, a flexible flap of tissue that forms the floor of the pharynx (throat) and keeps the mouth closed off from the airway. (Unlike you, your horse can't breathe through his mouth.) The air then crosses the pharynx and enters the trachea (or 'windpipe'), through the larynx (or 'voice box').

Guarding the entrance to the larynx is a valve system. Its main parts are the epiglottis, a triangular flap of tissue stiffened by cartilage, and the two arytenoid cartilages, which form an inverted V at the entrance to the larynx. At rest, the epiglottis lies on the soft palate (the floor of the pharynx). But when the horse swallows, his tongue pushes back, pushing the soft palate up to block the nasal passages and force the epiglottis over the opening of the larynx. At the same time, the arytenoid cartilages draw together to help seal the airway. Food passes safely over the seal and into the oesophagus.

Veterinary Surgeon	Liz Brown
XLVets Equine Practice	Wright & Morten Veterinary Surgeons

Investigating respiratory noise

Initial investigation involves a full clinical examination, including visual assessment of the face and sinuses (looking for any asymmetry), feeling for any scars that may indicate previous surgery and auscultation of the airway (listening with the stethoscope). Further examinations will often include using a rebreathing bag to attempt to accentuate respiratory noises by increasing breathing rate and effort. The horse will also be examined at exercise.

Some horses only make respiratory noise when performing a specific action; such as when they are galloping or when they are flexed at the poll. The nature of the noise is assessed and it is determined whether it can be heard during inspiration (breathing in) or expiration (breathing out). During cantering and galloping the horse's breathing pattern is linked to the stride pattern with the horse breathing out when the front legs are on the ground during each stride.

The next stage is to perform an endoscopic examination of the upper airway at rest. This involves passage of a camera into the nostril and up into the larynx to assess the airway. Ideally, the exam is performed without sedation in the first instance in order to allow a true at rest assessment of the movement of the arytenoid cartilages of the larynx (voicebox). If abnormalities are detected a diagnosis may be reached at this point.

In some cases the airway obstruction may only be present during fast work or when the head is in a specific position and in these cases the examination at rest may be completely normal. In these cases an overland scope is required to remotely examine the airways during exercise. This involves an endoscope placed in the horse's airway and secured to the bridle. A pack which transmits a signal to a monitor is secured to the horse's tack or on the rider's back allowing the larynx to be visualised while the horse undergoes exercise (figure 4).

Figure 1. Examination of the respiratory tract

Figure 4. Horse exercising with overland scope in position

What causes noise?

With each breath air is taken in via the nostrils, through the nasal passages and into the throat (pharynx). From here it passes through the larynx, before entering the trachea and lungs. To allow the horse to take in more air during exercise, the nostrils dilate and the horse extends its head and neck, thus enabling the pharynx and larynx to open wider and to take in more air. Anything which interferes with the smooth passage of air flowing from the nostrils to the lungs may result in the horse making an audible noise.

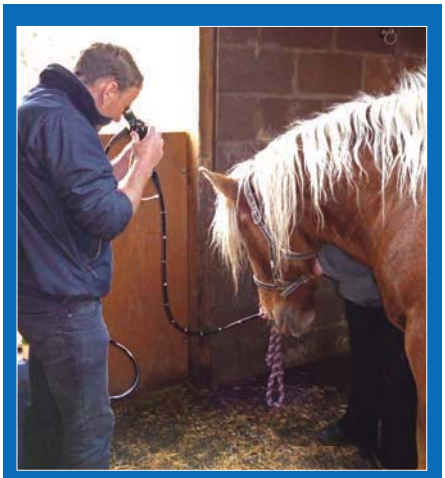


Figure 2. An endoscopic examination of the upper airway at rest

Figure 3. The larynx viewed through an endoscope during examination

Condition: Nasal obstruction

Type of noise: variable, snoring, snorting

Presentation: noise may be heard at rest and worsen during exercise or may only be heard during exercise. Other signs such as nasal discharge and facial swelling may be present.

Timing of noise: expiration and inspiration

Causes: sinus infections, cysts, nasal polyps, tumours

Treatment: surgery to remove or treat the obstruction

Condition: High blowing

Type of noise: snorting type noise

Presentation: noise heard on exercise with no effect on performance

Timing of noise: expiration

Causes: vibration of the fold of the `false nostril

Treatment: treatment is not normally necessary

Condition: Laryngeal hemiplegia (roaring)

Type of noise: sharp noise (roar, gasp, whistle)

Presentation: noise during fast work and poor performance in race and sports horses.

Timing of noise: inspiration

Causes: partial or total paralysis of one (most commonly the left) or both of the arytenoid cartilages of the larynx due abnormal function of the nerve supplying the area. Most common in larger horses. Other causes include nerve trauma and liver disease.

Treatment: surgery to the larynx involving a 'Tie back' procedure to hold in the arytenoid cartilage in a partially open position and 'Hobday' procedure which removes the saccule of the larynx.

Condition: Dorsal displacement of the soft palate (gurgling)

Type of noise: gurgle, choking

Presentation: gurgling or choking noise and very sudden loss of performance during a race or fast work

Timing of noise: during intense work (requires an overland scope to diagnose).

Causes: the horse's soft palate displaces up over the epiglottis and blocks the passage of air.

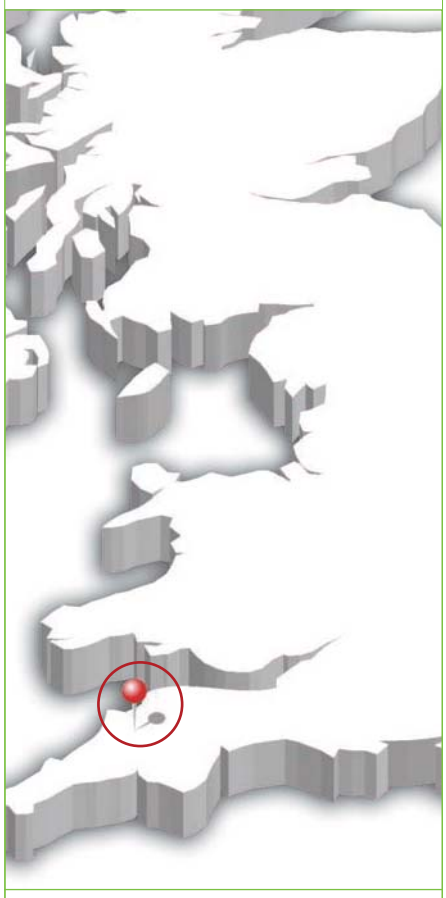
Treatment/Management: depending on severity of the condition, the following methods may be used to attempt to prevent the soft palate displacing: use of a tongue tie or dropped noseband, soft palate cautery or laser surgery, laryngeal tie forward surgery.

There are many other less common causes of upper airway obstruction which can result in an abnormal respiratory noise. If you are concerned that your horse may be making an abnormal respiratory noise speak to your local XLVets Equine practice for more information.

Strategies to assist in the prevention of laminitis

Gemma Stokes BVSc GPCert(EqP) MRCVS, Penbode Equine Vets

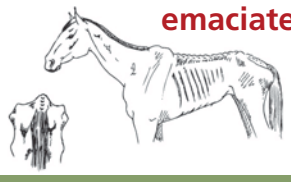
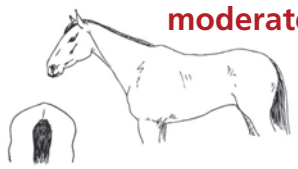
Prevention is the focus of much of the recent research concerning laminitis. We still have a lot to learn but this article will focus on the current thinking and tactics to aid its prevention. It is important to be aware that any horse or pony can be at risk of laminitis. It is no longer just a condition of fat ponies, although they are still the most commonly affected. No owner should think that their horse is not at risk. I have treated, amongst others, shire horses, thoroughbreds, Arabs, donkeys, mares, geldings, old and young.



Veterinary Surgeon Gemma Stokes
XLVets Equine Practice Penbode Equine Vets

Weight management

The most important factor, both historically and according to current research, is management of the weight of our horses and ponies. Obesity is a huge problem affecting the equine population. As owners, we often do our horses too well and so the amount of weight they carry is too much. The use of weight tapes, regular photographs, cresty neck scores and body condition scoring should all be used to monitor your horses. These should be regularly recorded and then acted upon if there is an increasing trend. This should be started as youngsters as it is easier to prevent equines becoming overweight than correcting it later.

Body condition score		
0	emaciated 	• Marked 'ewe' neck, narrow and slack at base • Skin tight over the ribs, which are clearly visible • Spinous processes sharp and easily seen • Angular pelvis, skin tight, very sunken rump. Deep cavity under tail and either side of croup.
1	poor 	• 'Ewe' neck, narrow and slack at base • Ribs clearly visible • Skin clearly shrunken either side of spine. Spinous processes well defined • Rump sunken but skin supple, pelvis and croup well defined, cavity under tail.
2	moderate 	Normally ideal for a fit racehorse or eventer. • Neck narrow but firm, shoulder blade clearly defined • Ribs just visible • Spine well covered. Spinous processes felt. • Rump flat either side of spine, croup well defined, some fat, slight cavity under tail.
3	good 	Normally ideal for most show and leisure horses • Firm neck, no crest (except stallions), shoulder blades defined • Ribs just covered, easily felt • No gutter along back. Spinous processes covered, but can be felt • Pelvis covered by fat and rounded, no gutter, pelvis easily felt.
4	fat 	• Slight crest on neck, wide and firm • Ribs well covered • Gutter along spine. Gutter to root of tail. Fat stored either side of the spine to form slight 'apple bottom', with a gutter down the middle • Pelvis covered, felt only with firm pressure.
5	obese 	• Marked crest, very wide and firm, folds of fat. Shoulder blade buried and difficult to feel • Ribs buried, cannot be felt • Deep gutter along spine, back broad and flat. Deep gutter to root of tail, producing marked apple bottom, skin distended • Pelvis buried, cannot be felt.

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Weight tape

Equine metabolic syndrome (EMS)

EMS is a clinical syndrome with a collection of risk factors that are associated with an increased susceptibility to laminitis. Usually ponies with EMS are overweight but not all obese horses have EMS and not all EMS horses appear obese. More often they have regions with increased fat deposits, generally a cresty neck.

To diagnose EMS a blood sample is taken after the horse/pony has been starved. In some cases then given a feed of glucose prior to further blood sampling, to see how the body responds to the increased glucose levels. Ponies with EMS are insulin resistant i.e. they have high resting insulin levels but the cells are not responding to the insulin and therefore not taking up glucose. This insulin resistance is related to obesity and laminitis.

Management is weight loss, exercise and sometimes medical treatment. This syndrome is related to type 2 diabetes in humans.

Most EMS sufferers are detected after they have had recurrent bouts of laminitis but it is most likely to be prevented if detected early. Blood tests can be used to detect those horses at risk of EMS and therefore at risk of laminitis.

Diet and exercise

Equine metabolic syndrome, obesity and to some extent Cushing's disease are all related to dietary management and exercise. Many horses and ponies are overfed for the amount of exercise they do. Pasture management and hay/haylage production have improved, increasing the calories that they receive. The increased use of supplements also increases the calorie intake, both the supplements themselves and also the feed given to disguise them. Plus rug technology has improved and horses don't lose weight over winter.

Feeding little and often and a measured quantity for a 24 hour period is important in weight control. A guideline is an exercised, body condition score 2.5 horse should receive 2.5% of their bodyweight (BW) in dry matter i.e. a 400kg horse should receive 10kg over 24 hours including all hay, feed and grass. For weight loss 1.5% BW is a guideline but some studies have revealed far lesser amounts still do not result in weight loss.

The use of multiple small holed haynets to reduce bite size, haynets placed around the stable/yard to promote grazing behaviour, haynets hanging from above rather than against a wall to make the horse work harder for the feed, and soaking hay are all possible aids to help reduce the quantities of calories taken in by the horse. Control of calorie intake is much harder when the horse is allowed free access to pasture. Grazing muzzles and strip grazing systems can help.

Exercise is an important factor and it is important to feed to the required work demands. Exercise is not only important for weight management and fitness but also aiding the blood flow and health of the hoof.

Hoof care

Regular trimming and care of the equine hoof is important to maintain the integrity and health of this continually evolving and growing structure. Hoof conformation is important for the balance of pressure through the laminae and therefore preventing micro damage to these vital structures. Most horses from a foal will require trimming approximately every six weeks to maintain optimum hoof health. Allowing the toes and/or heels to become too long or under run will predispose to laminitis. There will also be increased risk of infections within the hoof; abscesses, seedy toe, thrush etc.

Cushing's disease

Another endocrine (hormonal) disease, like EMS, that is highly linked to laminitis is Cushing's disease. This is a condition that generally affects older horses (over 15 years old) although increased blood testing of laminitics is showing that it does exist in younger animals too.

Cushing's disease is caused by a degeneration of nerves in the hypothalamus (within the brain) which leads to a reduced production of dopamine which results in a hormone imbalance which leads to an increase in the production of cortisol (steroid) by the adrenal glands. The increased cortisol level increases the risk of laminitis by several mechanisms including insulin resistance.

Cushing's disease is diagnosed by clinical signs and confirmed by a blood test. Pergolide is a tablet used to treat Cushing's disease by stimulating the production of Dopamine. This treatment reduces the risk of laminitis and early detection can prevent it.

Other causes of laminitis...

Obesity and endocrine disease are the most common causes of laminitis but this article would not be complete if I didn't mention laminitis caused by toxaemia and systemic infections such as if a mare should retain the foetal membranes post foaling and treatment is not started within a few hours. This can cause a nasty and often fatal laminitis due to toxin build up. Laminitis can also be caused by continued loading of one limb if there is an injury to the opposite limb.

If you are concerned that your horse may be at risk from laminitis contact your XLVets Equine vet who will be pleased to advise on the best course of action.

Lucy Hindmarsh RVN, Paragon Veterinary Group

Nursing the severe laminitic case

Laminitis hoof rings

Laminitis is a very common and painful cause of lameness in horses and ponies. It is important that treatment and nursing care is instigated immediately as the disease has the potential to cause long term suffering. This article should provide you with guidance on how you can provide the best care for your horse should they suffer from laminitis.

Veterinary Nurse	Lucy Hindmarsh
XLVets Equine Practice	Paragon Veterinary Group

Environment

Ensuring comfort for the severely laminitic horse or pony is a priority. First we need to look at the environment that the horse is going to be kept in. Most severely laminitic horses need to be kept in a stable on strict box rest. Take into consideration the size of the horse and use a stable that the horse can easily turn around in. Turning around for a severely laminitic horse is very painful and so the last thing they need is a very tight place to do it in.

In an ideal world a rubber matted stable with a deep bed and well banked sides would be provided for extra cushioning and comfort. The horse may well lie down for long periods of time (depending how painful it is for them to stand) and the deep bedding provides cushioning for the feet. The bed should be around the whole stable with no gap swept back at the doorway. Shavings are preferable to straw, they provide better foot support and reduce the risk of bedding consumption and the resultant problems of impaction colic and dietary imbalances.

In order to minimise stress to the laminitic horse, make sure that it has a companion nearby. Stress can be a contributory factor to laminitis so it is vital that your horse is placed in an environment where he feels happy and comfortable.

Nutrition

If the horse is very uncomfortable and is spending a lot of its time lying down then food and water will need to be offered frequently. The best feeds for laminitic horses are highly digestible fibre diets. These diets need to be low in sugar and starch; look for the laminitis trust approved logo. Vitamin and mineral supplements or even a feed balancer should be considered to prevent any dietary deficiencies. Feeding little and often is advisable as it mimics their natural eating behaviour.

If a horse has long periods without access to feed/dry matter this can increase the risk of developing stereotypical behaviour, colic and gastric ulcers. Sometimes they are in so much pain that they may even not want to eat. In these cases medical treatment involving anti-inflammatory and pain-killers will need to be reviewed with your vet to make the horse more comfortable.

Practical nursing of the horse

It is a good idea to groom your horse and interact with him as much as you can. Complementary treatments like physiotherapy can help too, especially if the horse is lying down a lot and not using the muscles enough to maintain them. For small ponies and Shetlands recumbent for long periods of time, you may be able to turn them over so that they can lie on both sides. Safety is paramount however, so make sure you wear the correct protective equipment and have enough people to do so.

Monitoring/reporting

Urine and faecal output will need to be monitored and temperature, pulse and respiration (TPR) should be taken on a frequent (daily) basis so that you can inform the vet straight away if you are seeing signs that the horse is deteriorating or in greater discomfort.

Some horses can get agitated and stressed when confined to box rest. If the horse is particularly stressed or prone to stomach ulcers they might benefit from preventative medications which will need to be discussed with the case vet.

Decubitus ulcers or pressure/bed sores occur when the horse is lying down on the same side for long periods of time. They are something to keep a look out for and you need to try to prevent them as much as you can. As discussed earlier, if the pony is small enough then with a few people you may be able to turn it over onto its other side. Decubitus ulcers are another reason why the bed should be very deep and comfortable to prevent pressure on prominent areas such as the tuber coxae (hip bone).

To monitor the feet for deterioration look for increased heat in the feet or the digital pulses becoming stronger (all indicating more pain for the horse). Look carefully for any changes in the sole and if there is any then foot hygiene needs to be taken into consideration and even foot dressing to keep the area as clean as possible.

Laminitic hoof growth

Pain management

Pain is a major factor in laminitic horses and can cause them to be extremely depressed. Signs of horses in pain with laminitis include difficulty walking (especially turning), increased digital pulses, sweating, weight shifting from one foot to another, standing with the typical laminitic stance (shifting weight back onto the heels), not eating, grinding teeth, tucked up abdomen and lying down for long periods. Keeping a diary of the length of time your horse is lying down each day will help you to monitor whether the horse's pain levels are improving or not.

Farriery

Providing support to the frog and correcting distribution of pressure in the foot can be very effective in alleviating pain. The correct support will help prevent further damage to the laminae and rotation of the pedal bone in the severe laminitic. Avoid shoeing as pounding with the shoeing hammer and lifting the horse's leg for prolonged periods of time will create more pain and inflammation in the foot.

Treatment of the foot is aimed at supporting the sole and frog. X-rays will direct the individual horse's need for corrective trimming and sole support. Polystyrene pads, Lily pads and sole support foams can all help provide emergency support to the foot. The foam becomes imprinted into the shape of the sole and frog, distributing even pressure to the bottom of the foot. If temporary supports are being used then they need to be checked daily to make sure they are still in the correct position.

Conclusion

Nursing the severe laminitic case requires a lot of time and dedication. Recovery is often very gradual, and sometimes despite the best care laminitic cases do not recover and may sadly require euthanasia. The important thing to remember is that good nursing of a laminitic horse is vital to the horses comfort and wellbeing, and plays a critical role in the treatment of this condition.

Peak Performance: Endurance

We asked the experts for top tips on achieving peak performance in endurance riding.

How do veterinary problems impact on endurance peak performance and how can they be prevented?

Matt Fernandez MRCVS, 608 Farm & Equine Veterinary Surgeons

Endurance riding is the racing over long distances (up to 160km). The total length is divided into loops at the end of which there is a compulsory rest period. Before the race, at the end of each loop and at the end of the race, the horse has to undergo a veterinary inspection to assess the fitness to continue the race and therefore avoid potentially more severe injuries.

Horses will be eliminated from the race, mainly, for two reasons: lameness or metabolic reasons. The horse has to be sound on a trot up and with a heart rate no higher than 64 beats per minute.

Lameness problems

Endurance horses train and compete over the widest variations of terrain and that has a bearing on the type of injury and the structures affected.

As a general rule, a race over rocky, hard grounds will produce more eliminations for sole bruising and forelimb concussion leading to coffin joint pain and laminitis.

Soft and sandy ground is more likely to cause suspensory ligament injuries and superficial flexor tendon strains.

Muddy, sticky surfaces will result in, proportionally, more muscle fatigue-based injuries mainly in the hind limbs.

Exhausted horse syndrome (overheating)

This condition is an emergency which can prove fatal if not quickly identified and correctly treated. It is most frequently seen in hot and humid environments and in these conditions the correct action by the crew to prevent the condition is crucial. There are many causes that can contribute to the condition but in particular horses who are unfit, ill-prepared, lame, unwell or in season are more at risk.

The heart rate doesn't decrease as normal following rest and the horse will usually refuse food and water and appear depressed. As the condition progresses signs of tying-up and colic will be seen.

The goal of treatment is to cool the horse down and restore fluid loss with an intravenous drip. Mild cases may respond to fluids given by stomach tube if there is good gut movement. Pain killer anti-inflammatory drugs should be avoided until the horse is fully rehydrated.

Prevention of problems

Training (horse and rider):

- fitness will reduce fatigue;
- hill work (up, down and more importantly across) will improve the full range of motion of lower limb joints, synovial structures and collateral ligaments.

Shoeing:

- pads to reduce localised trauma from stones and overall bruising;
- has to be specific to the discipline;
- might require x-ray guidance.

Nutrition:

- has to include water and electrolytes;
- has to provide a continuous supply of energy for the duration of the competition.

Crew:

- should be well trained in heat management.

Careful selection of type of horse:

- conformation;
- breed: Arab better than Welsh Cob;
- lean better than overweight.

Matt Fernandez MRCVS,
608 Farm and Equine Veterinary Surgeons

How can nutrition influence performance in endurance horses?

- Low intensity and long duration exercise uses carbohydrates from fibre and fat whereas high intensity and short duration uses easily digestible sugars.
- Endurance depends on carbohydrate metabolism with an increasing contribution from fat: the slower the speed is, the fitter the horse is and the longer the distance is.
- During training feed high fibre and high fat. This trains the horse's metabolism to use fat during race.

  Prior to competition feed fibre with high water holding capacity e.g. good quality hay. Avoid starch e.g. cereals 4-5 hours before competition this leads to high insulin and energy depletion.

  During competition feed long and short chopped fibre e.g. alfalfa and sugar beet this has good, easily available, short term water holding capacity.

Beccy Broughton, North Lincolnshire
Professional fitness, training and competition coach and member of Endurance GB squad (www.beccybroughton.webs.com)

In the sport of endurance how do training and talent influence 'peak performance'?

The beauty of Endurance riding is that at the introductory levels any horse and any rider can take part. At higher levels the training is vital; but fitness can only get you so far. With competitions of 100 miles taking nine to twelve hours, only those horses and riders with a tough mental attitude will succeed. The distances can also take their toll in the form of injuries so the other quality I look for in a potential horse is straightness of conformation and movement.

When designing the training programme it is important to remember that all horses and riders are individuals and the programme should be tailored to the needs of the horse and the commitments and lifestyle of the rider. Training for these competitions is about striking a balance of achieving fitness whilst minimising the risk of injury. I believe training is very much about quality not quantity and my horses are rarely ridden for more than one hour per day and never galloped; but every training step is about quality, balance and control. Rest is an equally important component of the training program to allow recovery from training sessions and healing of minor damage. As the intensity of the exercise increases the frequency decreases providing more time for the necessary rest and recovery.

It must be remembered that it is not just the horses that need training the roles of fitness, training and nutrition of the rider cannot be underestimated. A fit rider can help a tired horse home safely but even aboard a fit horse a tired rider can make a mistake risking injury.

Kelvin Lymer DipWCF ATF, Sandpitt Forge, Worcester, Endurance GB International team farrier since 1992

How does farriery contribute to achieving 'peak performance' in an endurance horse?

Foot balance and comfort are paramount in the endurance horse. Endurance horses may cover as many miles in a day as many horses cover in a month so even mild imbalances can lead to injury and lameness. We use video analysis to look at how the feet land during exercise to ensure they are 'dynamically' balanced.

Shoeing an endurance horse for competition is a bit like fitting tyres to a formula one car; the composition of the shoe depends on the terrain at the competition; we look to keep the shoe as light as possible and just durable enough to have worn down by the finish. If the terrain is very rocky we may schedule reshoeing within the ride. Pads and packing are also used to cushion the sole and reduce concussion. Part of my role ahead of team competitions is to visit and assess the ground conditions; this allows me to predict the optimum shoe, packing and pad combination for the horses and then plan the shoeings in the build-up to the competition to allow the horse to adjust gradually to changes.

Good regular shoeing and re-evaluating the balance and shoe wear are key to managing endurance horses but with a three to five week recommended shoeing interval and all the specialist materials there are significant farriery costs to bear for these top level horses.

Emerging disease threats

Andy Cant BVMS CertVR MRCVS, Northvet Veterinary Group

Veterinary Surgeon	Andy Cant
XLVets Equine Practice	Northvet Veterinary Group

Do not be fooled by the exotic names - just because they are called African Horse Sickness or West Nile Fever it does not mean these diseases will stay in that part of the world and abide by some line on a map. We only have to look at the experience in the farming sector, with the arrival of Blue Tongue Virus (BTV) in 2007 and Schmallenberg Virus (SBV) last year to know that disease patterns are changing.

Two factors have fuelled this change:

- Increased movement of animals around the world, for competition or breeding purposes.
- Climate conditions favouring the insect vectors responsible for spreading some of these diseases.

What many of these emerging diseases have in common is that infected biting insects spread them. Whilst we can contain and control the animals the same cannot be said for these insect vectors. Infected midges may be blown large distances or may hitch a lift among inanimate objects on aircraft.

Potential Disease Threats

African Horse Sickness (AHS)

- Viral infection spread by midges /mosquitoes.
- As the name suggests, widespread in Africa but also has occurred in southern Europe. Not yet in the UK.
- Causes respiratory distress, heart failure and death.

West Nile Fever (WNF)

- Viral infection of wild birds spread by mosquitoes/ticks.
- Incidental infection of horses and humans.
- Causes fever and nervous signs in horses.
- Exposure to the virus has been identified in wild birds in the UK but no active virus or clinical signs as yet. Risk from migrating birds.

Equine Infectious Anaemia (EIA) or Swamp Fever

- Viral infection spread by biting horse flies and stable flies.
- Causes intermittent fever, anaemia, and emaciation.
- Cases have been identified in UK in 2010 and 2012.

Equine Viral Arteritis (EVA)

- Viral infection contracted during mating, AI with infected semen, and through respiratory secretions.
- Causes fever, swelling of genitals/legs and abortion.
- Active worldwide. Cases in the UK in 2010 and 2012.
- Stallions can become asymptomatic carriers or shedders.

Equine Piroplasmosis (EP)

- Protozoa spread by infected ticks.
- Causes jaundice and anaemia. Some horses can become lifelong carriers.
- Widespread in Mediterranean countries.
- Disease not present in the UK. Cases have been diagnosed in Ireland.
- Ticks capable of being vectors have been identified in UK.

Dourine

- Protozoa spread during mating or by infected semen at AI.
- Causes swelling of genitalia and neurological signs leading to paralysis.
- Present in Eastern Europe. Diagnosed in Italy in 2011.

The major consequences of exotic diseases entering the UK are compromised health and welfare of horses as well as disruption to all equine activities. Control of emerging disease is through import controls, which require laboratory testing and surveillance of imported animals and semen. Legislation is also in place to help protect the UK horse population. Apart from Equine Piroplasmosis, all the diseases mentioned above are notifiable; any suspicious symptoms must be reported to the Animal Health authorities who will instigate isolation, movement restrictions and testing until the all clear is given. There are also codes of practice that horse owners should follow to play their part in preventing disease coming into this country.

VET VIEWPOINT...

WE VIEW THE OPINIONS OF OUR VETS ON THE TOPIC ABOUT **A FUTURE LARGE SCALE DISEASE OUTBREAK IN THE UK.**

Are you concerned about a future large scale disease outbreak in the UK?

Andrew Robinson BSc(Hons) BVMS MRCVS
Millcroft Veterinary Group

Over recent years we have seen the increasing movement of horses worldwide and the gradual reduction in border controls and quarantine regulations. Changes in environmental conditions allow insects such as mosquitoes (that are able to transmit diseases), to move over long distances from tropical climates to our country. I therefore think that it won't be long before a new, exotic disease hits our shores.

We have seen a similar scenario in other species and this has led to ongoing research programmes alongside the continuing training of vets and veterinary students. I am also aware that agencies currently have in place rapid response teams ready to implement control measures for a disease outbreak in other species. These groups rely on a number of trained personnel familiar with the handling and restraint of the relevant animals in such a scenario. As yet this is not the case in the equine world but, in my opinion, would be a valuable tool to implement in preparation for such a disease outbreak.

Richard Sutcliffe BVM&S MRCVS
Bishopton Veterinary Group

Following the recent widespread incursions into the UK of Foot and Mouth Disease, Blue Tongue and Schmallenberg we would be very foolish to think that our horse population is free from the risk of a future widespread disease outbreak. Insect vector-borne diseases such as West Nile Virus and African Horse Sickness cause very high mortality rates in horses and are incredibly difficult to control once introduced.

In the USA, West Nile Virus has swept across much of the country and caused chaos in the horse population.

Last summer there were close encounters when Equine Viral Arteritis (EVA) and Equine Infectious Anaemia (EIA) were both identified in horses in the UK. Thanks to the monitoring procedures we have in place, fortunately both disease outbreaks were contained.

The importation of horses and semen represent a risk - even some areas of the EU have high levels of endemic disease which, if introduced to the UK, could be catastrophic - we need to observe importation rules carefully if these risks are to be minimised.

Dominic Alexander BSc BVMS MRCVS Belmont Veterinary Centre

We should be concerned about the possibility of a large scale disease outbreak. It could come in the form of a disease we are familiar with, e.g. equine influenza (flu) or a so called, 'exotic' disease; such as African Horse Sickness or West Nile Virus. These diseases are transmitted by the bites of infected midges in a similar way that Blue Tongue Virus and Schmallenberg Virus have infected sheep and cattle in the UK.

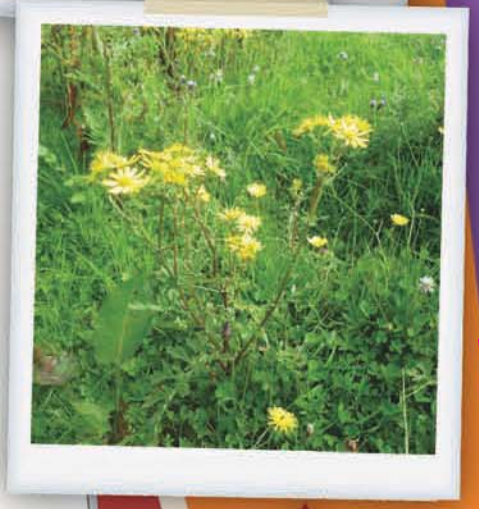
With equine flu we can help protect our horses, ponies and donkeys by correct vaccination. We recently diagnosed flu in an old pony that lived with three others. The infection came from a newly introduced unvaccinated yearling. The pony that showed no ill health was fortunately routinely vaccinated for flu and tetanus. Sadly, around only thirty percent of the equine population is vaccinated in the UK.

The best defence is to be vigilant. Contact your vet immediately if you notice any unusual signs of illness in your horse.

pony pages

Welcome...

TO THE SPRING 2013
XLVETS EQUINE PONY PAGES



Top Tips

Disease prevention...

from Julia James MA VetMB MRCVS, Larkmead Veterinary Group

- **Vaccinations** - these are the injections that your pony should have every year. Commonly they protect against two very serious diseases, tetanus and equine flu, although vaccines against other horse diseases are available.
- **Worm control** - it is important to prevent your pony suffering from worms. You should check if your pony has worms by doing a worm egg count on their droppings - speak to your vet about this. They can then advise if worming is necessary and if so, which product should be used. 'Poo picking' in your pony's paddock at least once every one to two weeks is also important in reducing worm contamination.
- **Care of your paddock** - make sure you regularly check your paddock fencing. Some ponies can be very accident prone, so try and make sure there are no places where your pony can get hurt or injured. Also make sure your paddocks are free of any potentially poisonous plants, especially ragwort which can cause life threatening liver damage.
- **Teeth** - make sure you get your pony's teeth checked regularly. Dental disease can be very painful and may affect the pony's ability to grind its food.
- **Good management** - any pony that is well looked after will be less prone to getting disease. Correct feeding suitable for the type of pony you have is essential. This will help reduce the risk of diseases like laminitis.
- **Call the vet** - if you have any concerns about your pony's health, remember to call and speak to your vet as soon as you have any worries. Often if you can treat a disease quickly then the outcome is better in the long run.

Competition page

ENTER TODAY
GOOD LUCK...

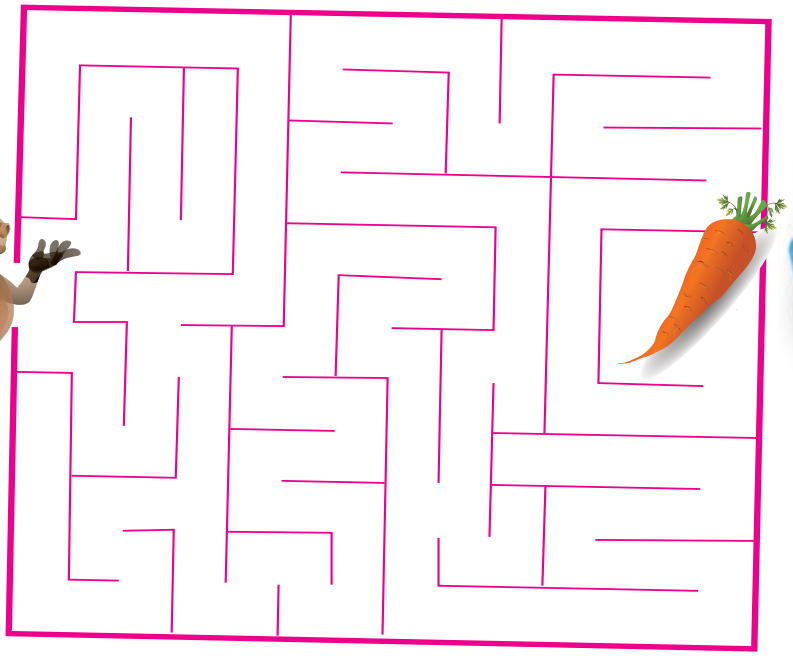
Welcome
XLVets Equine Competition

YOUR CHANCE TO WIN!

Help 'Max' trot to reach his carrot...

Draw the route Max needs to take to get his carrot and then send your completed maze showing the way. All correct entries will be entered into the draw to win a grooming kit.

...Max has worked hard today and his reward is a juicy carrot, but he needs help to get through the maze to get his prize. Can you lead Max to the carrot?



WIN an Equestrian Bag, containing six items comprising a small body brush, dandy brush, flick brush, face brush, hoof pick and sweat scraper.

WIN!

The closing date for entries is Friday 31st May 2013

A winner will be chosen from all the correct entries received before the closing date. The winner will be revealed in the next issue of Equine Matters. The editor's decision is final, no correspondence will be entered into.

Send your completed entry to: Equine Matters Competition No.12
XLVets, Carlisle House, Townhead Road, Dalston, Carlisle, CA5 7JF

Name

Address

Postcode

Daytime Telephone Number

Email

XLVets Practice Name

☐ I do not wish to receive further information from XLVets

☐ I would like to receive further information from XLVets by e-mail

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Castle Veterinary Surgeons Barnard Castle, Durham Telephone: 01833 695695	**Hook Norton Veterinary Group** Banbury, Oxfordshire Telephone: 01608 730085	**Rosevean Veterinary Practice** Penzance, Cornwall Telephone: 01736 362215	**Willows Veterinary Group** Northwich, Cheshire Telephone: 01565 723030
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November 2012