



# VET REPORT



## OUR EXPERT

*Egbert Willems DipACVSMR MRCVS*  
Vet Egbert works at Cliffe Equine Clinic, West Sussex, a member practice of XLEquine. He qualified at Utrecht University in the Netherlands and has received specialist training in lameness diagnosis and equine surgery.

## SUBTLE SIGNS OF LAMENESS: A diagnostic challenge

When a horse is showing signs of a subtle lameness, it can be a frustrating issue that is difficult to solve. Egbert Willems looks at the process a vet may go through to get to the bottom of the problem

**D**iagnosing lameness in horses can at times be frustrating, and this is especially true when there is a subtle lameness.

Subtle or intermittent lameness is often described as poor performance. In these cases, the horse may be presented to the vet because he has started refusing fences or is finding it difficult to perform certain dressage moments, rather than an obvious lameness being recognised.

The problem will often present as a diagnostic challenge, and will require a thorough understanding of the horse and the discipline he competes in.

The vet will also need to assess the rider's ability and training methods.

The history of the complaint will be as important as the clinical examination. In

particular, the answers to the following questions could yield vital clues:-

- What is the type, age and performance history of the horse?
- Does he have the physical and mental ability to do the work being asked of him?
- What is his current work routine, and what behaviour does he display when at rest?
- Have there been any changes in work pattern, intensity or the tack used?
- Could he have suffered an injury, fall or trauma, recently or in the past?
- Has the horse ever suffered from an episode of tying-up/azoturia?

Often, the history will relate to changes in gait, behaviour or performance.

Where a horse has performed at the desired level before, but is now unable to cope, it is likely to be due to physical discomfort.

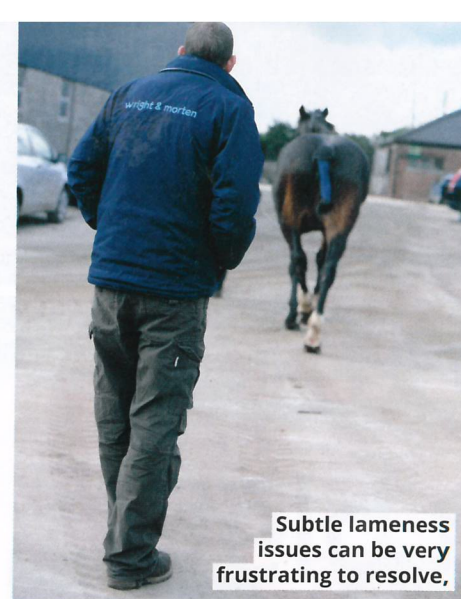
### The diagnostic route

Investigation of poor performance issues in the horse can be time consuming and may involve repeated examinations, and the use of multiple diagnostic techniques.

Ideally, the horse will still be in full work when presented to the vet. Giving him time off could cause the symptoms to reduce, which would not show the true picture during the assessment.

Following a detailed appraisal of the horse's history, a full physical examination of the horse should be carried out. This will include an assessment of the bridle, saddle and bit.

The neck and back will be examined in detail, with the vet judging the horse's ability to flex and extend. He will look for pain on palpation of the back and spasms or potential loss of musculature.



Subtle lameness issues can be very frustrating to resolve,



X-ray is one of the diagnostic techniques widely used

The pelvis – including the sacroiliac region – deserves special attention in the case of a poor performance work up.

Front and hind limbs are assessed for conformation, swelling or heat and how the hooves have been trimmed/shod will be taken into consideration.

Next, the vet will want to see the horse presented in-hand and under saddle.

Lungeing on both firm and soft surfaces, flexion tests and the horse moving on a camber may all be used to assess the gait.

In particular, the influence of back pain from the thoracolumbar or sacroiliac regions can have a profound influence on the way a horse is moving.

The clinical signs of back pain can be subtle unless the horse is assessed when ridden. Alternating between rising trot, sitting trot and canter may show increased back restriction, which could indicate pain or discomfort.

Lameness may be more obvious when the rider sits on the diagonal of the lame limb and may disappear on the other diagonal.

If any neurological symptoms are identified, a full neurological examination should then be performed.

The use of video recordings to show the vet how the horse behaves at home or at a



If your horse's behaviour or attitude to work changes, have his saddle checked

competition may be useful to illustrate a certain gait abnormality.

Video analysis and/or the use of accelerometers (a tool for measuring acceleration) to quantify lameness have brought great advances in the objective assessment of poor performance in recent years.

Following gait analysis, nerve or joint blocks may be performed to try and block out the source of the pain using local anaesthetic and see a subsequent improvement in gait.

### Imaging techniques

When the above tests have identified lameness is present, certain diagnostic techniques can be used to find out exactly where the problem is located.

Imaging techniques such as radiographs (Xrays) or ultrasound may be used to identify

the structure – or structures – involved and the extent of the damage.

Other diagnostic tools used are magnetic resonance imaging (MRI), computed tomography (CT) and nuclear scintigraphy (bone scanning).

Nuclear scintigraphy involves a radioactive isotope being injected into the horse. This becomes attached to bone, mapping out the skeletal system.

A special camera is then used to identify problem areas. The isotope attaches in increased amounts to areas which are undergoing remodelling processes.

The latter can be useful when there is no positive response to local analgesia (pain relief), or in fractious horses. It should, however, be noted that in certain conditions such as lumbosacral pain or desmitis of the proximal suspensory ligaments it may not ▶

### Changes in performance – the warning signs

Below are some of the common issues experienced in competition horses that result in a vet being called out to check if any physical issue is present:-

**Showjumping:** Refusing a fence, knocking down rails and being unable to make the distance between combination fences. The horse may not be jumping straight or resist (nap) on the approach to a fence. A horse suddenly rushing at fences could be a sign of discomfort, as can loss of hindlimb power.

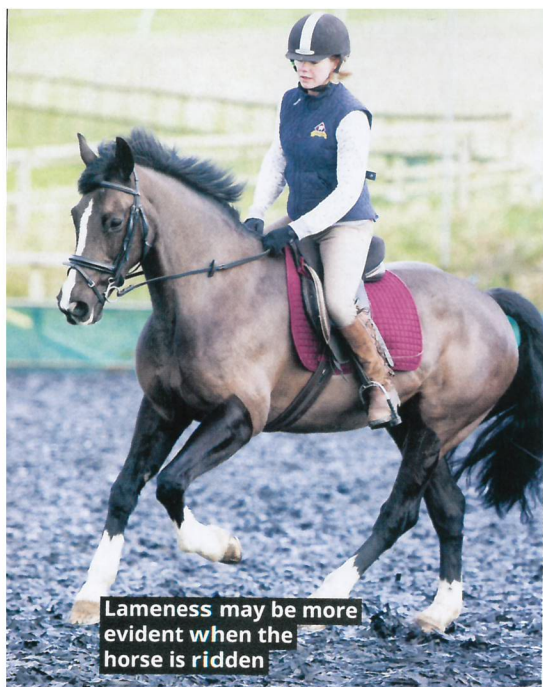
**Dressage:** Signs of a problem may be loss of action, stiffness in the back or restricted gaits. There may be inadequate impulsion at trot, or breaking into canter when asked to work harder. Perhaps the horse is unable to achieve medium or extended trot, or perform a certain movement, such as a left half-pass. Becoming disunited behind in canter, particularly on one rein only, is likely to reflect discomfort. Another cause for concern is lameness only noticeable when working into a contact or on a long rein.

**Eventing:** Losing power during the cross-country phase, stiffness or acute back pain. Some horses become unwilling to jump drop fences.

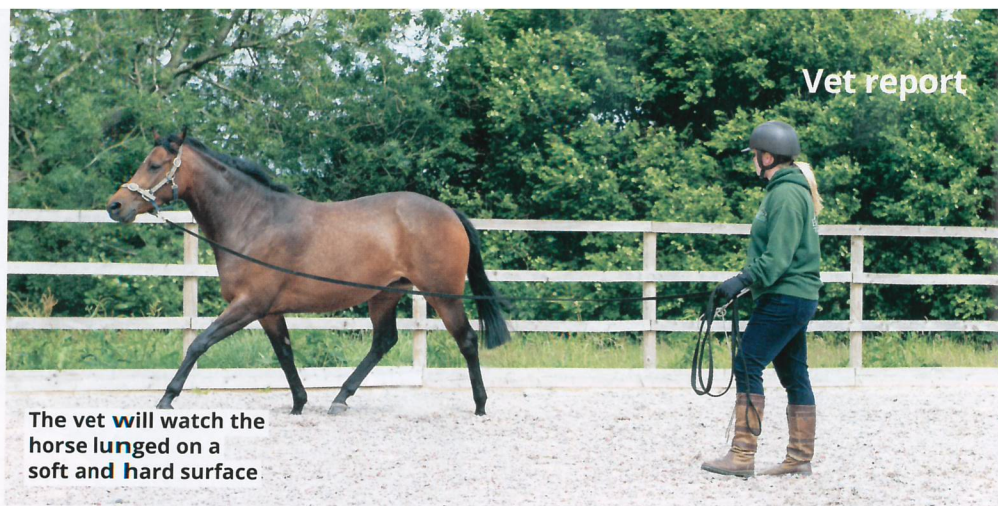
**All horses:** Signs across the board are cold-backed behaviour when being tacked up or mounted and bucking or rearing when ridden or when asked to trot or canter. Hindlimb lameness can also result in a consistent saddle slip to one side. There may be a general unwillingness to work, napping or evasive behaviour.

The fact that some subtle lamenesses are often only noticed when the horse is ridden, and not when he is trotted in hand or lunged, may prompt the rider to believe them to be a 'bridle' lameness – where a horse may be showing signs of being unsound to evade working. However, these are signs of a true lameness, but which is only noticeable under saddle.





Lameness may be more evident when the horse is ridden



The vet will watch the horse lunged on a soft and hard surface

result in an increase of radiopharmaceutical uptake and could therefore be false negative.

A blood sample or muscle biopsy may be required when certain muscle disorders, such as recurrent equine rhabdomyolysis, are suspected, even when the horse is not showing any signs of tying-up.

Performing video-endoscopy of the stomach (gastroscopy) is also warranted in a number of cases as gastric ulcers can result in poor performance.

When it is unclear whether there is a musculoskeletal or behavioural issue involved, a course of phenylbutazone may be prescribed. In most cases of pain, a high dose of 'bute' will result in an improvement or resolution of the problem.

### Potential causes

Often there is an underlying musculoskeletal injury causing the lameness issue, which can be diagnosed by the techniques described above.

These may include proximal suspensory ligament desmitis, foot pain, mild (bilateral) arthritis of the distal hock joints, kissing spines, arthritis of the dorsal articular facet



Nerve blocks are used in lameness work-ups



Remedial farriery may be required

joints or sacroiliac joint disease. However, many other musculoskeletal conditions can cause poor performance.

Even the use of an inappropriate bit, or a saddle that is unsuitable or ill-fitting may be causing performance issues.

A new piece of tack, or a change in the horse's body shape due to the horse putting on or losing weight, could interfere with his natural movement.

In cases of poor foot conformation, but also in most other musculoskeletal problems, a change in trimming or shoeing may be advised in order to improve the comfort. It should be remembered that when there is no foot, there is no horse but also that most

other conditions of the limbs can benefit from good (remedial) farriery.

### An informed decision

Some people may consider turning a horse away to see if time and rest result in an improvement.

Whether or not to further investigate a horse with subtle lameness or poor performance may depend on a number of factors. There may be financial restrictions or the horse may be near the end of his career.

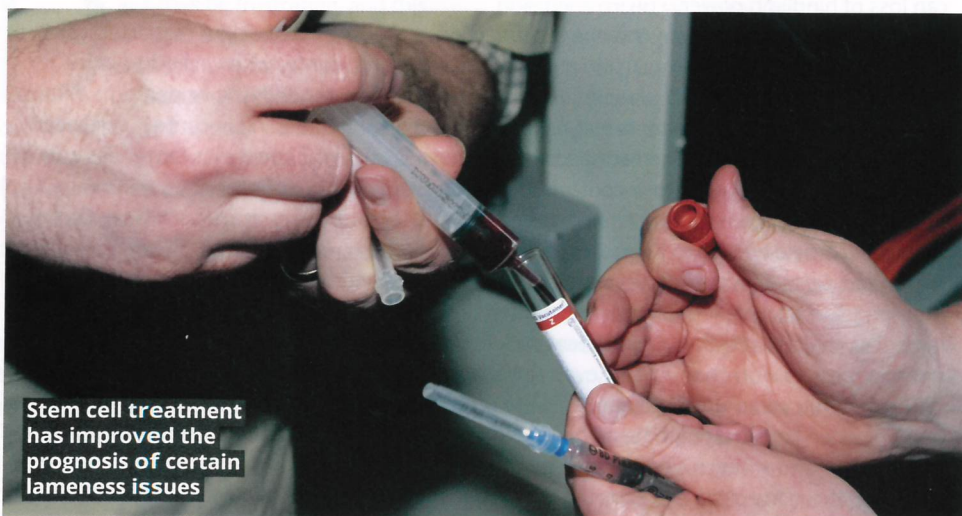
However, in most cases a decision to investigate these issues may lead to a more accurate diagnosis and a better prognosis, thanks to the many advances in veterinary diagnostic imaging and treatment modalities in recent years.

Stem cell treatment, platelet rich plasma and novel orthopaedic surgical techniques have all been developed to treat many causes of poor performance with better results.

In fact, the decision to turn a horse away for a season could even be to the detriment of the horse in certain conditions such as tendon injuries.

In any case, the accurate diagnosis and associated prognosis can be used to tailor the treatment to the circumstances of the individual horse and owner.

Then, an informed decision can be made to pursue further treatment or in some cases to retire the horse from active competition. ■



Stem cell treatment has improved the prognosis of certain lameness issues