



## Lameness Examinations

### Finding the source of pain

*The vets at House & Jackson are commonly called upon to determine the cause of lameness in a horse. This examination is designed to determine the anatomical area that is causing the gait defect, and to find out what the exact problem is. Sometimes the examination is simple and the cause of the lameness is readily identified, however some cases can require extensive and complicated examination.*



The definition of lameness is gait unevenness, usually through pain in the musculo-skeletal system. Not every horse that is assessed will be overtly lame. Many horses that are mildly lame will be presented for poor performance or bad behaviour. It is up to the experienced vet to decide whether horses with these presentations are likely to be caused by pain in the legs, neck or back.

The first objective of determining the cause of lameness is to find out where the pain originates. Sometimes a sudden swelling, or obvious pain when touching or manipulating an area enable the vet to be able to concentrate on a small part of the horse. In many cases there are no outward signs of pain or inflammation. Determining the site and cause of lameness may be a time consuming process and can often take several hours to evaluate. Multi-limb lameness and subtle poor performance issues can take 2 or 3 days and are therefore often better suited to being performed at your vet's practice. Rushing this examination will often lead to the wrong conclusion, as well as extra cost due to expensive imaging modalities being employed in a non targeted way.

### Examination at rest

The horse will initially be observed from all angles to determine any unevenness, or difference between limbs. A lot of information can be gleaned from how the horse stands, and whether full weight is being transferred in all legs. Swellings can also draw the attention to an area that warrants further investigation.

Your vet will then feel all legs and see whether different manipulations elicit pain reactions. Particular attention will be paid to the blood vessels of the lower limbs. Throbbing (digital pulses) can be palpated by gently applying finger pressure over the vessels, and these indicate inflammation at a level below the throb. Foot abscesses, laminitis and navicular disease are all examples of diseases that result in increased digital pulses. Hoof testers and hoof percussion (tapping the foot with a hard object) are used to see whether any part of the foot is painful.

### Examination on the move

To fully assess a lame horse, its movement will need to be assessed in at least walk and trot in a straight line, after flexion of the limbs, lunged on a soft surface, and lunged on a hard surface. In subtle cases, or in poor performance investigations, lameness may only be detectable when the horse is ridden.

#### Flexion Tests

An increase in lameness following a flexion test suggests that the joints and some surrounding soft tissue structures may be the source of pain. Flexions can be separated into upper and lower limb tests to improve specificity. The test is considered positive if the lameness is increased for more than 4 or 5 strides.

#### Lunging on a soft and hard circle

Frequently, lameness is more pronounced when the horse is worked in a circle. The lameness can be exaggerated when the affected leg is on the inside of the circle if it is a weight-bearing lameness. If the swing phase causes more pain, the lameness may be exacerbated with the lame leg on the outside of the circle. Lunging on a hard surface usually accentuates foot or lower limb lameness while lunging on a soft surface usually accentuates upper limb lameness and lameness associated with soft tissues.

#### Assessment under saddle

Certain lameness may be accentuated when the horse is ridden and some subtle lameness may only be observed under saddle. Clinical signs may be minor such as the horse displaying poor upward and downward transitions, a head tilt or tail swishing. Occasionally a horse may appear sound from the ground but the rider feels that the performance is impaired.

### Diagnostic Anaesthesia (Nerve & Joint Blocks)

Injection of local anaesthetic to look for improvement before and after is the gold standard of lameness diagnosis. Local anaesthetic is injected directly into a joint for a joint block, whereas it is injected around nerves for a nerve block. When an area is numbed, the horse is assessed for improvement. If improved or sound after a block, your vet can determine which structures are likely to be the cause of pain. Injection of local anaesthetic to look for improvement before and after is the gold standard of lameness diagnosis. Local anaesthetic is injected directly into a joint for a joint block, whereas it is injected around nerves for a nerve block. When an area is numbed, the horse is assessed for improvement. If improved or sound after a block, your vet can determine which structures are likely to be the cause of pain.

### Diagnostic Imaging

Radiography and ultrasonography are often employed to determine what exactly in that area is causing the horse to be lame. Other modalities to highlight causes of lameness include Magnetic Resonance Imaging (MRI), Scintigraphy (Bone Scanning), Computed Tomography (CT Scanning) and Arthroscopy and Tenoscopy (Keyhole Surgery).