

Equine Lameness & Equinosis® Q

DIAGNOSTIC TOOL FOR OBJECTIVE GAIT ASSESSMENT

DEFINITION OF LAMENESS

Lameness is defined as an abnormal gait in which the horse does not travel in a sound and regular manner. Lameness can be the result of a conformational defect, overexertion, neurological disorder, injury, or a disease process affecting the muscle, tendon, and/or bone. Horses are very athletic animals and pain will alter their normal gait. As a result horses are often presented for lameness evaluation because a decrease in performance has been noted, not necessarily because the horse has an obvious limp.

HOW IS LAMENESS DIAGNOSED?

The traditional lameness evaluation is conducted in a systematic 5 step approach:

1. History and Complete Physical Exam.
2. Palpation of the neck, back and hip muscles, tendons; signs of joint effusion; digital pulses, and hoof tester application.
3. Body conformational assessment.
4. Brief Neurologic Exam to rule out the presence of a neurological condition as a cause of lameness.
5. Gait Analysis: Examination of the horse at a walk, trot and/or canter, both in a straight line and circling on a lunge line, ideally over hard and soft surfaces. Sometimes this evaluation is conducted while the horse is being ridden. Flexion tests are used to temporarily exacerbate an obscure condition.

After completion of these steps the use of nerve or joint blocks will likely be necessary to localize the source of pain. Once this has been identified other diagnostics such as radiographs, ultrasound, MRI or CT may be warranted to determine the definitive cause of the lameness.

WHAT TO WATCH DURING THE GAIT ANALYSIS

Commonly, lame horses are evaluated in hand, at the trot and in a straight line. If the horse is going away from us we look at the rear end and when the horses is trotting towards us we focus our attention on the front end.

During the gait analysis the veterinarian looks for changes in the normal gait, for example: decreased length of stride or excessive dropping of the fetlocks. In the sound horse, at the walk, the hind feet should land at or in front of the forelimb footprint, and while moving in a tight circle, should be fluid

without abnormal postures like “picking up” the head while being turned (a sign of pain in the fore limbs).

“Down on Sound”

If an animal is LAME IN THE FRONT, the head will go down when the sound limb comes in contact with the ground. If the animal is LAME BEHIND, the head will go down when the lame limb contacts the ground.

“Hip Hike”

When a horse is lame, the pelvis will not rise as high when pushing off of the lame limb, or fall as far landing on the lame limb. “Hip hike” is determine by the total vertical displacement of the tuber coxae during trotting. The side which shows the greatest displacement (hip hike) is the lame limb.

“Lunging”

When horses are lunging, their torso is tilted toward the center of the circle. This creates a potential natural asymmetry in both vertical head and vertical pelvic movement. This asymmetry can be quite dramatic in some horses, even when lameness is not present. Lunging typically exacerbates forelimb lameness and masks hind limb lameness.

LAMENESS GRADING SCORE SYSTEM

There are many lameness grading scores systems. One of the most commonly used is the 0-5 lameness score system developed by the American Association of Equine Practitioners (AAEP) where 0 is sound and 5 describes the non-weight bearing horse. However, this system does not imply severity of the condition, it merely describes where the lameness can be seen i.e. at walk, trot, circles, etc. Severity of the lameness (mild, moderate or severe) is given at the discretion of the veterinarian and therefore is very subjective and highly variable.

The poster titled "LAMENESS GRADING" from the AAEP Lameness Scale provides a visual guide to the 0-5 scoring system. It includes a color-coded scale from 0 (green) to 5 (red) with corresponding descriptions and observations for each grade. The poster also includes a definition of lameness and instructions on how to observe the horse in motion.

