**LAMENESS EVALUATION**

A horse can become lame from a variety of causes (conditions or ailments), involving almost any anatomic region within a limb. Some conditions are more easily diagnosed and treated than others. For equine veterinarians, lameness diagnosis requires a solid understanding of equine anatomy and physiology, conformation, biomechanics, and medicine, and yet it requires adaptation in response to changing conditions, horse types, uses and personalities, and owner needs.

THE LAMENESS EXAM

The lameness exam is a multi-step methodical veterinary exam wherein a veterinarian tries to determine where the pain in a limb originates and the nature of that pain. Only once a diagnosis is made can the best treatments be chosen.

Generally, lameness exams consist of (1) a careful history, (2) a standing exam (3) an exam in movement, (4) flexion and hoof tester exams, (5) diagnostic anesthesia – nerve and joint blocks, and (6) imaging the site of injury – radiographs, ultrasound, MRI and others. The diagnosis and treatment plan is derived from a synthesis of findings from all of the above parts of the lameness exam.

HISTORY: The first step in a lameness evaluation is a thorough history of both the horse and the injury. Information gathered about the horse includes breed, age, and prior use all of which provide clues to the problem. The history of the injury includes the date that lameness was first noticed, how severe the lameness has been, and how it occurred, if known. All of these are important questions that veterinarians ask, and you should try to be as complete as possible in your responses.

STANDING EXAM: A standing examination is done at a distance to evaluate the horse’s conformation and general appearance. This is followed by a more careful visual examination and palpation of specific anatomic structures for swelling, heat, and pain.

EXAM IN MOVEMENT: The next part of the exam involves observation of the horse in movement. Lameness is mostly evaluated at the trot. Most thorough lameness exams are performed on firm to hard, consistent footing. Examination often includes trotting in hand in straight lines, and circles to both directions. It may also include moving a horse up or down inclines or through specific patterns. For the diagnosis of some types of lameness problems, having a rider up can be advantageous.

FLEXION EXAMS: Flexion exams involve putting specific joints or regions of the limb under stress for a specified and consistent period of time. The horse’s degree of lameness is assessed before and after flexion. The result, which is the change in severity of lameness following flexion, provides additional information regarding the origin of the pain. As with many parts of the exam, flexion tests are subjective, and the vet must interpret them in light of what is considered normal for that specific horse.

HOOF TESTERS: Hoof testing involves the use of a pincer-like tool to put pressure on specific regions of the foot in search of a pain response. As with flexion exams, the key to accurate interpretation of hoof tester examination is knowledge of what constitutes a normal response. This can only be gained through a methodical approach, and lots of experience with different types of horses and hooves.

Once these things have been done, the veterinarian usually has determined which limb is lame, and may have an idea where the pain is located within that limb.

At this point, nerve blocks may then be necessary to determine precisely where the pain is located.

NERVE & JOINT BLOCKS: Nerve blocks are used to methodically numb portions of the limb as a means of finding the site of pain, using the process of elimination. Also known as diagnostic anesthesia, “blocking” is the injection of a local anesthetic agent around specific nerves or into specific joints or other structures. The horse is examined at the trot before the block, and the degree of lameness determined. Then the area in question is numbed, and the horse is asked again to trot off.  Either there is improvement in the lameness or not.

If there is not, the process is continued on specific nerves progressing up the limb until the lameness is visibly lessened. Specific joints and tendon sheaths can also be blocked for a more specific localization of lameness. Blocks into a joint or tendon sheath require surgical cleanliness and technique to prevent infection of these structures. Limitations of blocking include spread of local anesthetics to adjacent regions, clouding the interpretation of the results.

LAMENESS TREATMENTS

All of the above steps, when performed properly and assembled and interpreted correctly, help to provide an accurate diagnosis and form the basis for a treatment program. Appropriate treatments will depend on the DIAGNOSIS. Ultimately, the treatment selected will depend on many factors, including your budget.

Examples of veterinary treatments used to address various lameness diagnoses include:

* Joint (intra-articular) injections of steroids and other substances to reduce inflammation and pain in an arthritic joint.
* Systemic (oral or injectable) anti-inflammatories and pain relievers to manage multiple pain sources, to manage chronic pain in older or debilitated horses, and as an adjunct to more specific therapies used.
* Surgery, especially arthroscopy, is used to treat certain types of lameness.  The most common is arthroscopic surgery, wherein repairs are made to the joint surface through several tiny incisions, and using a tiny camera and instruments inserted into the joint.
* There are also a multitude of other newer therapies available including Pulsed Extra-Corporeal Shockwave, Stem Cell Injection, Injection of Platelet Rich Plasma, Autologous Conditioned Serum, IRAP and others.  These are generally classed as “regenerative therapies” wherein the body is manipulated in some way to heal itself without externally derived medications.  This is the exciting forefront of medicine and is the topic of another article.
* Complementary therapies like acupuncture, chiropractic, massage and other treatments may have additional value in some cases but are not a substitute for a thorough lameness evaluation.