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Lameness: General - Jun 30th, 05

Stress, strain or injury can take a toll on any horse, even one with no obvious conformation defects. When lameness occurs, you should contact your veterinarian promptly. A prompt examination can save you time, money and frustration by diagnosing and treating the problem immediately, possibly preventing further damage. The goal of such early examinations is to keep small problems from becoming big ones.

Lameness evaluations are also routine in most purchase examinations. When your veterinarian evaluates an animal you are considering for purchase, you may be forewarned about potential problems and should be able to make a more informed decision.

LAMENESS DEFINED

Traditionally, lameness has been defined as any alteration of the horse's gait. In addition, lameness can be manifest in such ways as a change in attitude or performance. These abnormalities can be caused by pain in the neck, withers, shoulders, back, loin, hips, legs or feet. Identifying the source of the problem is essential to proper treatment.

EXAMINATION PROCEDURES

Veterinarians have specific systems for performing examinations, depending on the reasons for the evaluation. However, essential features of a thorough examination include:

- **The medical history of the horse.** The veterinarian asks the owner questions relating to past and present difficulties of the horse. He or she also inquires about exercise or work requirements and any other pertinent information.
- **A visual appraisal of the horse at rest.** The veterinarian will study conformation, balance and weight-bearing, as well as look for any evidence of injury or stress.
- **A thorough hands-on exam.** The veterinarian palpates the horse, checking muscles, joints, bones and tendons for evidence of pain, heat, swelling or any other physical abnormalities.
- **Application of hoof testers to the feet.** This instrument allows the veterinarian to apply pressure to the soles of the feet to check for

undue sensitivity or pain. Many practitioners will concentrate on the front feet, as 70-80% of the horse's weight will be supported by the front limbs.

- **Evaluation of the horse in motion.** The veterinarian watches the horse walking and trotting. Gait evaluation on a flat, hard (concrete) surface usually yields the most. Observing the horse from the front, back and both side views, the veterinarian notes any deviations in gait (such as winging or paddling), failure to land squarely on all four feet and the unnatural shifting of weight from one limb to another. The horse also walks and trots in circles, on a longe line, in a round pen and under saddle. The veterinarian looks for signs, such as shortening of the stride, irregular foot placement, head bobbing, stiffness, weight shifting, etc.
- **Joint flexion tests.** The veterinarian holds the horse's limbs in a flexed position and then releases the leg. As the horse trots away, the veterinarian watches for signs of pain, weight shifting or irregular movement. Flexing the joints in this manner may reveal problems not otherwise readily apparent.

DIAGNOSTIC TESTS

Diagnostic procedures are often necessary to isolate the specific location and cause of lameness. *Lameness is best treated with a specific diagnosis.* If your veterinarian has cause for concern based on initial examination, he or she may recommend further tests, including diagnostic nerve or joint blocks, radiographs, nuclear scanning, ultrasound, arthroscopy or examination of blood, synovial fluid and tissue samples.

- **Diagnostic nerve and joint blocks.** These analgesic techniques are perhaps the most important tools used to identify the location of lameness. Working systematically, the veterinarian temporarily deadens sensation to specific segments of the limb, one joint at a time, until the lameness disappears. This procedure isolates the area of pain causing the lameness. Blocks can also help determine whether the condition is treatable.
- **Radiographs** are useful in identifying damage or changes to bony tissues. They should be interpreted only by an experienced and knowledgeable veterinarian, since not all changes are cause for concern. Radiographs provide limited information about soft tissue, such as tendons, ligaments or structures inside the joints, which are often the source of lameness.
- **Scintigraphy (nuclear scanning).** Radioisotopes injected intravenously into the horse are concentrated in areas of injury. These areas are scanned with a gamma camera, providing an image of the trouble site (horses will need to be quarantined for radioactivity after this procedure).
- **Ultrasound (sonography).** This procedure uses ultrasonic waves to image internal structures.

- **Arthroscopy.** This surgical procedure allows visual examination of the inside of a joint or tendon sheath. It requires general anesthesia but may be the only way to define the damage. Some diagnoses can only be made with arthroscopy. If deemed necessary, surgical treatment is often performed at the same time.
- **Blood, synovial (joint) fluid and tissue samples.** These samples can be examined for infection or inflammation. Such examinations usually require laboratory testing.

AAEP LAMENESS SCALE

Because each horse has unique performance characteristics, evaluating lameness can be challenging. Experienced riders may detect minor alterations in gait before they are apparent to an observer. Lameness may appear as a subtle shortening of the stride, or the condition may be so severe that the horse will not bear weight on the affected limb.

With such extremes of lameness possible, a lameness grading system has been developed by the AAEP to aid both communication and record-keeping. The scale ranges from zero to five, with zero being no perceptible lameness, and five being most extreme. **The AAEP guidelines explain the grading system this way:**

- 0:** Lameness not perceptible under any circumstances.
- 1:** Lameness is difficult to observe and is not consistently apparent, regardless of circumstances (e.g. under saddle, circling, inclines, hard surface, etc.).
- 2:** Lameness is difficult to observe at a walk or when trotting in a straight line but consistently apparent under certain circumstances (e.g. weight-carrying, circling, inclines, hard surface, etc.).
- 3:** Lameness is consistently observable at a trot under all circumstances.
- 4:** Lameness is obvious at a walk.
- 5:** Lameness produces minimal weight bearing in motion and/or at rest or a complete inability to move.

MORE ABOUT OBSERVING THE HORSE IN MOTION

The veterinarian should observe the horse on both soft and hard surfaces, since different types of lameness may become apparent with different footing. In addition, lameness may only be apparent when the horse is under saddle, or it may be manifest only at liberty or on a longe line when the horse can be evaluated without the influence of the rider.

A horse's walk and trot may be especially revealing. The slower gait of the walk makes it easier to observe slight deviations that aren't readily apparent at a faster pace. However, the trot is perhaps most useful for evaluating lameness because it is the simplest gait, consisting of a two-beat stride pattern, and because the horse's weight is distributed evenly between diagonal pairs of legs. In some cases the speed and concussion of a faster pace (i.e. canter, gallop) is needed to help demonstrate the lameness.

LAMENESS EVALUATIONS IN RELATION TO PURCHASE EXAMS

Evaluation for the presence of lameness should be part of every purchase evaluation. While it is impossible to predict a horse's actual performance, the veterinarian can provide information regarding lameness or potential lameness by evaluating conformation, movement, medical history, past performance and existing medical conditions. The extent of the exam will be determined by the buyer and veterinarian. Value, intended use and long-term goals may be factors in selecting certain exam procedures. For example, radiographs, sonograms and other diagnostic tests provide comprehensive pictures of the horse's condition, but they also add to the exam's cost. Remember, your veterinarian cannot tell you whether to buy a horse or not, they can simply assist you in finding current or potential problems.

The most important question your veterinarian will ask is: *What will you be doing with this horse?* Your veterinarian will then weigh conformation, movement and medical considerations against the type and level of performance expected. A horse that is fine for a daily pleasure ride may not hold up under more strenuous activities.

LAMENESS EVALUATION

In the purchase lameness exam, the veterinarian will try to determine two things:

- 1) Is the horse lame at the present time, or are there existing conditions that deserve a closer look?
- 2) What is the likelihood that the horse will remain serviceable for its intended use? Age, health, expected level of activity, conformation and past use will be considered. The veterinarian will inform the owner of the relevant facts and risks, and the owner can then decide whether to purchase the horse.

LIMITATIONS OF PURCHASE EXAMS

It is important to remember that even a favorable report following a lameness exam does not guarantee there are no problems. Many factors can affect a horse's short- and long-term ability to perform. Factors in the lameness equation include many variables, such as:

- Conformation
- Hoof care
- Use of protective leg gear
- Fitting and conditioning of the horse
- Degree and manner of training
- Type and level of performance
- Age
- Skill, balance and experience of the rider
- Type or condition of the ground on which the horse performs
- Disease or injury
- Genetic predisposition
- Others

In order for your veterinarian to evaluate a horse fairly, the animal should be fit, conditioned and in training for its intended use. A horse that has been laid off for an extended time will be difficult to evaluate for lameness. One option may be to ask that the horse be returned to training and then re-examined after 30-60 days. Depending on the horse's value, such a request may be reasonable. Ask your veterinarian.

GOOD STEWARDSHIP

Lameness is a complicated condition, with many possible causes. Be a conscientious observer. If you suspect a problem, discontinue riding your horse and seek advice from your veterinarian promptly. By identifying even a minor lameness and acting swiftly to correct it, you will minimize the risk of injury to the horse and yourself, and you will be rewarded by better performance and a longer useful life from your horse.

For more information, contact your veterinarian.

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