PREPURCHASE EXAMINATION OF HORSES: INTRODUCTION

Prepurchase examinations are often requested by a potential buyer of a horse. The objective is to reduce the buyer’s risks in relationship to the general health and athletic soundness of the horse for sale. The examination is not meant to guarantee soundness of the horse, but is an attempt, on the part of the veterinarian, to ascertain any preexisting problem or any potential problem that may affect future soundness (e.g., degenerative joint disease).

The examining veterinarian should have experience with the specific breed, as well as knowledge of the purpose for which the horse is being purchased. Ideally, the examiner should also be aware of any related organizational regulations that may influence the prepurchase examination. All notes generated during the examination should be kept in the buyer’s file and a report should be generated for the buyer. The examination should be conducted in a thorough and organized manner, as prepurchase examinations are a common cause for litigation from dissatisfied buyers. The major problems related to litigation are lack of understanding of the prepurchase examination process and the client’s excessive expectation of a secure investment.

At the onset, the roles of all the parties involved (e.g., buyer, trainer, legal agent) in the purchase of the particular horse should be defined. Trainers may or may not have legal agent status. The trainer does have the potential to be responsible for assessing buyer’s expectations for the horse’s athletic future and also whether the horse is suitable for the buyer. If an agent is representing the buyer, the examining veterinarian should encourage all information gathered to be communicated to the buyer, along with the report. Buyers of horses have different levels of experience and practical expectations. The veterinarian should ascertain the particular buyer’s expectations and define the limitations of the examination, emphasizing that the examination does not eliminate risks.

The buyer is the owner of the information, but needs to maintain a level of confidentiality so that the reputation of the horse is not potentially altered due to inappropriate dissemination of medical information. Through requests by the buyer or the buyer’s agent, the seller and/or their veterinarian may agree to provide the horse’s medical history to the examining veterinarian. These medical records are returned at the end of the examination. Trial periods are often acceptable and encouraged, especially if the seller can be assured of the horse’s safety. One option is to house the horse in a mutually known, professionally managed barn. The seller may request that the horse be insured.

The simplest way for the veterinarian to accumulate history prior to the examination is to have the seller fill out and sign a history form. This helps to legally bind the seller in the transaction and gives information that may or may not have been known to the buyer, their agent, or the examining veterinarian. A similar questionnaire can be devised for the buyer as to their expectations, potential use, and previous experience with the horse in question. Examples of such forms are readily available on the Internet and may be modified as needed.

Traditionally, it is recommended that the examining veterinarian have had no contact with the horse or seller in a previous medical or personal role. However, this is often not possible when the horse is being sold within a small community or within the same boarding barn. In such situations, the relationship of the veterinarian to all parties involved should be clearly stated. The opposite situation can occur when the horse is being purchased out of town and the examining veterinarian is not the routine veterinarian
for the buyer. The examining veterinarian may want to have the buyer’s routine veterinarian review the examination report and any ancillary information, such as radiographs, laboratory tests, etc. Also, if any particular question arises during the examination, an opinion from a board-certified veterinary specialist might be indicated.

If the veterinarian has working knowledge of competition rules related to the discipline in which the horse is being purchased (e.g., height requirements), he or she should explain how these rules may apply to the prepurchase examination. The veterinarian should counsel the buyer to learn the specific rules and verify “cards” that belong to the pony or horse. Having the buyer verify any rule requirements may help reduce future problems.

State and international disease testing and other requirements should be reviewed with the buyer and complied with by the examining veterinarian. Drug testing should be offered to the buyer and its limitations discussed. If the horse is purchased at a competition, or the seller is not known to the buyer, drug testing should be strongly recommended. Even when a buyer does not wish to have drug testing, examiners often collect blood at the time of the exam and store the serum or plasma frozen. It would then be available if any questions arose after the purchase.

Prepurchase examinations of performance horses often are conducted under several different conditions of training. The ideal situation is that the horse is currently active in the particular level of competition for which it is being purchased. However, prepurchase examinations can involve some inherent predictability even though they are not classically meant for prediction of a horse’s health. The following are examples of conditions an examiner may face. Any of these or other modifying conditions should be noted as part of the examination notes: 1) A horse is currently in early training for a specific athletic endeavor and the buyer is ultimately looking to have the horse compete at a higher level. 2) A horse is coming off a lay-off period and has only been back in work for a brief period of time. 3) An older horse that has some infirmities and is being purchased as a schoolmaster by a less experienced rider, in which case the physical demands will potentially decrease with the new buyer. 4) A horse is being purchased for a financial investment. 5) A horse is being purchased as a pleasure or trail horse where the workload is not high but the horse’s attitude is extremely important. In each of these conditions, different approaches are needed, and different questions should be asked and understood by the examiner.

Examinations of pretraining and brood stock present different issues to the examining veterinarian. The examiner must be alert to potential limiting conditions of the suckling, weanling, or yearling that would diminish its ability to perform its potential future work. In examining mares and stallions, experience with reproductive examination procedures is needed. In all situations, thorough knowledge of the rules of the specific breed and any governmental disease regulations is critical.

The examination for a performing horse can be divided into 4 sections. The first part is observing the horse in the stall. The second includes observing the horse on a lead strap at a walk and a trot on a straight line, doing flexion tests, and in a circle with a longe line. The third part of the examination involves observation of the horse while it is being ridden. The fourth part includes diagnostic procedures such as radiography and ultrasound.
During the first part of the examination, a thorough identification of the horse should be recorded. This can be a written description of its color and age verification with inspection of the teeth. Notations of markings and any other permanent peculiarities to the horse’s body are also beneficial. The most common markings include a star, stripe, blaze, or snip on the face of the horse. Any white markings on the legs should also be described. Other markings that are valuable to record include whorls on the face and neck, brands, and tattoos. The presence of any scars, splints, or joint effusion should be noted. In some cases, brands or tattoos can give information, such as age (e.g., American Jockey Club tattoos have an alphabet letter before the number; “A” represents the years 1971 and 1997). The date, time, and place of the examination should also be recorded. An ophthalmologic examination should be done, as well as auscultation of the heart and lungs, temperature and pulse recordings, and oral examinations. It is also worth looking in the stall for the character of the manure and feed and/or oral medication remaining in the feed bucket.

The second phase of the examination outside the stall can begin with general body and skin condition. The body condition score (1-9) can be assigned a number from thinness (1) to obesity (9). Scores of 4, 5, or 6 are considered normal. Next, visual observation and palpation of the limbs, hoof examination (including hoof testers), passive and active flexion tests, and watching the horse move on different surfaces on a straight line and in a circle should be done. It is also valuable to complete a basic neurologic examination.

Many examiners feel that it is helpful to watch the horse being ridden to rule out any subtle unsoundness. It also gives the examiner some observations and insight into the potential of the rider, if it is the buyer. These observations are worth noting, even though it is the trainer’s and buyer’s responsibility to determine the suitability of the horse.

The fourth part of the examination should include any diagnostic procedures that may be necessary to determine soundness, including radiographs (particularly of the feet, hocks, and stifles), ultrasonography, and nuclear scans. Radiography is the most common diagnostic procedure performed. A recent retrospective analysis of radiography in equine prepurchase examinations suggests that higher radiographic grades (e.g., 2-3) in the navicular bone and distal phalanx are associated with lameness, whereas similar grades in the tarsus were less likely to be associated with lameness.

A summary report should be prepared and given to the buyer. There are many published samples of these reports, available in letter or check-off list form. The report should describe any abnormal or undesirable findings and include an opinion as to the functional effect of these findings. The American Association of Equine Practitioners publishes an annual Resource Guide in their membership directory that provides guidelines for reproduction, medications, sale issues such as cryptorchidism, dental malocclusions, post-sale examination of the upper respiratory tract of horses intended for racing, radiograph custody, and sale disclosure. Specific guidelines for reporting prepurchase examinations are also included.

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THE LAMENESS EXAMINATION: OVERVIEW

A systematic investigation of a lame horse is time consuming. The examination also benefits from standardized facilities such as a level, firm running-up track and ideally both a firm, nonslippery surface and a softer area for lunging or riding the lame horse.

The examination begins with a comprehensive medical history; type, age, and training regimen may give important clues to the lameness as will the time since onset of lameness and interim management. The interval since the last shoeing should be noted, as well as any suggestions that the lameness may improve with either rest or exercise. Response to anti-inflammatory or analgesic medications may provide useful information. Results of hematologic and biochemical analyses may shed light on other problems that influence overall performance. Anemia may be associated with muscle fatigue, while enzymes such as AST and CK in combination are reasonably muscle-tissue specific; they rise as the result of severe muscle cell damage and may not be elevated in cases of moderate sprain of a single muscle, in particular if the pathology affects the connective tissues of the musculo-tendinous junction rather than the muscle fiber itself.

In cases of chronically elevated muscle-related enzymes suggestive of equine rhabdomyolysis, a muscle biopsy may be useful to check for subgroups such as polysaccharide storage myopathies.

Although valuable, modern diagnostic imaging techniques are no substitute for detailed visual inspection and thorough manual palpation of the limbs in weightbearing and nonweightbearing positions. The high degree of variation between horses should be remembered, and comparison with the contralateral limb should always take place, although the latter may not necessarily be a useful control. Any heat, joint distention, or abnormal tissue tension should be noted, as well as the reaction of the horse and range of flexion and extension of all joints. Specific areas of muscle wastage may also provide useful information. The feet should be thoroughly examined, including compression of the walls and sole with hoof testers. Wear patterns of shoes and feet should be noted. A number of abnormalities such as broken toe/pastern axis; mismatched hoof angles; under-run, contracted, and sheared heels, and disproportionate hoof size are seen more frequently in lame than in sound horses. Shoes should be left on, as removing them at this stage might make the horse footsore and thereby preclude further examination. However, occasionally it may prove useful to remove the front shoes to demonstrate that the shoeing was the cause of the lameness.

The back and neck should be thoroughly examined with the horse restrained and standing square on a level surface. The neck should be assessed for range of movement in all planes and for evidence of muscle asymmetry and pain. The dorsal midline of the back should be straight, and equal tone should be present in the paravertebral musculature on either side of the midline. The same should be true of the gluteal musculature and the hamstrings. The definitive diagnosis of a strained or torn muscle can be extremely difficult, especially in more chronic cases. Spatial alignment of the tubera coxae and sacrale should also be observed. Flexibility and extensibility of the back can be checked by alternately pinching the midline in the midthoracic and sacrococcygeal regions, while lateral flexion can be checked by turning the horse short around its own axis.
Examination during exercise becomes an option only if the degree of lameness is minor and chronic. If lameness is major and acute (e.g., suspected fracture), additional exercise could result in a catastrophic breakdown with dire consequences for the horse. It is important to check whether the horse may have been given analgesic medication prior to the lameness examination.

A firm, nonslippery surface (e.g., hardcore fine gravel) is ideal for trotting on a straight line and for lunging on a firm surface. It also provides an opportunity to listen to the footfall and consider this information along with the visual appraisal. However, feet of different shapes make slightly different impact sounds, which may be confusing. Although a horse may be regular in its stride, it may have a slightly weaker limb, particularly if recovering from a previous problem. Lunging on tarmac (asphalt) or concrete increases the risk of the horse slipping. It also generally alters the gait so much that it has little value in lameness examination. Leading the horse on a circle at a trot also tends to alter the horse’s stride too much; the horse cannot move its neck and instead “sets” its head on the leader’s hand. Assessing the horse at a canter, which requires a softer surface, is always important. A surprising number of horses with lower back pain may appear normal at a trot but are unable to maintain a normal 3-beat canter rhythm or may canter disunited.

Flexion tests are useful diagnostic tools. The range of movement and response to passive flexion, along with any suggestion of increased lameness or onset of lameness following flexion, should be observed. The distal phalanges in both forelimbs and hind limbs should be flexed independently of carpus and hock to obtain maximal information. However, results of recent studies have suggested that “false-positive” results may be seen if excessive forces are applied. Consistency should always be applied, and individual experience used. A single positive flexion test without associated lameness may not be of significance and in some horses has proved to be a lifelong observation.

To establish consistency, the entire examination should involve the same handler, the same bitting, and the same surfaces under foot. The horse should be controlled so that it is trotting at a useful, repeatable pace to evaluate the lameness (e.g., trotting in a straight line with the horse straight through its neck and trunk). This “correct” pace varies between horses. Correct bitting, is important but can be confusing due to an altered posture when lunging and should be avoided if possible. Very slight sedation may also result in a horse with a more relaxed outline and allow a better assessment without seemingly influencing the degree of lameness. Slowing down the pace at the trot often illustrates a subtle lameness better because the horse loses its momentum and struggles with suspension in the affected limb(s).

A ridden assessment of the horse is often necessary, particularly with a subtle lameness or a horse that is unwilling to perform certain movements (e.g., a dressage horse). A multilimb lameness without an obvious single-limb lameness may also be involved. The clinical signs may be minor (e.g., signs of aversion as opposed to lameness). Subtle signs include an unwillingness to take a strong contact with the rider’s hand, a slight heat tilt, and tail swishing. Seeing the horse and rider at work is necessary to look for subtle lamenesses. However, a good rider can, often inadvertently, hide a problem by his or her inherent expertise and ability to “correct” difficulties. Similarly, a bad rider can make a sound horse look lame (“bridle lame”). Deliberately riding on the wrong diagonal frequently helps illustrate a problem, especially those involving the back. A change of rider may occasionally be required to highlight a particular problem. Occasionally a horse appears to be sound when lunged and ridden, but the rider feels that the performance is impaired. In such cases it may be worth working the horse on concomitant analgesic or anti-inflammatory medication at therapeutic levels for an adequate period to assess whether
improvement occurs. If so, medication should be withdrawn and diagnostic anesthesia used beginning in an arbitrary limb, most often a forelimb. In this way, multiple limb lamenesses (as many as 4), often mimicking the clinical picture associated with back pain, can be evaluated and treated. Some veterinarians choose to ride the horse as part of the lameness examination; however, in most cases time spent on the ground observing the horse on different surfaces and in different training situations is time better spent.

Because lameness may indicate a peripheral nerve dysfunction, a neurologic examination should always be part of the lameness examination and might include observing the horse execute “complicated” movements such as turning short, backing, “hopping” on one forelimb (with the other forelimb held up), and negotiating a curb. These tests help determine whether reduced proprioception, weakness, or spasticity are present or suggest abnormalities in the motor function of the major muscle groups that flex and extend the limbs. In acute traumatic injuries of the nerves to the limbs, the presence of these gait deficits relative to the major muscle groups provide the key to diagnosis. Longstanding peripheral neuropathies also give rise to denervation atrophy of the innervated muscles as seen in suprascapular nerve trauma (“sweeney”), in which atrophy of both the infraspinatus and supraspinatus muscle develops.