



Equine Purchase Examinations

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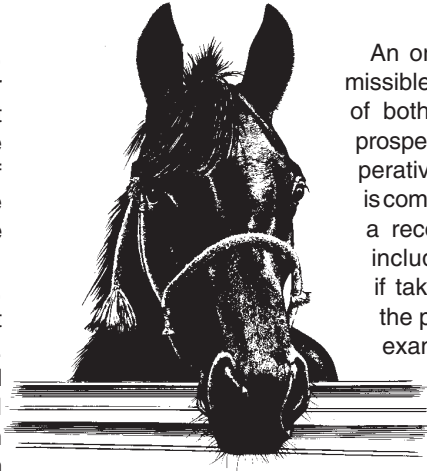
Unlike other consumer products that one might purchase, horses rarely come with a guarantee. Therefore, the buyer must make the best possible attempt to select an animal that is suitable and capable of performing a given function. The final determination, of course, is the price. The combination of function capability, suitability, and price enter into the ultimate decision of whether or not a prospective buyer should purchase a given animal.

The purchase examination or prepurchase examination, done by a qualified veterinarian, is perhaps one of the best ways to help the prospective buyer determine serviceability. It is the veterinarian's responsibility to look for physical and medical evidence to determine whether or not the horse will withstand a particular use for the prospective buyer. The term "purchase examination" implies a complete clinical examination that includes consideration of the pertinent medical history and environmental factors. All other terms that have been associated with this type of examination should be abandoned, for they are either incomplete or cause confusion about the type of examination that has been done.

The role of the veterinarian is to find medical problems on the date of the exam, evaluating conformation defects in light of future problems that they may cause, as well as evaluating overall health. Even though the procedure is applicable to all classes of horses, the veterinarian involved should have a thorough knowledge of the class and use of the horse to be examined.

Serviceability is not synonymous with soundness. Perfectly sound animals—those with no physical faults—are rarely found. A horse may have minor alterations from "perfection" and still be able to perform the given task. Whether these alterations are too numerous or severe to limit usefulness is the question to be answered. It is the veterinarian's responsibility to note the existing problems and assist the buyer in determining which ones can be overlooked and which will limit present use or have potential to cause future problems. The future can often be accurately predicted, but not guaranteed.

It is inadvisable to examine and determine the potential of an animal that is not on a regulated work schedule. The immature animal which is not in training must be given extended paddock exercise in order to completely evaluate the musculo-skeletal and cardiopulmonary systems. It is not the domain of the examining veterinarian to determine the presence of undesirable traits or vices. The disclosure of this information is dependent upon the integrity of the seller.



An oral or written report is permissible, depending on the desires of both the veterinarian and the prospective buyer. However, it is imperative that the animal examined is completely identified. In addition, a record of all clinical findings, including radiographs (X-rays) if taken, must be maintained in the permanent office files of the examining veterinarian.

It is important that each veterinarian develop a standardized basic procedure in the examination of the horse for purchase. More detailed diagnostic techniques are performed in the event of suspicious disease problems or on client request. In these cases, consultation with a specialist may be required.

Before the examination is begun, any history of preventive medicine programs and previous medical problems is obtained. The horse's markings and other means of identification are noted. Ideally, the horse has been worked by the prospective buyer before the examination so it is known that horse and rider are suited for each other. Findings should be recorded in the order noted so that the entire examination is not trusted to memory.

The horse is viewed in its stall for evidence of abnormal stance or posture and temperament. The horse's eyes are then examined with a direct ophthalmoscope. An indirect, aspheric viewing lens with a halogen-illuminated light source is excellent for a panoramic view of the ocular fundus (rear portion of the eye). Ophthalmic abnormalities are interpreted in terms of the horse's intended use.

The transilluminator of the ophthalmoscope is used to examine the nasolacrimal puncta and external ear canals. The mouth is rinsed and examined, manually and with the transilluminator, for dental disease, malocclusion, or other abnormalities of the oral cavity.

With the horse still in the stall, the rectal temperature is measured and the respiratory rate and pattern noted. The heart is auscultated (monitored using a stethoscope) from both sides while palpating (feeling) the transverse facial or facial artery for irregularities of rate or rhythm. Occluding

(blocking) the horse's nostrils for at least 30 seconds often accentuates respiratory problems as indicated by subsequent coughing or dyspnea (difficult breathing). This also causes the horse to breathe deeply for thorough auscultation of the lungs. The trachea and larynx are auscultated carefully and the nasal sinuses percussed (tapping the area as an aid in diagnosing the condition of the underlying parts by the sound obtained).

The horse is then taken to a well-lit, level, firm surface, and made to stand with its weight equally distributed on all four legs. The horse's conformation, balance, and symmetry, from all views, are carefully evaluated, with faults predisposing to lameness or gait abnormalities noted.

Next, the head is observed for symmetry, carriage, and coordination of movement, and any cranial nerve defects noted. The mandibular lymph nodes, parotid glands, and guttural pouch areas are palpated. The larynx is palpated for atrophy of the cricoarytenoideus dorsalis muscle or signs of previous surgery. The laryngeal cartilages often can be compressed, causing inspiratory noise in horses with laryngeal hemiplegia (roaring). The ventral neck muscles are palpated and the patency (the condition of being wide open) of both jugular veins determined. The cervical vertebrae are palpated, beginning at the poll. Symmetry of the wings of the atlas (first cervical vertebra) and the horse's response to cervical vertebral palpation and manipulation are noted.

Examination of the body begins on the left side with palpation of the spine of the scapula (shoulder blade), point of the shoulder, and muscles of the shoulder and chest. Working posteriorly on the topline, the withers, dorsal spinous processes of the vertebra, tuber sacrale, and point of the hip are palpated. The muscles of the back, loin, and croup are palpated and evidence of muscle guarding noted. The girth region and ventral abdomen are examined for midline dermatitis, absence of the umbilicus (navel), or signs of previous abdominal surgery. Several breeds of horses will not allow the exhibition of horses with altered tail function. An electromyogram may be necessary to prove normal tail function. Normal tail tone and function should be determined by manipulation and careful observation when the horse is worked. Evidence of coccygeal muscle atrophy (wasting away) and surgical or medical alteration of normal tail function should be noted; the gluteal and caudal thigh muscles are palpated and compared for symmetry. Unilateral muscle atrophy may indicate chronic rear-leg lameness. The external genitalia (reproductive organs) are also examined at this time. Examination of the body is then repeated on the right side.

Next, each limb is inspected, beginning with palpation of the structures of the left forelimb. The digital pulse (pulse at the posterior fetlock) is taken before the sulci and the frog are cleaned and the sole pared, if necessary. The comparative size, balance, wear, and quality of each hoof are noted. A flat sole, atrophied frog, divergent growth rings, sheared heels, improper hoof-pastern angle, and dished cranial (dorsal) hoof wall may indicate previous or existing foot disease. The type of shoe, presence of pads, and shoe wear may also provide useful information. The pliability of the collateral cartilages of the coffin bone and presence of coffin joint effusion (excess fluid) are determined. The posterior pastern region is examined for neurectomy scars, painful neuromas, digital sheath effusion, thickening of the distal sesamoidean ligaments, and ringbone. Firm pressure applied to either side of the exten-

sor tendon on the face of the fetlock may reveal villonodular lesions (proliferative nodules), extensor process fractures, or osselets (bony protrusions). Fetlock joint effusion, "windpuffs," and annular ligament constriction are conditions commonly encountered.

With the leg flexed at the carpus (knee), each sesamoid bone and its branch of the suspensory ligament is palpated for thickening, enlargement, or pain. Moving anteriorly (to the front), the suspensory ligament is palpated to its origin and the flexor tendons palpated for thickening, pain, and loss of separation along their lengths. While palpating the suspensory ligament, abnormal enlargements of the splint bones (short bone along each side of the cannon bone) are often encountered. With the limb still flexed, each splint bone should be palpated from its distal end (farthest point from attachment) to its proximal attachment. Pain on palpation of splint bone enlargements and degree of impingement on the suspensory ligament should be carefully considered.

With the leg flexed, the carpal bones are palpated for thickening, or rents (tears) of the fibrous joint capsule and synovial effusion. The accessory carpal bone and carpal canal are also palpated. Proceeding from the carpus, the muscles of the forearm, distal radius, chestnut, and olecranon are inspected.

After palpation of the forelimb, the range of motion and response to forced flexion or rotation of the digit, pastern, fetlock, and carpus are determined. The shoulder and elbow usually are not manipulated. Decreased range of motion and abnormal response to manipulation are noted and reevaluated when the horse is examined in motion.

Examination of the hindlimb below the hock is similar to that of the forelimb. At the hock, effusion of the tarsal sheath, tibiotarsal joint, and tendon sheaths over the face of the hock are evaluated. The bony structures of the hock, point of the hock, and plantar ligament are palpated. The surgical sites for cunean tenotomy and lateral digital extensor tenotomy are examined. Proceeding to the stifle joint, the tibial crest, patellar ligaments, patella, and lateral trochlea of the femur are palpated. Horses with chronic upward fixation of the patella often resent palpation of the lateral trochlea of the femur and attempts to fix the patella. By this time, the horse's temperament should be known. Most horses permit the examiner to stand behind them and palpate both stifle joints simultaneously, allowing comparison of synovial effusion and joint capsule thickening. The medial collateral ligament of the stifle should also be palpated. After the structures of the hindlimb are examined, the digit, pastern, fetlock, hock, and stifle are manipulated for range of motion and pain.

When the body and legs have been examined, hoof testers can be applied to the feet. Occasionally, a seller may implicate the hoof testers as causing lameness. For this reason, examination with hoof testers is done after the horse has been observed at work.

The next phase of the examination is to observe the horse in motion. Initially, the horse should be observed at a walk toward and away from the examiner. The length of stride, arc of the foot in flight, and how the foot lands should be related to conformation and suspected problems. The horse should be backed and turned in tight circles to detect subtle neurologic deficits.

On a longe line, the horse is worked in both directions at a trot. Work is started in large circles that are gradually

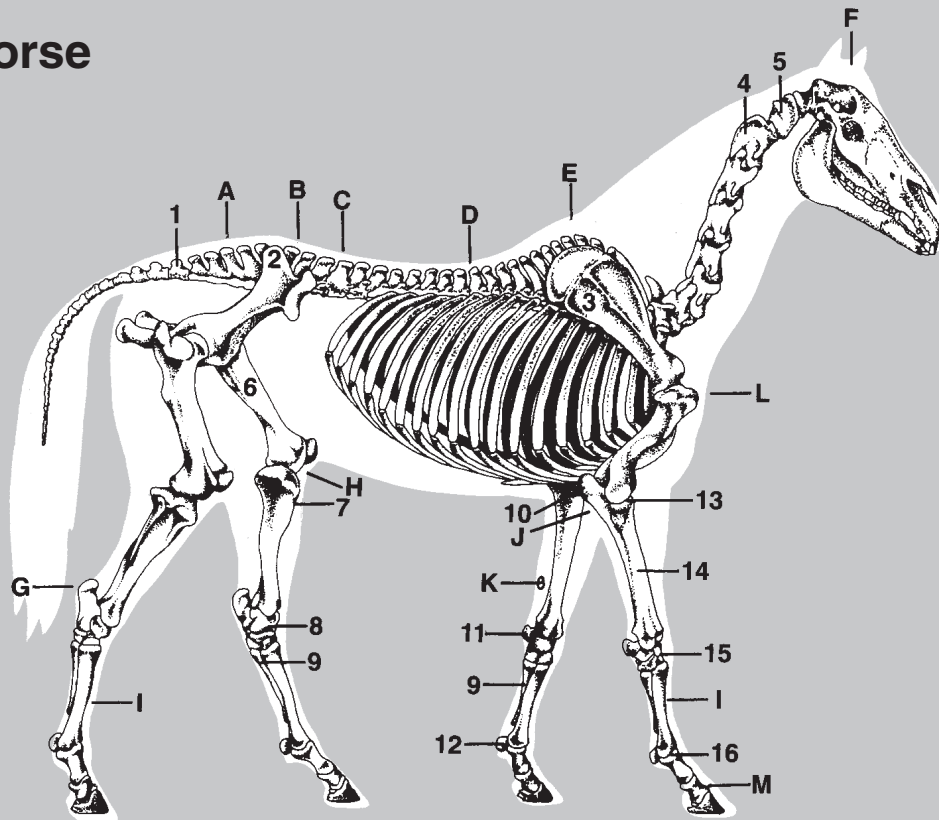
tightened. This provides the examiner a good opportunity to evaluate length of stride, fetlock over extension, toe stabbing or dragging, and other gait abnormalities.

Timed flexion or other manipulative tests are performed after work on the longe line, with emphasis on areas with suspected problems. The response to forced flexion, rotation, or digital pressure varies greatly between individuals and must be considered carefully, along with the history and clinical findings. The horse is then watched at work under saddle. After a warm-up period, the horse is observed at a walk, trot, and canter. Trotting in a tight figure-8 pattern frequently reveals subtle lameness. Lead changes and length of stride can be evaluated at a canter.

Though it is the trainer's job to determine whether the horse's disposition and athletic ability are suited to the rider and intended use, it is very informative to watch the horse perform as intended. Tail-wringing, ear-pinning, unwillingness to work in one direction, cross-cantering, failure to pick up leads or other inappropriate behavior often indicate problems. After the horse is worked hard, the larynx and heart are auscultated. Heart and respiratory rates are determined during recovery from exercise.

Once the physical examination is completed, other diagnostic procedures may be done. Radiography is probably the most common ancillary (secondary or follow-up) procedure performed. Radiographs are not routinely obtained in the ab-

The Horse



External Features: (marked with letters)

- A. Croup
- B. Point of hip
- C. Loin
- D. Back
- E. Withers
- F. Poll
- G. Hock
- H. Stifle
- I. Cannon
- J. Elbow
- K. Chestnut
- L. Point of shoulder
- M. Pastern

Skeletal Structure: (marked with numbers)

- 1. Coccygeal vertebrae
- 2. Tuber sacrale
- 3. Scapula
- 4. Axis (second cervical vertebra)
- 5. Atlas (first cervical vertebra)
- 6. Femur
- 7. Tibial crest
- 8. Tarsus (or tarsal bone)
- 9. Small metacarpal bone (splint bone)
- 10. Olecranon
- 11. Accessory carpal bone
- 12. Proximal sesamoid bone
- 13. Elbow joint
- 14. Radius
- 15. Carpus or carpal joint
- 16. Fetlock joint

sence of clinical findings, unless requested by the buyer. Other special diagnostic procedures performed include endoscopic examination of the upper respiratory system, fecal exam for internal parasite ova, rectal examination, uterine biopsy, and breeding soundness examination. Blood is drawn for a Coggins' test for Equine Infectious Anemia, if not current. Blood chemistry analyses, a CBC, urinalysis, drug tests, and an electrocardiogram are other tests that are mentioned for the sake of completeness. However, certain situations may warrant the use of these tests.

Prospective buyers should also be made aware of the potential of Hyperkalemic Periodic Paralysis (HPP). HPP is an inherited defect seen in descendants of a particular Quarterhorse sire characterized by intermittent episodes of muscular fasciculations, weakness, mytonia, and/or involuntary recumbency. During these episodes the serum potassium is often elevated, but between occurrences the potassium concentration is normal. For affected horses, this disease is a lifelong problem. This disease is an autosomal (chromosome-related) dominant trait. Owners and breeders with affected

horses should inform prospective buyers of the potential for this disease to occur.

After the entire examination is complete, the veterinarian may offer a prognosis (prediction) to the buyer. In considering the prognosis for a performance horse, one must consider the horse's conformation, temperament, intended use, past history, clinical problems, and results of ancillary diagnostic procedures.

The purpose of the purchase examination is not to pass or fail the horse, but to inform the buyer of existing or potential problems that could render the horse unsuitable for its intended use. Certain warranties or agreements between the buyer and seller, such as the length of serviceability, performance ability, and avoidance of drugs before the examination, are not the responsibility of the veterinarian.

The relatively small investment at the time of purchase for a good quality examination can help prevent a much larger investment in treatment or loss of performance later on. Such an exam is certainly a good choice for an informed purchase.

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