

Pre-Purchase Examination

Most veterinarians involved with sport horses who are participating in a prepurchase exam have a similar goal: to assist the rider in the physical examination of the horse they have deemed suitable for the task intended. Therefore, the goal is to help the rider find the correct horse – not to fail a horse.

Before we launch into the specifics of the exam, I would like you to keep the following in mind:

- No horse is perfect. All horses have some imperfections that will be major or minor in magnitude depending on what the horse is selected to do in its career.
- The veterinarian should enter the exam without concern for legal liability. His or her focus should be on a thorough exam to determine if the horse is suitable for intended usage.
- The buyer should understand there is no such thing as a crystal ball. The veterinarian is looking at the horse at a specific point in time with the history he is given. He cannot predict how a particular animal will perform in the future. The veterinarian performing the prepurchase exam is not the buyer's insurance policy for the horse staying sound. If the buyer wants that he should purchase a loss-of-use insurance policy and be sure that the insurance company will issue a policy on the horse in question.
- It is always easier to evaluate a horse that is doing the job that it is intended to do than it is to look at a youngster with no experience and speculate on what the horse might be able to do in the future.

Who is involved in the Pre-Purchase Exam?

The Buyer: The buyer has the most worrisome role as it is his money that will purchase the horse he hopes will compete successfully at the intended level. To help in the decision, the buyer assembles a supporting cast of advisors. At no time, however, can the buyer abdicate any of the ultimate responsibility for the purchase of the horse.

The Seller: The seller has a traumatic role to play. He is selling a horse in which he has invested years of training, or he has a young prospect for which he has high hopes. No seller likes to be told there is anything wrong with his horse. The prepurchase exam is designed to find out any possible problems with the horse and then assign significance to them according to the horse's intended purpose.

The Agent: The agent has expertise in selecting a horse for the buyer when the buyer is unable to find one himself. He often has multiple connections within the horse market and/or multiple young horses that he is bringing along for sale himself. The agent, having found the horse, has a vested interest in seeing the sale completed. He or she often earns a percentage for his or her connections and ability to find horses for a given task.

The Trainer: The trainer has an interest in helping the buyer procure the horse, as he will train the horse and rider to develop a successful combination. Often a trainer is very involved in the acquisition and purchase of a new or replacement horse for the rider.

He can offer a wealth of expertise concerning a horse's suitability to reach the competition goals as set by the buyer.

The Veterinarian: The veterinarian is the medical advisor. His or her opinion is sought to make sure the horse does not have confirmation, physical or lameness problems that will limit its ability to perform at a given level. It is very important to all parties involved at which the veterinarian have significant experience with the level of competition at which the buyer is expecting the horse to perform. The reason that this is so important is that at the end of the exam the veterinarian will need to put the imperfections or problems that he has found into perspective with what the horse will be asked to do. This part of the exam is critical and very difficult to achieve if the veterinarian does not have significant experience with this type of horse. The veterinarian will not pass or fail the horse since each prepurchase exam varies depending on what the buyer is expecting of that particular horse.

The Basic Examination

The basic exam has many individual variations, even among veterinarians within the same practice. The prepurchase exam calls on the detective and intuitive skills of the veterinarian to find any lameness and medical problems. He then incorporates his experience to explain what those problems mean in light of the intended use of the horse. This is easily the most complex exam that veterinarians are called on to perform. The lameness exam, on the other hand (which is different from the prepurchase exam), is simple because it has a stated goal – to determine if a horse has a lameness problem that is causing substandard performance.

In the prepurchase exam, the horse is examined by systems (heart,lungs,etc.) and by anatomic regions (right front limb,etc). The most common method is to begin by taking a brief history of any illnesses or lameness problems the horse may have had. Obviously, recent problems are of greater concern. Usually I ask what the horse has been doing for the past three-six months. The answer will determine if the horse has been at work or at rest. If the horse has been at rest, I want to know why. If the exam is taking place near the horse's stall, I look in it for evidence of cribbing or other stall vices. These vices are rarely a medical problem but often are of concern to a buyer. The general attitude of the horse and the basic conformation usually is examined at this time. The horse's markings are noted on a worksheet so if there is a question at a later date it can be proven which horse was examined on that day.

The Head: The head is often examined first, beginning with a thorough ophthalmic exam of the eyes. The sinuses are lightly tapped to make sure they have a normal resonant sound and are not filled with scar tissue or evidence of old infection. The ears are looked at to see if there is any evidence of viral growths, or tumors or discharge. The mouth is examined to see if the given age corresponds to the approximate dental aging, and any identification tattoo is recorded. I look to see if the teeth align properly and if there is need for dental care. A brief neurological exam is performed on the head to make sure the cranial nerves appear to be within normal limits.

The Respiratory System: The respiratory system is examined by auscultation (listening with a stethoscope). I listen to the trachea and lung areas, and the horse is usually encouraged to take a few deep breaths. This is accomplished either by holding the

nose for a brief period of time or by using a plastic bag, or it can also be done after the horse is exercised. Respiratory rates are taken during rest and after exercise. Any respiratory noise during exercise is noted.

The Cardiovascular System: The cardiovascular system consists of the heart and corresponding arteries and veins within the body. The heart is listened to for a normal rhythm and an absence of a murmur. Filling of the jugular veins and the leg veins, particularly in the hind legs, is evaluated after exercise. Any filling of the hind legs on a normal basis is also noted. The heart rate is taken while the horse is resting and again after exercise.

The Gastrointestinal System: The gastrointestinal system is evaluated as to whether the horse looks thrifty and is in good flesh. The intestinal sounds are monitored for any abnormalities, and in the southern states, for evidence of sand heard in the lower portion of the intestine. The lower abdomen is observed for any evidence of past colic surgery.

The Musculoskeletal System: The musculoskeletal system is one of the key points in the exam of the equine athlete. This system must have the conformation necessary to support the horse in the work that it has been chosen to do. Fairly major conformational flaws may be present in a lower-level horse but the horse still may be able to do its job. Upper-level horses, however, will tolerate only fairly minor conformational flaws because these flaws will rapidly affect performance as the horse continues to accumulate experience at the upper levels as well as wear and tear.

Usually I first look over the horse to determine if surgery has been performed to enhance the musculoskeletal system. I check the stifle area where a medial patellar desmotomy, a surgical procedure in which joint stability is improved by cutting the medial patellar ligament, may have been performed. I look for scars in the heel area which would indicate a neurectomy (best known as “nerving” where a surgical procedure is done to block pain. This is often used to manage navicular disease.) had been performed. Simply testing the heels for sensation is not an accurate enough test, since horses that have had neurectomies regain surface sensation, but not deep pain, within a matter of weeks.

The horse’s back is examined in detail and palpated for muscle soreness in the back and croup area. Next, the dorsal spine is palpated from the withers back to the sacroiliac area to determine if there is any pain anywhere. Some pain on muscular palpation is not uncommon for horses in competition.

Shoeing is also evaluated at this point with the horse being examined on a flat, level surface. The horse is then moved in hand at a walk and trot. I am looking to see whether the feet land flat and level. The feet are then examined to see if they are the same size. Unusual foot conformation, such as high heel, or low heel front foot conformation is noted as this may cause problems later.

This is also the time that I stand back from the horse and look for lumps and bumps, swelling in the fetlock or other points in the legs. Wind puffs or tendon sheath filling can become a problem, particularly if located low in the back of the hind fetlock area. Mild to moderate filling in tendon sheaths is a common finding in the equine athlete and is not of major concern unless it is associated with heat or pain on palpation or flexion of the limb. Particularly, I pay attention to the suspensory ligament branches, since these are commonly injured in sport horses.

Next, each leg is evaluated in turn for pain by hoof-tester response. It is preferable that the horse has not been shod within the prior week as occasionally there will be little sole present and false positive readings may result. The leg is then palpated for any pain or thickening in the tendons and ligaments. Pain on palpation is a highly subjective finding, and I attempt to correlate it with thickening before making a clinical judgment. Occasionally a horse will be subjected to additional tests such as diagnostic ultrasound to determine whether the horse simply flinches when it is palpated or if there is a real problem. The joints are flexed for evidence of full range of motion. This is what is called “passive flexion” since the horse is not jogged afterwards. I am checking to see that the horse bends his legs easily and it has a normal range of movement.

The horse is examined at a walk and trot on a straight, flat surface. He is then moved on a lunge line and/or under saddle at a walk, trot and canter, usually on firm footing that has a good surface. I look for any indication of lameness as evidenced by a head bob or a body drop from one side to another. If I have any questions after seeing the horse on the lunge line or if the horse has significant back soreness, I would definitely want to see the horse under saddle.

The next part of the exam is the “active flexion” test, which is flexion of the joints or limbs followed by jogging. This exam is simply a flexion test of the joint and then the horse is jogged away. It is acceptable for the horse to move stiffly or lame for a few steps after the flexion. The question is whether the horse is comparable side to side, and whether the horse takes an extended time to warm out of the flexion. Obviously horses with older arthritic joints or horses that have been in recent competition will take longer to warm out of the flexion tests. This is usually equal from side to side, unless the problem is worse on one side than the other. This exam simply compares the horse to itself, not to other horses. It should never be used as a basis to eliminate a horse from consideration. It is simply used as an indicator of a potential problem that may need to be x-rayed or further evaluated.

The Neurological Evaluation: A neurological evaluation is usually performed during the physical and the musculoskeletal exams. If a question is raised as to the ability of the horse to move its limbs normally, additional tests are performed. Some of these tests may include moving the horse in tight circles, and others may be blood or spinal-tap tests for equine protozoal myelitis (EPM). I normally do not take blood tests routinely for EPM unless the horses show some neurological signs, since 50 percent of normal horses in the United States will have a positive blood test to EPM.

Blood Work: The coggins test, which is required by most states for interstate transportation, is also recommended as a routine part of the prepurchase exam by the American Association of Equine Practitioners (AAEP). This is a test for equine infectious anemia. Although it is rare to find a positive reactor, a horse that does test positive will be quarantined by federal authorities for the rest of its life.

If the horse is being imported from a foreign country, then blood tests for diseases that would keep the horse from entering the United States or from going abroad to compete, should be checked before money changes hands.

Optional Tests:

X-Rays: X-rays (radiographs) are routinely taken as part of the prepurchase exam. Any set of x-rays will inevitably have false positives, which are x-ray changes not significant to the lameness or to the intended use of the horse. The x-rays are the best possible guide to describing any hint of future problems such as low-level arthritis or bone cystic disease that, although present, will not cause a problem until later when a horse is in heavier work.

Realistically, x-rays may value or devalue a horse in today's market. The rule of thumb is if you do not like the x-rays today, you will like them even less in three years when you go to sell the horse. Also, if there is a previous set of x-rays existing on a horse, they can often be used to argue that navicular changes in the front feet have been unchanged for the past three years. A complete set of prepurchase radiographs also gives you valuable information by which to base: (1) the purchase decision, (2) a baseline for that particular horse and (3) a basis for later arguing that insignificant x-ray changes in the horse have been unchanged over a period of time.

A common set of x-rays done for the prepurchase of a sport horse would be a front to back view of the navicular bone, a lateral view of the navicular and foot and a flexor view of the navicular in both front feet. Front-to-back and side views of all four fetlocks are also quite common. Because of the propensity for hock problems in any horse utilizing its hind legs, it is also common to have a full series consisting of front to back, side and two oblique views of each hock. If there is filling in any of the fetlock joints, additional radiographs may be required. If it is a young horse, stifle radiographs may be necessary to rule out any bone disease.

If the horse has a prepurchase exam performed outside the U.S. or out of town, it is advisable to have the x-rays sent to and examined by your veterinarian.

Scoping: A scoping or endoscopic exam is done if respiratory noises are heard during exercise.

Drug Testing: Drug testing is an option for the buyer if he is in a situation where he feels uncomfortable or unsure. Drug testing ensures that the horse has no medication in its bloodstream that would significantly affect the horse at the time of the exam.

Bone Scan: The bone scan is a technique used to look at the active inflammation or physiology of the bone itself. This is totally different from an x-ray which looks only at the anatomical changes within the bone. The bone scan can be used to help focus on whether an x-ray change is significant to a particular horse. It can also be used to give a wide overview of any inflammatory changes in the horse. It also can be used to answer questions that have been raised by the x-rays.

Thermography: This is surface temperature mapping of the horse. Thermography is a rapid method of evaluating surface inflammatory changes in the horse

and is useful for looking at specific areas or a wide overview of the horse. This can be used as a screening test.

Fluoroscopy: Fluoroscopy, or Xiscan, is a moving or real time x-ray exam. The machine is portable and is usually faster than standard x-rays. As in any set of diagnostics there are trade-offs. For the ease, quickness and portability, you usually wind up with a lower resolution x-ray than with standard flat films. I recommend that standard flat films are made for the permanent record.

Video Examination: Buyers who are interested in a horse located far away often use videotapes to let their veterinarian or trainer see the horse. Videos can be useful in critical evaluation if they are done properly. The horse should be walked and trotted away from the camera, then walked and trotted toward the camera on a hard, level surface. The horse should then be walked and trotted with the camera out to the side of the horse. This should be done at least twice in each direction. Next, the horse should be taken into an arena and trotted on a lunge line or ridden with a loose rein in both directions and cantered in both directions. The entire length of the video should be no longer than 5-10 minutes.

Ultrasound: Ultrasound, or sonography, is the use of sound waves to study the body – particularly soft tissue. Ultrasound should be used anytime there is a thickening and/or pain response on tendon palpation. It is particularly useful in determining if a horse's rehabilitated or healed tendon or ligament will hold up to additional stresses such as moving up a level.

Lameness Examination: If a buyer and seller so desire, the prepurchase exam can change into a lameness exam. This might occur if, for example, a horse is noticed to be lame during the prepurchase exam. Usually this involves a discussion with both the buyer and seller to see if everyone agrees to blocking the leg with a local anesthetic to determine the exact area where the horse is lame. If so, is it in a location that is considered to be of minor consequence or one that can be treated easily? One of the optional or diagnostic tests would be performed on that area to determine what the problem is and how it would affect the future of the horse. Obviously, by definition, a horse cannot be considered suitable for the usage intended if it is lame at the time of the exam. It is not uncommon to work out an arrangement whereby the horse may be re-examined at a later date once the determination of the problem has been made.

The prepurchase exam is extremely useful for gathering information on which to base a purchase decision. It should be re-emphasized that the buyer has the ultimate authority and responsibility, and the veterinarian, trainer, agent, etc, are advisors who can offer experience and probabilities of what may happen, but they cannot predict the future of that individual horse. In the end, the buyer must decide, in light of all the information he has been given, if he wants "a horse" or wants "this horse."

