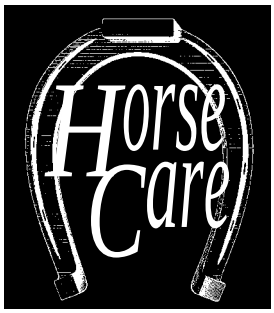

Pinpointing Lameness

by HEATHER SMITH THOMAS

When a horse goes lame, the horseman tries to pinpoint the soreness and its cause—to be better able to treat it properly and help the horse recover faster. A careful observation of the horse gives clues about how his gait is affected (which leg is lame), then it must be figured out where the pain is coming from—which part of that leg is sore. Every horseman should become familiar with the way a sound horse moves (the perfect regularity of gait and stride), especially at the walk and trot, to more readily detect when a horse is "off". Lameness is merely an alteration of gait as the horse tries to reduce the pain of weight-bearing on a certain part of his leg structure.

Your ability to identify which leg is lame will improve if you know what the normal rhythm should be, watching the movement and listening to the sound of the hoofbeats on hard ground. The walk may not reveal much unless the horse is quite sore. The trot is the best gait for pinpointing lameness. The horse makes more obvious deviation (to compensate for the sore leg) since the trot is the most regular and symmetrical gait, with diagonal legs striking the ground together. It's hard to pick the lame leg at the canter or gallop, since this is not a symmetrical gait—it's easy for the horse to minimize his lameness, especially if he uses the lead that reduces strain on his sore leg.

The horse compensates for pain by getting off the sore leg as quickly as possible, moving his other legs and body in such a way as to take more of the weight. It's these compensatory movements that signal lameness, and by watching closely you can determine which leg is lame and get a clue as to which part of the leg structure is causing pain. If the horse is compensating for pain in the supporting column itself (leg bones and joints), he tries to reduce the impact of landing on that leg and gets off it as quickly as possible. If the pain is in tendons or ligaments, it's most obvious at the mid-phase of his stride (from the time the leg is fully weight-bearing until it leaves the ground again). If the pain is in the muscles of the upper leg, the forward swing of his leg will be most affected.

The easiest way to tell which leg is lame and at what point in his stride he is compensating for the pain is to watch his head, especially at the trot. Head carriage is the most obvious clue, since he uses his head and neck for balance. The horse's head and neck make up about 20 percent of his weight, and he uses them the way a human swings the arms for balance while walking or running. At both a walk and a canter, the horse's head bobs with each stride.

At the trot, however, the horse's head remains steady since he always has a leg at each side and at each end of his body, striking the ground at the same time—he does not need to use his head for balance. Thus the trot is an ideal gait to check for lameness—if there is any hint of head-bobbing at all, the horse is lame, trying to shift his weight off a sore leg by making extra balancing movements with head and neck. Watch the horse from the side as he is led by you at a trot, using a straight background like a fence to give you a reference point.

In almost every type of front leg lameness (and even in a serious hind leg lameness), the horse's head will bob at the trot as he tries to take weight off the sore leg and put it more quickly onto the good leg. If the pain is occurring when the hoof strikes the ground (soreness in the support column), the horse throws his head up just before nodding it down, taking the weight as much as possible off the bad leg and then throwing it onto the good leg. If tendons or ligaments are sore, he dips his head down after the sore leg reaches full support, so the other foreleg (that is just getting ready to take on the full load) can take more weight and lighten the effort of pushoff in the sore leg.

If a horse has equal pain in both front legs (from a condition like founder or navicular disease) he will not bob his head, but may hold his head higher than normal as he tries to keep his front legs unweighted while pushing his hind legs farther underneath himself to take more of the weight.

Compensation movements for hind leg lameness are more difficult to detect, since the horse will only bob his head for severe hind leg pain—and this might be misinterpreted as lameness in a front leg. A more reliable way to pinpoint hind leg lameness is to stand behind the horse as he is led directly away from you, so you can compare the up-and-down motion of his hip bones. If the pain occurs early in the stride (support column of bones or joints), the rest of the stride will be quite shortened and the hip will pop up as the horse gets off that leg quickly. If pain comes later in the stride (tendons or ligaments), the hip will sink lower and then bounce back up as that leg comes to the next support phase. To evaluate the hip movement better, it helps to imagine a big "T" on the back of the horse, with the tail dividing the horse in half and the horizontal top of the "T" connecting the points of the hips. As the horse moves, the rise and fall of the hips will be quite obvious as you envision this horizontal line.

A hind leg lameness will make some difference in how the horse carries his head, but it won't be pronounced unless pain is severe enough to make him try to take more weight on the

front legs. When he's trotting, you'll see him drop his head during the support phase of the diagonal foreleg (when the sore hind should be taking weight). If the right hind leg is lame, the horse's head will drop as the left front foot takes weight. If you are only looking at his head carriage (and not evaluating hip movement as well), you might mistakenly assume he is lame in the right front leg.

Other ways to get a better idea about which leg (and what part of it) is lame is to lead the horse up or down a hill, on hard or soft ground, or in circles. Leg bones and joints are under greater stress when the horse is going downhill, whereas ligaments and tendons have to work harder to propel him uphill or through soft, loose ground. A hard surface will often accentuate some types of lameness, due to more concussion. A turn or circle may also put more stress on certain parts of his feet or legs and cause him to make more obvious compensation movements. Other clues that can help you pinpoint the trouble spot is how the horse stands while at rest—whether he puts his weight squarely on all four feet or tries to take the weight and pressure off a leg by standing with it more forward of its usual position (front) or resting it (hind).

Once you determine which leg is sore, the next step is to locate the problem. The first place to look, if a horse is reluctant to put full weight on a leg, is the foot. The problem may be as simple as a rock caught in the hoof or shoe. If the bottom of the foot is fine, check for heat in the hoof wall (compare it with the warmth or coolness of the other feet) or pain around the coronary band (squeezing the coronet and heels).

If you are still at a loss, check the leg from top to bottom. For a front leg, stand right in front of the horse's neck (his head over your shoulder) and run both hands down either side of his withers and shoulders, pressing with your thumbs to detect any sensitivity around the points of the shoulders. Run your hands on down the legs to compare the joints for thickness and swelling, heat or sensitivity, and feel the back tendons. Raise each leg and check for sensitivity in the knee joint, as well as the relaxed tendons. Press on the sesamoid bones toward the rear of the fetlock joints, and also check the pulse at that point to see if there's any difference between the strength of the pulse in one leg compared to the other. While the leg is off the ground, twist the foot to see if there's any pain in the fetlock joint.

For a hind leg, feel the hock and stifle joints to check for swelling, and check the back tendons. With the leg held up, feel the relaxed tendons and also check the sesamoids at the rear of the fetlock joint, and flex the joint to test for soreness. Your hands can often give you clues that are hard to see, particularly if there's a bit of heat or swelling in a certain area. The horse's reaction to your touch or pressing of a certain part can also tell you if it's sore and sensitive. A difference in the strength of pulse can tell you there's inflammation somewhere in that leg—the blood vessels dilate to permit more blood into a damaged area.

Once you've located the area of soreness, the next step is to determine what caused it (injury, infection, or tissue degeneration such as arthritis) and what to do about it. You may need advice from your veterinarian as to the most effective treatment.