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Diagnosing and Treating Equine Neck and Back Pain

It's not uncommon for performance horses, at one point or another, to develop pain in their neck or back. After all, horses use their entire body in their athletic pursuits. Successfully diagnosing and treating these areas of discomfort can be, well, a pain in the neck.

Fortunately, veterinarians have picked up on some telltale signs over the years that can help in diagnostics, and they've learned what works and what doesn't when it comes to eliminating the pain. At the 2016 Western Veterinary Conference, held in March in Las Vegas, lameness specialist Robin Dabareiner, DVM, PhD, Dipl. ACVS, reviewed how veterinarians can diagnose and treat equine neck and back pain.

Neck Pain

A horse's neck is a complex structure in which more than a hundred muscles support and move seven very large vertebrae. The spinal cord and nerves intersect each vertebrae before continuing down the forelimbs. And a lot can go wrong with these important, but ultimately fragile, structures.

Dabareiner, an associate professor in the Department of Large Animal Medicine and Surgery at the Texas A&M University College of Veterinary Medicine and Biomedical Sciences, in College Station, said cervical (or neck) pain often occurs in middle-aged performance horses and is common in those athletes that must collect themselves or turn quickly (such as dressage horses, eventers, jumpers, and barrel racers).

Neck pain often presents as poor performance or a behavior change that doesn't match a horse's personality. Dabareiner said specific signs can include a crabby attitude, a reduced willingness to flex the neck, holding the neck in a neutral or extended position, a willingness to work in one direction but not the other, and bolting when asked to turn or flex the neck.

It's important for a veterinarian to collect a thorough history when evaluating a horse for potential neck pain, so be prepared to inform him or her if your horse has recently:

- Started resisting taking the bit;
- Begun objecting to having his ears or poll touched;
- Fallen;
- Pulled back when tied; or
- Started grazing with one forelimb more forward than the other.

In addition to collecting a history, Dabareiner said the veterinarian should conduct a detailed exam, including:

- Visually examining for muscle atrophy (wasting), especially on one side of the neck;
- Palpating the neck for asymmetry or bony protrusions;
- Looking for a repeatable pain response to palpation;
- Conducting a neck flexibility test (where the practitioner asks the horse to flex his neck to the left and right sides);
- Carrying out complete lameness and neurologic exams; and
- If needed, performing diagnostic imaging, such as radiography, ultrasonography, and/or nuclear scintigraphy (bone scans).

There are several clinical signs and hints that neck pain could be causing a horse's problem, Dabareiner said:

- About 7% of horses with cervical arthritis become ataxic (incoordinated), generally mildly;
- Impingement (when internal structures interfere with each other, causing pain) isn't always caused by arthritis. Swollen soft tissue structures can cause it, as well, so check all neck structures carefully; and
- In some cases, cervical pain can cause a forelimb lameness that can't be eliminated with diagnostic analgesia (nerve or joint blocking).

Veterinarians have a variety of treatments at their disposal for horses with neck pain, including:

- Non-steroidal anti-inflammatory drug (NSAID) administration;
 - Time off or a decrease in the horse's workload, either temporary or permanent depending on the scenario;
 - Cervical facet injections (placing anti-inflammatory medication, corticosteroids, and/or prophylactic antibiotics into the facet joints between the cervical vertebrae);
 - Mesotherapy (injecting small volumes of corticosteroids and local anesthetics into the mesodermal tissue under the skin with the goal of reducing discomfort and improving range of motion);
 - Acupuncture;
 - Chiropractics;
 - Laser therapy; and
 - Shock wave therapy.
- While many horses with neck pain recover well with treatment, some injuries or ailments are too severe to return a horse to his previous level of performance. It's important to treat each horse's conditions individually with help from your veterinarian.

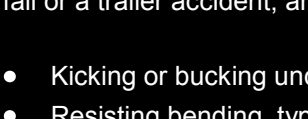
Back Pain

A common problem in sport horses, back pain can also be challenging to diagnose and even more difficult to treat.

The horse's spine (not including the neck) consists of, from the withers back, 18 thoracic vertebrae, six lumbar vertebrae, five sacral vertebrae, and 18 to 22 caudal (or tail) vertebrae (depending on the individual horse). Dabareiner focused on issues of the thoracolumbar region and the sacroiliac region.

She explained that some of the most common thoracolumbar problems the plague sport horses participating in many disciplines—including cutting, barrel racing, jumping, three-day eventing, dressage, and flat and harness racing—include:

- Kissing spines (or, technically, dorsal spinous processes impingement);
- Facet joint arthritis;
- Strained epaxial muscles (which run along either side of the spine); and
- Supraspinous ligament (which runs along the vertebral column) or interspinous ligament (which lies between the spinous processes) inflammation.



Article

The Healthy-Backed Horse

As it is with neck pain, a thorough history will help the veterinarian narrow down the problem. Dabareiner said common complaints from owners often appear following a traumatic event, such as a fall or a trailer accident, and include:

- Kicking or bucking under saddle, especially at the canter;
 - Resisting bending, typically one way over the other;
 - A poor-quality trot or canter (the former generally being more indicative of a thoracic problem and the latter suggesting a lumbar issue);
 - Cross-cantering;
 - Having a difficult time with trot-to-canter transitions;
 - Poor jumping technique;
 - Objecting to being saddled;
 - Pinning ears or biting when groomed;
 - A lack of impulsion; and
 - General irritability.
- Dabareiner cautioned that, because most of the common complaints are related to riding, it's crucial to ensure the issues aren't caused by ill-fitting tack or a poor rider, something that's often overlooked. She recommended having an experienced and capable equestrian ride the horse for a period of time to ensure the horse's problems aren't actually rooted in his pilot.

During the clinical exam, Dabareiner said the veterinarian must differentiate between a bony and a soft tissue problem, as these issues don't always have the same treatment approaches. The exam should include:

- Going over the horse visually to check for obvious defects;
- Palpating the back;
- Conducting full lameness and neurologic exams; and
- Evaluating the horse being tacked up and under saddle.

"If it's still not clear whether the issues are originating from pain or behavior issues," Dabareiner said, "the veterinarian can use local diagnostic analgesia or a single phenylbutazone injection—4 grams intravenously—to eliminate pain. Then, re-evaluate the horse after one to two hours. If the horse improves after eliminating the pain, we must investigate where the pain source is coming from; however, if the horse's actions remain the same then it may be a behavioral issue."

Diagnostic imaging can help localize inflamed or painful areas, she said. Bone scans, for instance, "are very useful for detecting bone inflammation, but are less useful for detecting soft tissue injuries," Dabareiner said. Veterinarians can also use radiographs and ultrasound to visualize pain-causing problems in horses' backs.

Treatment, not surprisingly, will depend on the problem the veterinarian finds, Dabareiner said:

- Kissing spines can be treated with interspinous injections (injecting anti-inflammatory medication between the vertebrae), mesotherapy, and shock wave therapy. She also noted that intravenous tiludronate (which is essentially used to slow bone remodeling and quiet bone inflammation) can help relieve pain in some cases; the drug is currently approved by the U.S. Food and Drug Administration to control clinical signs associated with navicular syndrome in horses. Kissing spines can also be treated surgically if medical therapy fails, she said.
- Veterinarians also have several options for treating vertebral facet arthritis. Facet injections—similar to those used for horses with cervical facet arthritis—are useful in these cases, she said, along with NSAID administration, tiludronate and/or methocarbamol (muscle relaxers) use, shock wave therapy, and rest and controlled exercise (four to six weeks of turnout, followed by a veterinarian-prescribed exercise program for the next three to six months, Dabareiner said).
- Epaxial muscle pain can occur with or without a related bony issue and is a very common problem in performance horses, especially in the lumbar and croup area. Horses generally respond well to mesotherapy followed by rest, then a gradual return to use. Dabareiner said the key to this therapy is breaking the pain/inflammation cycle, noting that many horses only require one treatment to successfully eliminate the muscle pain.
- Supraspinous ligament desmitis also has a variety of treatment options, including rest (four to six weeks' worth), NSAID administration, mesotherapy, and shock wave therapy, followed by a three-month controlled exercise program.

Sacroiliac (SI) joint problems are another common back problem in sport horses and are the main issues veterinarians encounter in the sacral region. Dabareiner said these are generally treated with SI joint injection. She noted, however, "there's more than one way to skin a cat." Therefore, other options—such as mesotherapy, shock wave, acupuncture, or rest and anti-inflammatory administration—can also help reduce pain and inflammation in the SI joint.

If you suspect your horse is suffering from back or SI joint pain, have your veterinarian evaluate him to determine the best treatment for his individual circumstance.