

TENDER TENDONS AND STRESSED SUSPENSORIES

A bowed tendon or strained suspensory ligament can be a competitor's worst nightmare ... but it doesn't have to be a career-ender for your horse. Here's what you need to know about these lower-leg injuries.

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November 2006

For all their size, horses are remarkably fragile things. Their 1200 lb. bodies are supported by legs which look far too delicate to do the job ... and sometimes, when stress is high and footing less than ideal, those legs do give under the pressure.

When your horse pulls up lame after jumping a course, or even trotting across his paddock at home, you hope for the best, but dread the worst: a tendon or ligament injury. In many ways, these injuries are worse than bone chips or fractures, because tendons and ligaments heal slowly and, often, incompletely.

The majority of equine tendon and ligament injuries occur in the forelegs. The two most commonly affected structures are the superficial digital flexor tendon (or SDFT) and the suspensory ligament (SL). The SDFT is located just under the skin surface, running along the back of the cannon bones. Just 'inside' it (a little further away from the skin surface, closer to the cannon bone) is the deep digital flexor tendon (DDFT), followed by the inferior check ligament just behind the back of the knee. Closest to the bone is the suspensory ligament. Horses have no muscles south of their knees and hocks, so the tendons and ligaments, which are attached to the muscles further up the leg, function as levers and pulleys to lift, move, support, and flex the hoof, pastern, and fetlock joints.

Both tendons and ligaments are made primarily of collagen fibers, which can stretch and contract by more than three inches. Tendons (which attach muscle to bone) are more elastic, but have less weight-bearing capacity than ligaments (which attach bone to bone).

Studies have shown that horses competing at the top of their sport are more vulnerable to lower-leg tendon and ligament damage than those competing at lower levels. Racehorses and three-day-eventers are probably most susceptible to the classic "bowed tendon" (a rupture of the superficial or deep digital flexor tendon), but hunters and jumpers can suffer them too. Sometimes all it takes is a clumsy moment or a bad step. The more fibers that are torn, the more serious the injury, and the longer the healing and recuperation period will be.

Older horses tend to be more vulnerable to tendon and ligament injuries than younger ones, probably because degenerative aging changes occur in all the horse's tissues over time, resulting in structures less resistant to injury. Conformation plays a role too – horses with long, sloping pasterns and underslung heels, and those who are over at the knees, can be especially vulnerable to tendon injuries. "Windpuffs" on a horse's ankles can sometimes be an early warning sign that legs are succumbing to stress and need a rest from training. And let's not forget that poor farriery, which leaves hooves unbalanced, and bad footing (especially muddy and sticky conditions) can also put your horse's tendons or ligaments at risk.

WHAT TO WATCH FOR, WHAT TO DO

The clinical signs of a tendon or ligament injury can be quite varied, but usually there will be heat and swelling in the affected area within a hour or two of the injury occurring. The horse will be in pain when you palpate (feel and squeeze) the area. You might see him drop his fetlock almost to the ground with each step. Lameness can range from mild to severe, and sometimes lasts only a few days ... but rest assured, the damage within is considerable. Over time, a strained or ruptured tendon will thicken and take on the characteristic 'archer's bow' shape of a bowed tendon.

Because the suspensory ligament is responsible for supporting the fetlock joint, the tell-tale sign of a strained or torn suspensory is a fetlock which dips too close to the ground when the horse bears weight on that limb, accompanied by acute lameness and pain on palpation either in the fetlock area, or higher up the leg.

Whether your horse has injured a flexor tendon or a suspensory ligament, says Michelle Chiunti, DVM, who runs a busy veterinary practice focused on sport horses in Colborne, Ontario, the most important thing is to reduce the inflammation in the leg as quickly as possible. “For the first three days or so, it’s all about ice,” she says. “When you’re not icing the leg, you should wrap it with a correctly applied support bandage (and don’t forget to wrap the opposite leg as well).” Anti-inflammatory drugs such as butazone can also be administered according to your vet’s advice. Finally, limit your horse’s movement by immediately putting him on stall rest.

It can be difficult to tell, at first, whether the heat and swelling in the leg stems from an injury to a tendon or a ligament, so once the initial inflammation has subsided (which can sometimes take up to two weeks), your veterinarian will use a diagnostic ultrasound machine to pinpoint the source of the trouble. “Ultrasound is the easiest and cheapest way to diagnose a tendon or ligament injury,” says Chiunti. “Sometimes, however, when the diagnosis is difficult, it’s worth doing MRI (magnetic resonance imaging), which gives far more information which is truly definitive.”

The diagnosis, however, isn’t likely to change the basic approach to healing: controlling inflammation, rest, and lots and lots of time. One thing that *has* changed, however, is the recommendation for total stall rest. “You want a tendon or ligament to heal with as little scar tissue as possible. Scar tissue and adhesions limit the elasticity of the structures, which will limit the horse’s future performance,” Chiunti explains.

“There are lots of methods people have used to help speed healing – things like tendon-splitting surgery, and applying counter-irritants – but I’m not convinced any of these really help a tendon or ligament injury heal any faster,” she adds. “Instead, we now recommend some controlled exercise as soon as the inflammation has gone down. For most horses, that means hand-walking, which helps keep the structure from putting down scar tissue or adhesions. If you have access to one, an ‘aquatread’ treadmill is great as well. Frequent monitoring with ultrasound can help you assess the healing process as you go.”

PREVENTION IS THE BEST CURE

Even with conscientious care, tendon and ligament injuries take months, not weeks, to heal completely. Though most horses do return to competition (sometimes at a gentler level than before), it’s definitely better to prevent an injury than treat one. Here are some tips for prevention:

- Make sure your horse gets top-notch farrier care, particularly if he is jumping. Not only must he be trimmed on a regular basis, but the balance of his feet both heel-to-toe and left-to-right must be correct in order for the tendons and ligaments to work properly and without unnatural stresses.
- Don’t ask your horse to do a job he’s not fit enough to do. Muscle weakness and fatigue, in competition or at home, can lead to hyperextension of the fetlock joint, which overstretches the tendons and ligaments and can cause a rupture of the collagen fibers. Tendons and ligaments also remodel and become stronger with progressive conditioning ... so before you show, put in the miles to gradually condition your horse for the work he has to do.
- If in doubt about the footing, let discretion be your guide. Avoid working your horse in areas where muddy or slippery footing puts him at risk, or where holes, divots, or rocks could make him take a bad step and overstretch those tender tendons. Sometimes, the footing in the show ring is first-rate but the warm-up ring is a nightmare ... remember, no single competition is worth injuring your horse over.

- After a hard work-out, head inflammation off at the pass by cold-hosing your horse's legs, applying ice boots, or slapping on a soothing poultice. Avoid the use of topical liniments, gels, or goops which generate heat – the idea is to minimize inflammation, not create it.
- Don't over-do traction devices, such as studs or caulks. Use the minimum you can get away with – and if you do resort to large studs when competing in deep or slippery conditions, don't forget to remove them right after the class.
- Be realistic about your horse's conformation and physical ability to do the job you're asking him to do. There's no shame in finding him a less demanding niche if his body isn't going to hold up to strenuous work.
- Remember that horses with previous tendon or ligament injuries will be predisposed to re-injury because the collagen fibers rarely align perfectly as they heal. Be especially cautious with a horse who has a history of tendon or ligament troubles.

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