

Ask A Vet: Bowed Tendons in Horses

Sunday, April 20, 2014

Dear Dr. Weldy's,

What is a "bowed tendon"? What should I look for if I suspect my horse has one?

Dear Reader,

A "bowed tendon" refers to a flexor tendon that has been injured, usually by over stretching or straining the tendon beyond its elastic limits. Tendons are bands of dense connective tissue that connect muscle to bone. They transfer the force from the contracting muscle to the leg in order to move that leg. Tendons are elastic and can stretch longer than their resting length. This enables the horse's flexor tendons to store energy, absorb shock, and support weight bearing limbs. But tendons can only take so much punishment. It is estimated that 46% of all sport horse injuries occur as tendon or ligament injuries. Usually, the term bowed tendon refers to damage to the superficial digital flexor tendon (SDFT). This tendon runs from just above the elbow (or stifle in the rear limb) to the pastern bones between the ankle (fetlock) and hoof. It courses down the backside of the leg and flexes the digit and knee, stores elastic potential energy, acts as a shock absorber, and supports the fetlock joint. Overuse injuries to the SDFT are the most common type of ligament and tendon injury diagnosed. These horses will exhibit mild to moderate lameness, heat and pain at the site, and a characteristic bulge or swelling that gives a bowed or convex appearance when viewed from the side in profile.

Once a "bow" is detected, work with your veterinarian to minimize further damage. Therapies such as bandaging for support, anti-inflammatory medications, application of cold (ice or cold hosing) and stall rest are the beginning phase of treatment. All of these share a common goal to stop further injury due to inflammation and overloading of the tendon. Your veterinarian may utilize ultrasound to determine the size and nature of the lesion. Repeated ultrasonic exams throughout the course of the recovery can help dictate rehabilitation and treatment protocols. Physical therapy should be done cautiously and can be based on the injury's ultrasonographic appearance.

When the acute inflammatory phase of the injury is complete, other treatment modalities are used to help the tendon heal in the most efficient manner possible. Surgical corrections, such as tendon splitting, are used in severe cases involving fluid accumulation. Therapeutic ultrasound and low level laser therapies may be helpful in improving blood flow. Acupuncture has been proven to reduce pain in human patients with chronic Achilles tendinopathy. Biologics, such as platelet rich plasma and stem cells are the most recent and exciting addition to treatment protocols. These require harvesting of either plasma or stem cells from the horse and injecting them back into the tendon's lesion via ultrasound guidance. Horses are amazingly athletic and are capable of feats we can only dream of. However, our use of our horse friends sometimes pushes the limits of their bodies. With a little common sense and a gradual acceleration of exercise regimens, we can prevent many injuries from happening at all.

-Dr. Wade Hammond