



## TENDON HEALING FACT SHEET

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“Your horse has injured its tendon” is a phrase that sends shivers down most people’s spines, but this does not necessarily mean the end to your horse’s career.

The tendon is the band of connective tissue (collagen fibres) that attaches the muscle to the bone. Tendons can be short or long, and are usually rounded. Tendons are slightly elastic and can endure an enormous amount of tension, although they can accidentally stay contracted after exercise, which puts them at a greater risk of being strained.

Tendons increase the tensile strength, which leads to sustaining increased loads on the body. Everyone thinks of tendons in relation to the leg, but there are tendons involved at the attachment site of every muscle in the body! For this article though, we will just focus on tendons in the distal limb.

Most injuries to tendons occur when the horse is undergoing intense activity, when pushed past their natural limit, or when they are fatigued.

And although this article is focusing on tendons, it’s ligaments which are more easily damaged and harder to repair.

One British researcher has estimated that more than 30% of horses involved in racing and other forms of competition throughout Europe suffer from some sort of tendon injury or problem as the result of the vigorous exercise involved in running, jumping, and dressage.

The most common tendons to incur injury include:

The superficial flexor tendon – this is the tendon that runs down the back of the cannon bone close to the skin.

The deep flexor tendon runs between the superficial flexor tendon and the cannon bone and ultimately attaches to the coffin bone (P3).

The digital extensor tendon begins on the cranial portion of the leg. It continues downward along the front of the cannon bone all the way past the pastern, ultimately attaching to the coffin bone.

The flexor tendons are designed to move--or flex, as the term implies--the leg and hoof in a rearward motion, and the extensor tendons allow the limbs to be brought forward, or extended. A greater stress is placed on the flexor tendons than on the extensors. Most tendon injuries and disease involve the two flexor tendons, with the superficial flexor tendon being the one most apt to "bow" (fibers tear and inflammation and swelling cause the tendon to bulge or bow outward) or suffer inflammation.

Most serious tendon injuries occur to the front limbs for obvious reasons. First, 60-65% of the horse's weight is carried on the front end. Second, when a horse travels at speed, there is one point in every stride where the animal's entire weight descends on a single foreleg.

Tendon injuries today can be examined with ultrasound, and some damage seen under

radiograph, and treatment can vary but will always involve a rehabilitation program.

The most important aspect to a tendon rehabilitation program is the element of time. The goal is to reduce inflammation, maintain blood flow, and decrease the formation of scar tissue. No matter how small the injury, you should allow no less than 12 weeks and often not less than 6 months even if it is just bruising.

Usually the initial therapy includes systemic and local anti-inflammatory therapy. Phenylbutazone therapy for five to seven days, and the anti-inflammatory DMSO is applied topically for seven to 10 days. Ice or cold water is applied for the first seven to 10 days, depending on the amount of swelling. Other anti-inflammatory products may also be injected into site.

The damaged tendon is usually supported with bandaging, but it is very important that you also support the non-injured leg as this is the one that will be taking most of the weight.

Most rehabilitation programs for tendons have the horse under box rest and hand walked for the first 8 weeks. Starting at 10 mins per day (or twice a day if possible) and moving up to 45 mins. Trotting is usually introduced in week 9 providing the area looks good when reevaluating it.

It is very important to keep the horse moving though, as long as it's controlled.

A good rehabilitation program combines controlled exercise with therapy. Common therapies used in the healing of tendons include:

- MRI (Magnetic Resonance Imaging)
- Stem Cell Therapy
- Ultrasound
- Laser Therapy
- Red Light Therapy
- Magnetic Therapy
- Shockwave Therapy
- Myofascial Release Therapy

A tendon rehabilitation program may look tedious and time consuming but hang in there! There is nothing like the element of time in the recovery of tendon and ligament injuries, and time taken at the onset will reduce the chance of the area being reinjured in the future.