

Treating and Preventing Tendon and Ligament Injuries with Traditional Chinese Medicine

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Tendon and ligament injuries are some of the most upsetting and common injuries to horses. Traditional Chinese Medicine (TCM), including Chinese herbs and acupuncture, can augment the treatment and rehabilitation of tendon and ligament injuries as well as aid in their prevention.

Tendons are the elastic, bungee cord-like structures made up of interlocking crimped fibers that attach muscle to bone, stabilize joints and act as shock absorbers. They are major players in the active motion of a horse's leg. By contrast, ligaments are strap-like stabilizers. Although ligaments don't participate in the active muscle movement, they, too, are comprised of interlocking crimped collagenous fibers, but they are non-elastic and tighten when under stress, rather than stretch. Ligaments hold and stabilize bones, joints, muscles and tendons from excessive movement and stretching.

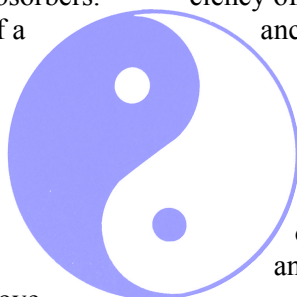
The Traditional Chinese Medicine view is this: Because tendons are involved in the active movement of the horse, they are considered yang in nature. Stabilizing ligaments are yin. This elegant and effective pairing of yin and yang opposites allows the horse its fluid gaits and motion. Tendons and ligaments work together in a natural coupling of elasticity and stability in constant dynamic exchange. However, as most horse people know, this beautiful system of equine motion is not problem-free.

Remember those salt-water taffy machines at the county fair, stretching and pulling the taffy strands until they break? Tendon and ligament injuries resemble over-stretched salt-water taffy. Tendon and ligament fibers can be stretched within limits, to a point where they will resume their previous shape when tension is released. However, when stretched too far, too fast or with too many repetitions, they can rupture, break or remain permanently overstretched. This can happen abruptly as in the case of a trauma or slowly, gradually, almost imperceptibly over time with training.

Yin and yang basics

The concept of yin and yang are at the basis of TCM theory and practice - they are basic forces that comprise every phenomenon of the universe. The yin and yang aspect of TCM is often a challenging concept for western minds to embrace, but very simply: yin and yang

energies are paired opposites, mutually dependent on each other. By partnering, they create a whole. Every aspect of our bodies can be categorized as yin or yang. Every organ, tissue and cell contains aspects of both. An example is the liver. The liver is a dense, moist, yin organ, but its function -- filtering blood -- is a yang activity. Yin and yang are in a constant state of flux. When there is an excess or deficiency of either yin or yang, the system becomes unbalanced and disease occurs.



Tai Ji Symbol

In the traditional Chinese worldview, when yin and yang are balanced, there is life; when they separate, death occurs. It is said that at the time of death, yin and yang let go of each other and life ceases. Yang floats up to heaven and yin descends down into the earth.

As it relates to the living organism, Yang is associated with energy, activity, and expansion; yin is associated with substance, rest and contraction. Graphically, yin and yang are represented by the Tai ji symbol.

The basic goal of TCM is to keep yin and yang in balance, achieving optimal health through the use of its many tools: acupuncture, acupuncture, herbal medicine and balanced life style.

The three goals of prevention and healing from the TCM perspective

Prevention: keeping the wood element strong

Ideally, we try to prevent injuries in the first place with balanced training, conditioning, herbal/dietary therapy and acupuncture. (Please see acupuncture chart.)

If we look at our horse through the TCM model, each organ system falls into one of five elemental classifications. For example, digestive organs and muscles relate to earth, the respiratory system relates to metal, the circulatory system relates to fire and tendons, ligaments and hoofs relate to wood. We can keep the wood element (tendons and ligaments) well nourished by periodically massaging corresponding acupuncture points and the occasional use of tonic herbal supplements such as Bai shao and Dang gui.

UB17 - enhances qi and blood of the entire body.
 ST36 - builds qi to nourish the whole body, including tendons and blood to nourish tendons.
 LV3 & LV8 - a strongly paired combination to nourish the blood, strengthen the wood element and nourish tendons.
 GB34 - master point of tendons.
 GB 39 - influences the lower leg and influences the qi of the tendons.

Treatment

If an injury should occur, damage can be minimized with standard veterinary treatments and complimentary therapies. During the first 48 to 72 hours, the goal is to minimize bleeding, blood accumulation (stagnation) and inflammation (heat) in the injured tissue and to start dissolving damaged tissue debris. The following acupuncture first aid treatment plan is a good place to start for an acute situation.

GB34 - master point of tendons.
 GB39 - influences the lower leg and influences the qi “energy” of the tendons.
 SI3 - benefits tendons.
 LI11 - reduces inflammation and heat in the joints.
 SP10 - blood stagnation and bleeding.

Typically, TCM treatment protocol seeks first to cool down what is inflamed by using basic TCM herbal concepts such as topical application of cooling and blood-moving herbs. This protocol is similar to standard methods of cold therapies. Cooling the area reduces inflammation, allowing improved blood circulation. Blood-moving herbs enhance the removal of tissue debris. The martial arts tradition has also generated a number of herbal treatment protocols for the treatment of tendon traumas. These closely guarded family recipes were the secret weapons of quick recovery. Frankincense and Myrrh are typical ingredients. When properly modified for the equine athlete, we see enhanced recoveries.

Repair, remodeling and rehabilitation

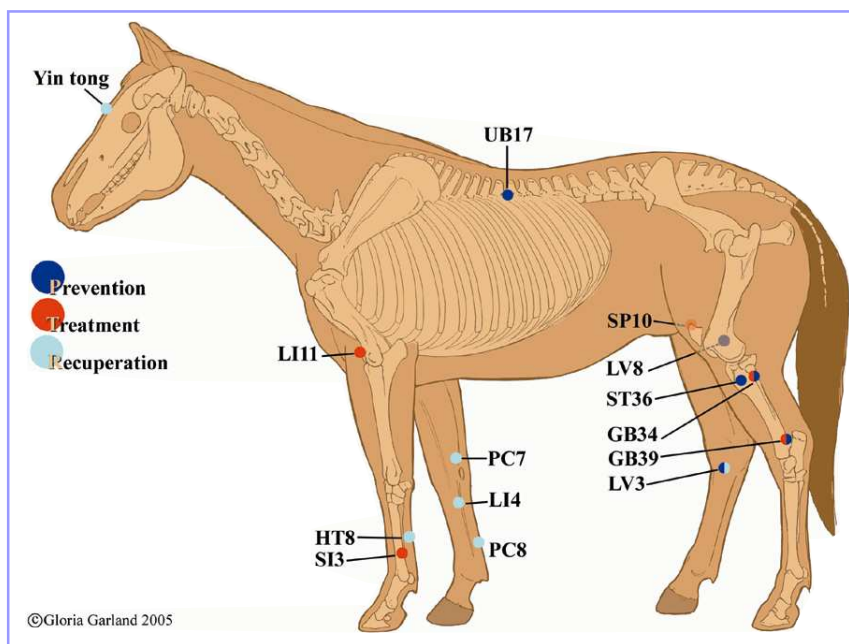
Rehabilitation can be frustrating for owners and horses alike. During the first 48 hours to six weeks after an injury, the body is laying down fibrin and fibroblasts - the building blocks of the repair process, which is characterized by local heat, tenderness, decreased circulation and decreased flexibility.

The goal is to minimize scarring, reduce inflammation, and increase circulation to the injured area and keep the

horse calm and quiet during tissue remodeling and rehabilitation.

Tendons and ligaments heal very slowly, often requiring recuperation time of up to a year. Horses are by nature very yang, as characterized by their constant energetic motion. Confinement in TCM is characterized as a yin-like activity. Excessive motion and exercise too early in the healing process can aggravate the injury. *Controlled* exercise as prescribed by your veterinarian benefits tissue rebuilding by helping new fibers lay down in an organized fashion, thus minimizing adhesions. Utilizing the following acupuncture points can help horses tolerate stall rest - so critical to a good recovery.

Yin tong - calms anxiety and agitation.
 PC7 & 8 - calm and relax a penned up horse.
 LV3 in combination with LI4 - vents pent up energy.
 HT8 - calms the mind and eases mental restlessness.



Most veterinarians agree that once a tendon or ligament is injured, it never fully recovers to its pre-injury state. However, by utilizing all the tools available, both standard and complementary, we can help our horses reach their recovery potential.

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Stages of Healing: Tendon & Ligament Injuries

Stage of Injury	Physiological Response	TCM Diagnosis	Standard Therapy	TCM Herbal Therapy	Acupuncture	Treatment Goal
<p>Acute inflammatory stage New injury</p> <p>Duration: 48 to 72 hours (to be measured from beginning of therapy)</p>	<p>Bleeding in the injured tissue and inflammation.</p> <p>Body is dissolving blood elements and tissue debris.</p> <p>Signs: Pain, possible heat and local tenderness, swelling & lameness.</p>	<p>Blood stagnation (bleeding and blood accumulation in surrounding tissues)</p> <p>Heat (inflammation)</p> <p>(Damp Heat, fluid accumulation – possible)</p>	<p>Treat with cold therapies for 24 to 48 hours</p> <p>Passive ROM only</p> <p>Anti inflammatory, corticosteroid medications</p> <p>Bandaging & stall rest</p>	<p>Trauma Formulas (Whole Horse Repair or Yunan bai yao topically and oral)</p> <p>Blood moving, heat reducing herbs (cold herbs)</p> <p>Liniments (Whole Horse Liniment)</p>	<p>GB34, 39 LI11, SP10</p> <p>Jing well and Xi cleft points on affected channels</p>	<p>Control inflammation & reduce scaring and pain.</p> <p>TCM: activate blood, remove stagnation loosen tendons, activate channels</p>
<p>Reparative (subacute) stage</p> <p>Duration: 48 hours to 8 weeks (to be measured from beginning of therapy)</p>	<p>Body is laying down fibrin and fibroblasts which begin the repair process.</p> <p>Signs: Local tenderness & heat. Pain and lameness.</p>	<p>Blood <u>and</u> qi stagnation</p>	<p>Hydro therapy - hose pressure to massage fluid out of the leg</p> <p>Light hand walking</p> <p>Stall rest</p>	<p>Tendon strengthening formulas (Whole Horse Tendon Support)</p> <p>Shen Calmers—stall rest (Whole Horse Calm Shen)</p> <p>Liniments</p>	<p>GB34, 39 LI11, SP10, UB17, UB23, 52, ST36</p> <p>Stall rest: Yin tang, LIV3, LI4, PC6, HT8</p>	<p>Prevent/Reduce scaring</p> <p>Stimulate circulation to reduce fluid accumulation & enhance O2 to area</p> <p>TCM: activate blood, and qi</p>
<p>Toughening, remodeling & rehabilitation stage</p> <p>Duration: 4 weeks to 12 plus months. (to be measured from beginning of therapy)</p>	<p>Body is laying down fibrous deposition (scar tissue)</p> <p>Signs: Palpable thickening, stiffness</p>	<p>Qi stagnation</p> <p>Liver blood & kidney yang deficiency</p> <p>Water not nourishing wood</p>	<p>Controlled exercise as prescribed by your veterinarian</p> <p>Careful monitoring of the injury site</p>	<p>Tendon strengthening formulas (Whole Horse Tendon Support)</p> <p>Blood building, tendon strengthen, kidney (water) and liver (wood) tonic herbs</p> <p>Liniments & topical warmed herbal massage balls</p>	<p>GB34, 39 SP10, UB17,UB18, UB23, 52, ST36 LIV3, KID3 and KID7</p>	<p>Strengthen healing tissue. Encouraging new tissue to align properly</p> <p>TCM: Nourish liver blood (wood), strengthen tendons & ligaments, Nourish kidney yin and yang (water)</p>