



Rehabilitation Options for Soft Tissue Injuries

Diagnosis:

Ultrasound: Cyclic sound pressure with a high frequency used to give a reflection image to reveal the inner structures and produce a picture. Best used for soft tissue injuries.

X-Ray: Electromagnetic radiation produces images of hard objects such as bone and joints.

MRI: Magnetic Resonance Imaging - gives an excellent contrast between different soft tissues of the body. Useful in difficult to diagnose injuries and both neurological and musculoskeletal injuries.

Nuclear Scintigraphy: Used to image the extent of the disease process in the body. Based on cellular function and physiology. Perfect for identifying problems early on. An isotope is injected and it "seeks out" diseased tissue which can be detected on an ultrasound machine.

Equinosis: Objective assessment detects and quantifies body movement asymmetry using sensors and a PC. It is non-invasive and great at detecting lameness early as well as monitoring progress.

Lameness Exam: Subjective analysis by accompanying veterinarian. Veterinarian watches closely for abnormal gaits and lameness. Excellent because many vets have history with horse and can compare to previous analysis. This is essential because they can detect abnormalities and recommend further diagnostics.

Rehabilitation Protocols:

Shockwave Therapy: Non-invasive therapy that causes micro trauma to injured area, which helps create new blood flow into injured area and promotes healing. Usually 3 treatments and done outpatient.

Stem-cell Therapy: Intervention strategy that introduces new cells into damaged tissue. These stem (or baby) cells can differentiate to become

ligament/tendon cells and self-renew. This offers the damaged tissue a large number of new cells to replace damaged tissue and decreases the change of scar tissue growth the cells can come from adipose (fat) tissue and bone marrow. Both have low incidence of refusal since cells come from client. Cells must be sent off to a lab, let multiply and then injected into injured area.

IRAP: Is a protein that is injected into damaged area that is believed to slow down osteoarthritis and degenerative joint disease. This protein, which binds to the cells surface, slows down cells releasing a protein, interleukin-1, which degenerates the cartilage. This stops the cycle of **joint injury – inflammation-pain-protein production-cartilage degeneration-inflammation-pain** by stopping the protein production it slows down the process, which degenerates the cartilage and causes pain. Blood is drawn and incubated for 24 hours, which stimulates production of an antagonist protein – it is placed in a centrifuge and the plasma is separated from blood cells. The plasma (IRAP) is injected into the joint. This is usually repeated 3 times every 10 days. Rest is suggested 5 – 7 days after injection.

PRP: Platelet Rich Plasma is injected in affected joint, tendon and ligament. PRP is a growth factor, which stimulates growth and healing. Concentrated platelets are injected into affected area, which stimulates bone and soft tissue healing, tendonitis, wound healing, and cartilage regeneration. Blood is drawn and processed into PRP and injected into injured area. This stimulates revascularization for regeneration of cells.

Tildren Therapy: Tildren is a drug injected intravenously for an hour into the client. Tildren helps suppress cells, which causes destructive changes. Has been very successful for navicular disease and hock pain. The effects of Tildren lasts about 6 months. This is beneficial for bone issues - Tildren helps rebuild bone by stopping osteoclasts from breaking bone down, which indirectly helps bone build back up by increasing bone density. Tildren is used for navicular, osteoarthritis and works best with horses who have been unsound for 6 months or less.

What you should do:

Get your horse in a Quality Rehabilitation Center!!

Discontinue work and turnout - No matter what!

1. Decrease inflammation and pain. It is very important to treat early – as soon as you suspect an injury – before diagnosis. Use NSAIDS and ice – or cold water hosing.
2. Form strategy with your veterinarian – after diagnosis.

3. Begin exercise based rehabilitation program - walking, euro-walker and underwater treadmill. Controlled exercise program along with treating injury to promote healing is best combination.

***Once strategy is designed: get your horse in qualified hands ***

THE DAYS OF STALL REST, HAND WALKING AND SMALL PADDOCKS FOR REHABILITATION ARE OVER!!! *

Walking – great for mind – gets horse out of stall - light sedation if necessary – early rehabilitation is paramount for full recovery. Make sure there is a limited amount of stimulation and ground is supportive and flat and handler is qualified. European Walker is an excellent option because it is a free walker and horses can relax and lower their head.

Ice-Compression boots - helps to alleviate inflammation – great for acute injuries as well as post therapy.

Underwater Treadmill – great for taking weight off of injured areas while balancing musculature. Helps to alleviate compensatory injuries and reinjuries.

Chiropractor/Acupuncture – helps to balance horses structure throughout spine and alleviate compensatory injuries.

4. In 30-45 days recheck injury with diagnostics. Discuss with your veterinarian to continue program or change strategy according to results.
5. When injured leg is approximately within 10% of opposing leg, you are ready to go back to work.

- **Important keys to remember ***

- Begin rehabilitation right away – to avoid greater injury to site or injuring another structure * this happens more often than you would believe.
- When injury is suspected, discontinue work and turnout – no matter what - even if you are at a show, lesson, etc.
- The rehabilitation should begin while getting diagnosis and forming your strategy with your veterinarian. This is vital to keeping your horse quiet and happy and begins alleviating pain and inflammation.

Benefits of a thorough quality rehabilitation program:

- Greater chance of full recovery
- Decreases chance of secondary injury
- Strengthens atrophied muscles
- Cost effective - believe it – it is an absolute truth!
- Lessens recovery time – you get your horse back.