

Sidelights

Regenerative Laser Therapy

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Regenerative laser therapy (RLT) is a new class IV laser that offers an advanced, non-invasive and non-painful treatment for tendon, ligament and bone injuries sustained by the horse in competition.

Surgical lasers have been used in the operating room for years. Therapeutic (class – III) lasers have been used to treat superficial wounds. Class IV lasers received FDA approval in 2005.

Why is the RLT Special? It is a *class IV* laser that is powered by a 220-volt source. The laser light is generated from the *ND:YAG* crystal at a wavelength of 1060 nm. Unfocused light and heat energy is deposited at distances of up to 5- cm from the surface of the skin. It emits a *pulsed* release (vs., continuous release) of energy that is essential to produce the *mechanical and thermal effects*.

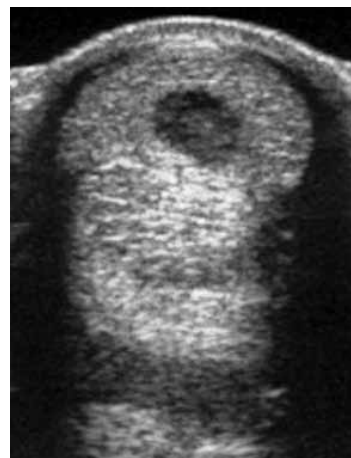
Photomechanical Effect: the energy of the laser pulse is converted into a mechanical force. Recognizing that tendons and ligaments respond to mechanical stimulation (i.e., shock wave therapy), the mechanical forces cause cells to change shape and size which increases cellular metabolism, activates enzymes, and increases the production of nucleic acids and proteins.

Photo-thermal Effect: the energy of the laser pulse is converted into a thermal wave which can heat the tissue to 41°C. The timing of the laser pulse allows superficial heat to dissipate before the next pulse is delivered. Impaired blood flow creates disease in all aspects of medicine. Using safely heated tissues, blood flow and oxygen delivery to damages tissues is increased which increases cellular metabolism allowing tissues to heal in 1/3rd to 1/2 normal healing times. It also produces an analgesic effect on nerve endings that is capable of a rapid reduction of painful symptoms.

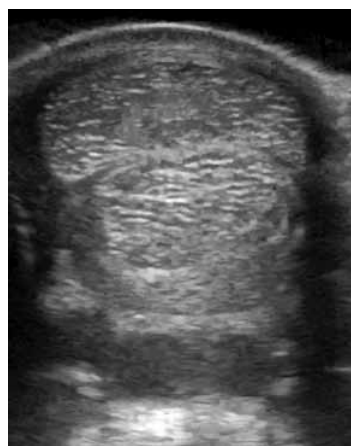
The Practical: Horses receive three laser treatments per week followed by 10 minutes hand walking. Laser treatments are cumulative so, for maximal benefits, 25 treatments are required for acute injuries and 35 treatments for chronic conditions. Treatment charts are tissue-specific and based on 10 years of research from the medical laser innovator El.En™.

Appropriate Applications: Any inflammatory condition, pain, or acute trauma and any chronic condition that cause pain, stiffness, or tissue scarring that limits mobility. Previous career ending injuries are now being reversed. 1. SDF and DDF tendon injuries: tendon injuries within hoof capsule. 2. Suspensory ligament: origin, body and branch injuries; straight or oblique distal sesamoidean ligament injury 3. Navicular bone: distal boarder fragments, impar ligament. 4. Fibrotic myopathy 5. Inferior check ligament desmitis and superior check ligament strain. 6. Arthritis: ring bone, bone spavin, stifle meniscus or cruciate injury.

For more information visit,
www.RLTvet.com.



Before laser therapy

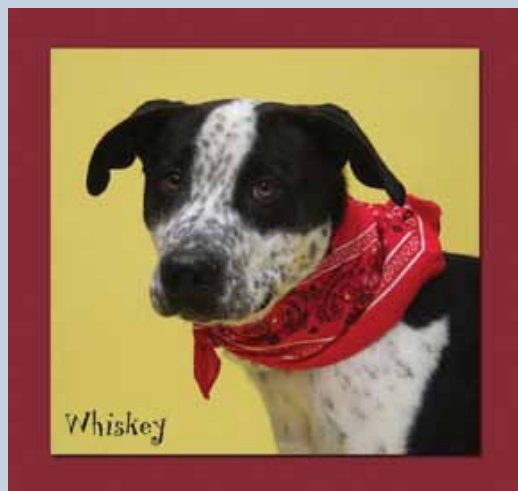


After laser therapy

Case Example With Photos: A four-year-old filly became mildly lame and painful to palpation with filling in the RF SDF tendon following galloping exercise. Ultrasound image (before laser therapy) is a SDF tendon core lesion 14 days after the bow occurred. Ultrasound image (after laser therapy) is the same core lesion 30 days later after 12 of 25 treatments have been administered.

Mutt of the Month

Could Whiskey be your next best friend? Whiskey is a male, 10-month-old hound/retriever mix. Whiskey loves to play ball, especially with tennis balls. He has learned to "sit," is learning "down" and walks well on a leash. He loves to be with people and is a very easy-going dog. Whiskey's adoption fee is \$75 and that includes his neutering, up-to-date vaccinations and a microchip implant. Whiskey is located at the Aiken SPCA Albrecht Center for Animal Welfare in Aiken, South Carolina. Call (803) 648-6863 or visit www.letlovelive.org.



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