

LASER THERAPY

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Low level-laser therapy is beneficial for wound therapy, pain reduction and healing of soft tissue injuries. The biological effects of laser include: release of endorphins, blocking of pain sensation through reduced nerve depolarization, enhanced ATP production, and reduced IL-1 levels. Laser light energy is optimally absorbed through the skin at wavelengths from 805-980 nm.

There are a wide variety of laser devices available to the veterinarian. Wavelength and laser energy output are important considerations when choosing a device. Laser wavelengths for wound treatment should be in the 650 nm range, while treatment of deeper tissues requires wavelengths from 805-980 nm. Lasers are available with energy outputs less than 500 mW and up to 15 W. Higher energy outputs reduce treatment time, but may cause undesired tissue effects if used incorrectly. Newly developed multi-wavelength super pulse lasers have been reported to provide deeper penetration and enhanced photobiomodulation at lower energy outputs than conventional lasers (White Paper: Multi Radiance Medical, Solon, OH USA)). Recommended laser dosage for soft tissue injuries is 4-12 J/cm². A recent study by Hausler found that laser combined with chiropractic therapy resulted in more measurable pain relief for equine back pain than laser or chiropractic alone.

Multi-wavelength super-pulse laser

