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Can Lasers Heal Herniated Discs?

Many practitioners use lasers over herniated and inflamed discs. However, there has never been a scientific study that demonstrated accelerated disc healing with LLLT (low level laser therapy). In this study (Biomed Sci Instrument 2008;44:34-40) done at University of Mississippi Medical Center, the researchers investigated the effects of low power laser on the healing process of a traumatized disc in an animal model.

The rats received 830 nm wavelength laser treatment for a period of 4 weeks. The results of this study indicated that the discs of the laser treated animals healed more effectively than the sham group. Image analysis revealed that there was more disc formation in the laser irradiated animals than the sham.

In conclusion, data obtained from this study demonstrated that laser irradiation delivered on traumatized discs resulted in a remarkable

Lasers currently available

About the Author

Curtis Turchin, M.A., D.C. has a bachelor's degree in pre-medical studies from the University of Southern California, a master's degree in Special Education from San Francisco State University, and a doctor of chiropractic from Palmer College. He is in private practice near San Francisco using manual therapies and lasers in a practice with a physician. He has published 3 books, more than 20 journal articles, and has been extensively interviewed on radio and television. Dr. Turchin is the author of the new text, ***Light and Laser Therapy: Clinical Procedures***, described as the authoritative text on clinical laser treatment as well as, ***Treating Addictions with Laser Therapy***, the only book published on this subject.

increase in discs regeneration and healing following trauma. When researchers describe the results as "remarkable" it is worth watching. This is especially true in light of the research that shows that photons do penetrate deeply into the disc and spinal cord.

However, because the disc is very deep, a powerful, cold laser would probably be required for consistent success.

Which Modality is More Effective, Laser or Ultrasound?

There is a lot of research on laser and ultrasound, but there is very little information comparing laser to ultrasound. In this study (Photomed Laser Surg 2009 Jan 26), the researchers investigated the effectiveness of splinting, ultrasound (US), and low-level laser (LLL) in the management of carpal tunnel syndrome (CTS). This study is important because of the frequency of CTS and the fact that there is no consensus about the best way to manage CTS.

Patients were randomly allocated to three groups that receive either splinting only, splinting plus US, and splinting plus LLL therapy. The study was completed with a total of 100 hands of 50 women patients with bilateral CTS. It appeared that the combinations of US or LLL therapy with splinting were more effective than splinting alone in treating CTS. However, LLL therapy plus splinting was more advantageous than US therapy plus splinting, especially for the outcomes of lessening of symptom severity, pain alleviation, and increased patient satisfaction.

This again supports prior research that documents that, although ultrasound has some healing effects, there is little doubt that laser is significantly more effective at stimulating healing, while increasing healthy tissue proliferation, than ultrasound.

Can Laser Prevent Abdominal Aneurysm?

One area of laser therapy that is intriguing, but with very little research, concerns the use of laser to treat areas outside the musculoskeletal system. It is interesting to see aneurysm being studied (Cardiovasc Res. 2009 May 14) in this case because there are a number of studies showing improved cardiac and circulatory function with laser therapy.

In this study the researchers used a 780 nm laser on mice and tested the aorta with High frequency ultrasonography. At 4 weeks, 7 of 15 non-irradiated mice, but none of the 13 low level laser treated mice, had their aneurysms worsen. These in vivo studies, together with previous in vitro studies, appear to provide strong evidence in support of a role for low level laser in the attenuation of aneurysm progression. Further studies in large animals would appear to be the next step toward testing the

applicability of this technology with humans. However, the fact that LLLT helped cure an aneurysm is an exciting discovery.

Laser Popular Therapy for Tinnitus in Europe

In Europe there are a number of clinics that treat tinnitus using laser therapy combined with natural therapies such as diet, meditation, relaxation, etc. In this study (Int Tinnitus K. 2008;14(2):175-80) from Italy, the researchers recruited 46 adult patients affected by disturbing tinnitus lasting for at least 3 years. All were treated with a combined counseling protocol constituting hypnosis and relaxation techniques.

They randomly assigned 26 patients to the group receiving low-level laser stimulation treatment and 20 to the placebo group. A reduction in tinnitus was noted in all groups but more significantly in the group receiving low-level laser stimulation. From the point of view of clinical classification, approximately 61% of irradiated patients had tinnitus severity decreased in comparison to 35% of the placebo group.

This study lends support for the value of laser in the treatment of tinnitus. If you do not have a powerful cold laser or a point probe that allows penetration close to the ear drum, you will find this treatment difficult. You will need a powerful infrared laser cluster of at least 1,000-2,000 mW to get sufficient photons into the ear or have a narrow point probe that you can insert directly into the ear canal. Both of these probes are available from Apollo.

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Thank you!

I will try to bring you unbiased, evidence based information on a regular basis to help you understand this new and exciting modality. If you would like to see any particular topics or have any comments or suggestions, please email me, Curtis Turchin, MA, DC at: dr.turchin@yahoo.com (yes, that is dr dot turchin @ yahoo.com)

Sincerely,

Dr. Curtis Turchin

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