

## **Lasers Aim at Pain and Swelling**

By The Wall Street Journal

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**It may sound like something out of "Star Trek" but makers of low-intensity "cold" lasers say the devices treat a broad range of pain and swelling, and may even heal a fracture. Physicians say there is some credible scientific evidence for cold lasers, but beware of exaggerated claims.**

Cold lasers are typically hand-held devices. The wavelength -- and power -- also varies, but is often in the invisible infrared spectrum. Cold lasers are used by chiropractors, physicians, physical therapists and athletic trainers.

The Food and Drug Administration generally allows companies to market the devices for "temporary relief" of pain and improvement of circulation. Some companies have presented studies that allow them to sell for more specific indications, such as pain from carpal tunnel syndrome.

How the lasers work isn't fully understood, but some scientists believe the light energy opens blood vessels to bring more blood to injured areas; spurs release of painkilling endorphins; and even stimulates regeneration of tissue and bone. Treatment, which is painless, lasts from a few seconds to a half hour, and generally takes several visits. The cost often ranges from \$25 to \$40 a session, and is sometimes covered by insurance. Only a few U.S. companies have done placebo-controlled studies, most of which are unpublished. Erchonia Medical Inc. of McKinney, Texas, has FDA clearance to market its laser for minor neck and shoulder pain based in part on an unpublished 83-patient study that found a significant reduction in pain compared with a fake laser treatment. MicroLight Corp. of America, Missouri City, Texas, markets its laser for carpal tunnel pain based on a study of 119 auto-industry employees that found 72% of those who received five weeks of laser treatment plus physical therapy had returned to work after three months compared with 41% of those who got physical therapy alone.

Some dramatic claims haven't been proved scientifically. Figure skater Melissa Gregory, who fractured a metatarsal bone in her foot this summer when she dropped a weight on it, says an Erchonia laser healed the fracture. Ms. Gregory, who signed an endorsement contract with Erchonia, says she was back on the ice after four days of treatment. After a week of treatment -- plus icing, elevation and wearing a rigid boot -- she says an X-ray showed the fracture was healed.

Claude T. Moorman III, director of the Duke Sports Medicine Center in Durham, N.C., who hasn't examined Ms. Gregory, says that with conventional treatment, it isn't unheard of for top athletes to resume training a few days after such a fracture as long as footwear keeps the bone in a stable position. He adds that metatarsal fractures generally take three months to heal. Erchonia says it is convinced of the laser's efficacy with fractures and is beginning a placebo-controlled study to test it.

Jan Tuneacuter, author of several books on laser therapy, says consumers should beware of claims that seem exaggerated and also of low-powered lasers, which may have little or no therapeutic effect. Dr. Tuneacuter says he is skeptical of very low-powered lasers, such as Erchonia's, which is five milliwatts. Erchonia says more power isn't necessarily better.