# Renable for directors in

www.advanceweb.com/rehab JUNE 2009 VOL. 18 • NO. 6

01

# Fast Interview

Hard-core Training Can Take a Toll on Elite Runners | 26

Managing Multisport Athletes 19

PENN RELA

since 1895



Applying Laser Therapy for Elite Athletes 33

Options for Massage Therapy 45





## Laser therapy provides non-invasive treatment for elite athletes and weekend warriors.

BY MIKE FROSTAD, ATC, GEORGE POULIS, MA, ATC, AND GLENN COPELAND, DPM

thetic trainers and medical professionals specializing in sports medicine are bombarded with requests to try the latest rehabilitation and physical therapy devices. While it's important to stay abreast of new technologies and evaluate legitimate interventions, you don't want to waste time or money on modalities that have more marketing behind them, instead of solid clinical evidence.

Class III lasers have been used in Major League Baseball for years and have proven effective. However, about a year ago, we started using a class IV laser with the Toronto Blue Jays and were impressed with the results.

In addition to expediting athletes' recovery

time after injury or surgery, the device also serves as an injury prevention tool. For example, by treating a starting pitcher's shoulder before every game, we warm up the joint, help prevent stiffness and optimize on-field performance.

The basic science behind laser therapy is compelling. Cells absorb the light and undergo significant positive changes. Studies have shown that impaired cells have a stronger response to laser light than healthy cells.<sup>1</sup> Light produces the most benefit where it's needed most.

Lasers work by impacting cellular function. Damaged cells absorb and become energized by photonic energy; this function has been docu-



**Tendinitis (shoulder).** We use laser therapy to help warm-up athletes prior to throwing. Players notice less stiffness when they start throwing and decreased soreness and fatigue after throwing, compared with other modalities.

**Rotator cuff strain (acute).** Decreased soreness is attributed to the anti-inflammatory and analgesic effects of class IV lasers. The effects allow more range of motion (ROM) earlier in the rehab process, and athletes can start strengthening exercises sooner.

**Partial medial meniscectomy.** Players treated the day after surgery can achieve full passive ROM by day 3, with little to no pain. Previously, athletes didn't achieve these type of results until week 1.

Pain-free, full ROM allows players to throw with normal mechanics by day 7. Reaching this level takes about 2 weeks using other modalities.

Arthroscopy portals. Laser treatment over arthroscopy portals decreases healing times in order to remove sutures after 8 days. Without laser treatment, sutures are usually removed in to 10 to 14 days.

Ulnar collateral ligament reconstruction. The full results of laser use during this recovery process are yet to be determined. However, using a laser over the incision decreases scar tissue and increases vascular activity to the area.

Its use over acupuncture points improves the overall feeling of the elbow when throwing. A pitcher may be able to return to his previous level of competition 2 to 3 months sooner (9 to 10 months postop) than other rehab modalities permit.

**Plantar fasciitis.** From pro athletes to weekend warriors, 70 percent to 80 percent of patients with plantar fasciitis resolve symptoms after 12 to 16 treatments. To achieve these results, perform treatment 3 times per week for 4 to 6 weeks.

Achilles tendinitis. Our overall success rate of laser therapy on Achilles tendinitis is about 75 percent. But athletes need approximately 20 treatments; severe cases may require 30 sessions.

Morton's neuroma. Only 8 to 10 treatments are needed to treat this condition, which responds with about an 85-percent success rate.

In addition, the following injuries have been successfully treated with laser therapy: turf toe,

medial epicondylitis (golfer's elbow), lateral epicondylitis (tennis elbow), patellar tendinitis, muscle strains (quadriceps, hamstrings, forearm, shoulder, oblique), joint sprains (mainly ankles and knees), carpal tunnel syndrome, neck pain and low back pain.

This year, the Toronto Blue Jays started using laser therapy in their minor league rehab facility. In addition to providing continuity of care between the major leagues and players sent for rehab, it's being used extensively during spring training and on minor league players who need rehab.

Laser therapy has decreased our athletes' pain levels following a variety of acute injuries. As a result, we're able to keep more players on the field, even if they're not performing at 100 percent. --The therapy has also decreased the number of days a player is out of the game due to injury.

Professional baseball players aren't the only population benefiting from this therapy. College, high school and amateur athletes, industrial workers and others suffering from disparate acute or chronic soft tissue and musculoskeletal injuries can also benefit.

The therapy's positive results stimulate compliance as patients start to feel less pain and experience faster, lasting results.

Non-invasive pain relief that reduces swelling of and inflammation is crucial to healing. Instead of recommending anti-inflammatory medications, our standard treatment protocol now combines orthoses with shockwave and laser therapy.

We keep identifying more conditions among our athletic clients that can be successfully treated with laser therapy. Athletic trainers, therapists and other health care professionals should investigate this promising modality.

For a list of references, go to www.advanceweb.

Mike Frostad, ATC, is athletic training and rehabilitation coordinator, George Poulis, MA, ATC, is head athletic trainer, and Glenn Copeland, DPM, is team podiatrist for the Toronto Blue Jays. Dr. Copeland is the former CEO of Cleveland Clinic Canada.

©2009, Reprinted with permission

determine individual protocols.

body to heal.

the same results.

over the last 30 years. Stimulated cells increase

ATP production and dramatically reduce inflammation, pain and swelling.<sup>2</sup> Thus, this modality

may be considered a healing process as it corrects

compromised cellular function and allows the

The following conditions can respond favorably

to class IV laser therapy if you comply with gen-

eral treatment parameters. Age and injury severity

Shin splints. Mild improvement of shin splints

occurs with 1 treatment. You can expect signifi-

cant improvement after 3 to 4 sessions. Other

modalities may take a week or longer to incite

#### The New Advanced Solution for Pain Management & Revenue Generation

Drug-Free Surgery-Free Pain-Free Relief

Relief of pain associate Muscle Injuries, Anke Conditions, Elbow Injuries, Headaches, H the Lumbar Spine Arthritis, Rotator Muscle Injuries, The

> The most advanced therapy laser available, the Class IV, **LCT-1000 Deep Tissue Therapy Laser**<sup>®</sup>.

### This drug-free, surgery-free, pain-free modality can relieve pain associated with:

- Musculoskeletal Pain Conditions
- Soft Tissue Conditions & Injuries
- Back & Spinal Conditions
- Carpal Tunnel Syndrome
- Myofascial Trigger Points
- Epicondylitis
- Sprains, Strains

- Repetitive Motion Injuries
- Plantar Fasciitis
- Migraine Headaches
- Neuropathy
- Aesthetic Procedures
- Surgery
- and more...

"The LCT-1000 is clearly one of the most effective modalities I have used in my entire career."

Ed Ryan Head Trainer 2008 USA Basketball Team



250 Corporate Blvd. Suite B Newark, DE 19702 www.litecure.com For more information, visit www.litecure.com or call 302.709.0408