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JUNE 2009

VOL. 18 • NO. 6

Rehabilitation

Fast Times

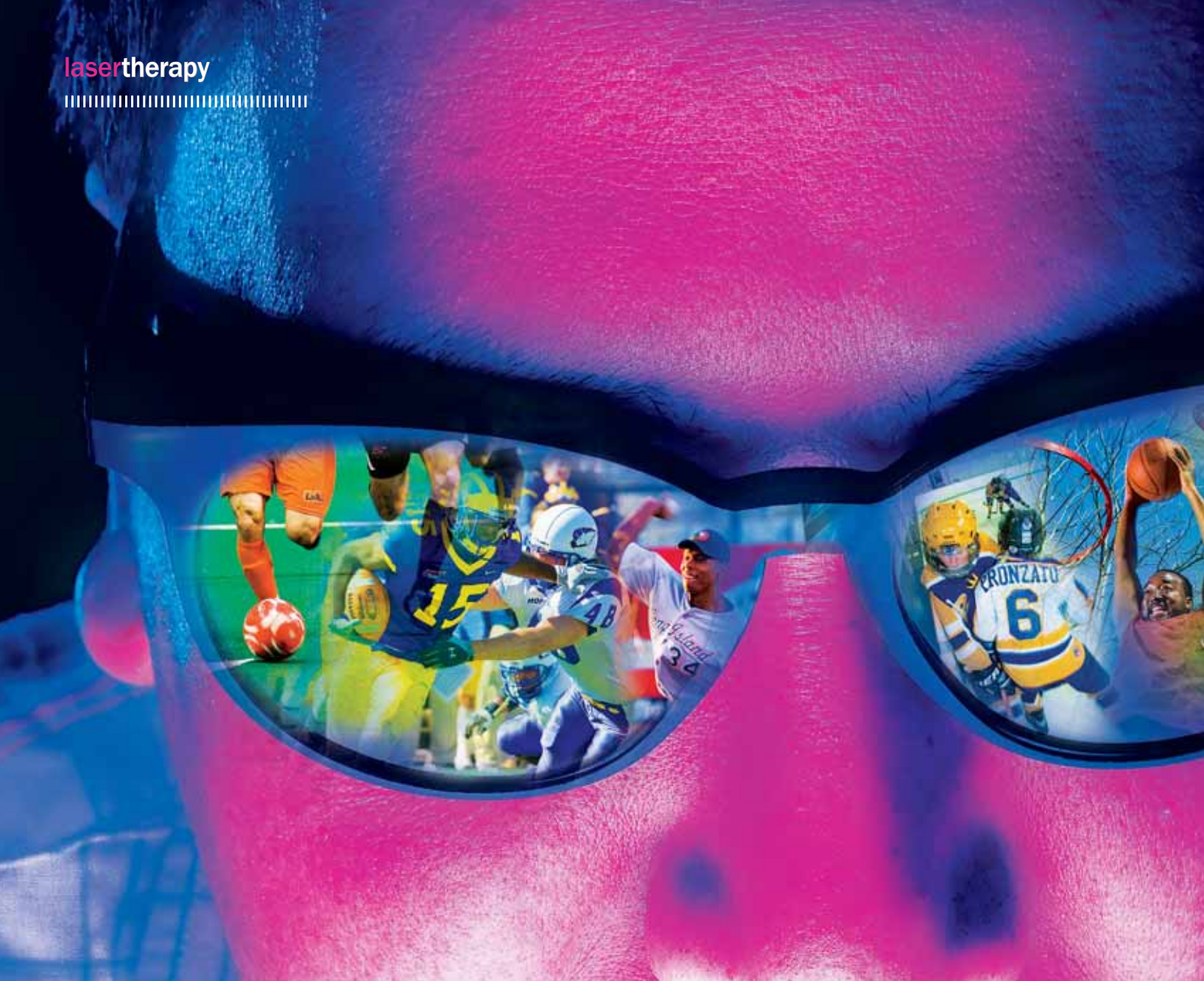
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MAJOR LEAGUE RELIEF



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

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

Athletic 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.¹ 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 documented with more than 2,000 clinical studies

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Studies have shown that impaired cells have a stronger response to laser light than healthy cells.

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 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.advancweb.com/rehab and click on the references section on the home page.

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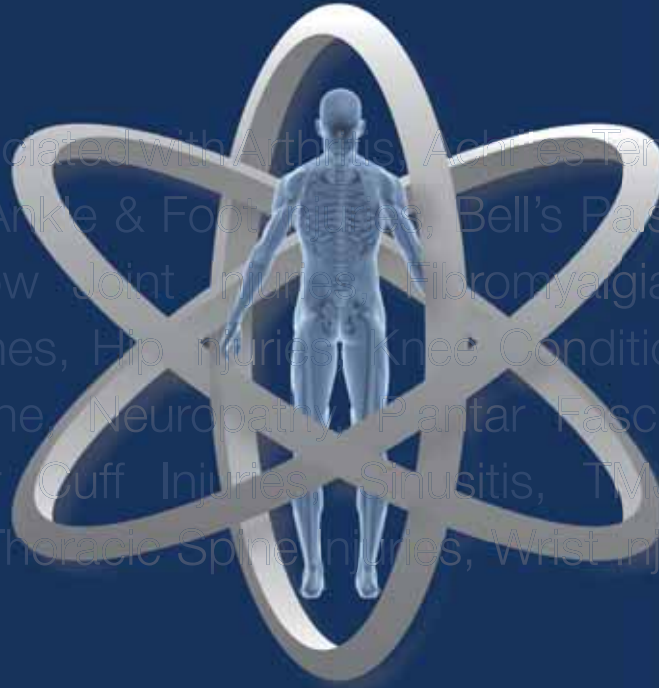
over the last 30 years. Stimulated cells increase ATP production and dramatically reduce inflammation, pain and swelling.² Thus, this modality may be considered a healing process as it corrects compromised cellular function and allows the body to heal.

The following conditions can respond favorably to class IV laser therapy if you comply with general treatment parameters. Age and injury severity determine individual protocols.

Shin splints. Mild improvement of shin splints occurs with 1 treatment. You can expect significant improvement after 3 to 4 sessions. Other modalities may take a week or longer to incite the same results.

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