

Teaming Up with Laser Therapy

Three University of Texas Athletics clinicians discuss technology in their practice

By Allen Hardin, ATC, PT, MS, SCS, CSCS; Anthony Pass, ATC, LAT, CSCS, PES, CES; and LaGwyn Durden, MS, ATC, LAT

Injuries and recovery are part of intercollegiate sports; it's something that can't be controlled. However, providing the best medical care for those injuries is something we can control. Implementing new approaches and technologies is part of staying ahead of the curve and, hopefully, providing a competitive advantage for our teams and student-athletes.

The University of Texas Athletics has a commitment to evaluate new technologies and interventions to ensure our athletes can compete in their respective sport and feel their best.

Laser therapy has been a hot topic as of late. We use it adjunctively every day in our sports medicine clinics and have found it to be very effective. Here is how we evaluate technology and how this therapy has made its way from a "useful tool" to "standard protocol" in our clinics.

Allen Hardin

Associate Athletic Director, Sports Medicine and Sports Performance

When considering new therapeutic interventions, the evaluation process is multifaceted. It begins with the current literature and ends with outcome assessments. The need for interventions to be supported with evidence-based outcomes is tantamount to its adoption.

Of course, we all consult with our respected peers and try to gain perspective of their experiences, and what expectations we should have with regard to anticipated outcomes.

Over the years, we have brought many pieces of therapeutic equipment in for evaluation. Some things stick and other things disappear as the newness fades.

Our goal as a staff is to substantiate that these technologies or interventions will enhance the level of care provided to our student-athletes. They must not only be effective, but also reasonably easy to implement given the day-to-day demands on our players and staff.



In an environment where performance is key, and downtimes must be minimized, the laser is helping us keep our athletes in the game and competing at the highest level.

These factors all play into the overall "buy-in" from our medical team and our athletes. This buy-in is crucial for anything to survive beyond an evaluation period and become a lasting part of our treatment parameters.

Feedback from the student-athletes cannot be discounted. We value their input; they know their bodies, and often can share

personal experiences about injuries and successful recoveries.

Until several years ago, our experiences with laser therapy had been limited to only the smaller, hand-held devices. These devices were typically lower-powered lasers and emitted only small amounts of energy. The results were mixed and inconsistent.

Our search guided us to higher-power laser therapy systems, class IV laser therapy. After an initial trial, we saw adoption of the therapy really take off. The intervention became a favorite of our student-athletes and a mainstay in our plans of care. We've since added multiple units in order to meet demand.

Volume of use, supported by positive outcomes, is a testament to the value this modality has added. In this case, the evaluation process worked, and we have a therapeutic intervention that everyone is benefiting from.

Anthony Pass

**Associate Athletic Trainer,
Head Football Athletic Trainer**

I was introduced to laser therapy almost a decade ago. Therefore, I can say with confidence that the higher-power lasers we are using today are a significant upgrade from what earlier models had to offer. The potential for the therapy was very evident in some cases, but I found results to be inconsistent and unreliable; even understanding optimal dosing was a confusing concept.

If a modality is going to have staying power, there needs to be a ton of confidence. Both the staff and athletes need to believe that results are achievable.

High-powered therapy lasers have enabled us to dose tissue far more effectively and efficiently, which has increased the predictability of our outcomes. As confidence increased, I began to use the laser consistently and it has become one of our "go-to" modalities. Laser therapy has now become a standard for just about every soft tissue injury we see in our clinic.

Personally, I prefer to administer laser treatment manually, combined with passive and active range-of-motion exercises. It gives me the opportunity to be one-on-one with the athlete, gauge their responses, and observe reactions like changes in range of motion.

It's a much more interactive experience than sending players on their way with a moist hot pack. When therapy is complete, I know the athlete has received a meaningful treatment.

One of the key benefits we have seen is in soft tissue. Used adjunctively with other techniques, we get fantastic results. Our impression is that it does a great job of creating blood flow and preparing the tissue to be worked.

When applying the treatment, I often prefer a "contact mode," which allows me to accomplish deep tissue work manually, and I feel that I'm able to get a lot of energy at a higher depth of penetration.

The same can be said with muscle injuries. When working on hamstrings or quad injuries, we work in the laser energy by actually massaging it into the tissue. Sometimes we dose these injuries as much as three times per day.

We can treat three times per day because each treatment only requires about 3-5 minutes — a huge advantage to our staff and student-athletes. The outcomes have been fantastic.

High-power laser therapy is now a mainstay in our clinic. It's one thing we do to help get the team ready, as well as care for them post-competition. It's fast, it's effective, and the players ask for it.

LaGwyn Durden

Assistant Athletics Director, Sports Medicine

I use my hands most often for treatments and am a firm believer that nothing replaces the hands of a clinician. I had limited exposure to lasers in the past, and really didn't find them effective or beneficial.

With the newer technology we have now at the University of Texas, I looked for ways to incorporate the laser into my treatment protocols.

I started with some very challenging chronic conditions and, interestingly, feedback from athletes was extremely positive. This motivated me to look for other ways to incorporate the laser into various treatments.

In addition to chronic conditions, I now use the laser to treat muscular tightness, tendonitis, and medial tibial stress syndrome. These are relatively common conditions with track and field athletes.

With patellar tendonitis, for example, I use the laser first, and then do a cross-fiber treatment. The laser is beneficial because I feel I am able to delve more into the tissue and it's easier to break through layers with less discomfort to the athlete. Achilles tendons are also healing at an accelerated rate.

Post-surgically I used it on a hamstring in order to improve flexibility. We weren't having great success until laser was added to the protocol. We were able to affect the scar tissue and ultimately regained full extension. This impressed everyone, including the surgeon who thought the athlete might be hindered for the entire season.

In my opinion there is tremendous value in any modality that requires the clinician to be actively involved. Delivering laser therapy treatments, especially in contact mode, is giving me a chance to get "hands-on" with the tissue.

With the higher-power laser, athletes can feel the treatment and are less skeptical. It makes for a great formula when you're looking for compliance from the athletes. It's a good sign when athletes are coming in asking for laser treatments, especially before practice. They just know they will be in a better place after practice if they get treated.

Laser therapy has been a terrific addition to our day-to-day activities. It helps us keep the athletes competing at their best. It's amazing how often I reach for it now, and bring it into the fold when preparing my plans of care.

Striving for the Best

High-powered lasers have been in our clinics for well over a year now. The newness hasn't worn off, and it's become part of our daily regimen. Athletes are feeling the benefits daily. In an environment where performance is key, and downtimes must be minimized, the laser is helping us keep our athletes in the game and competing at the highest level.

We strive for only the best — for both our existing and future student-athletes. The investment we've made in high power therapy lasers is just one example of what we're doing to stay ahead of the curve with regard to technology and treatment approaches. ■

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