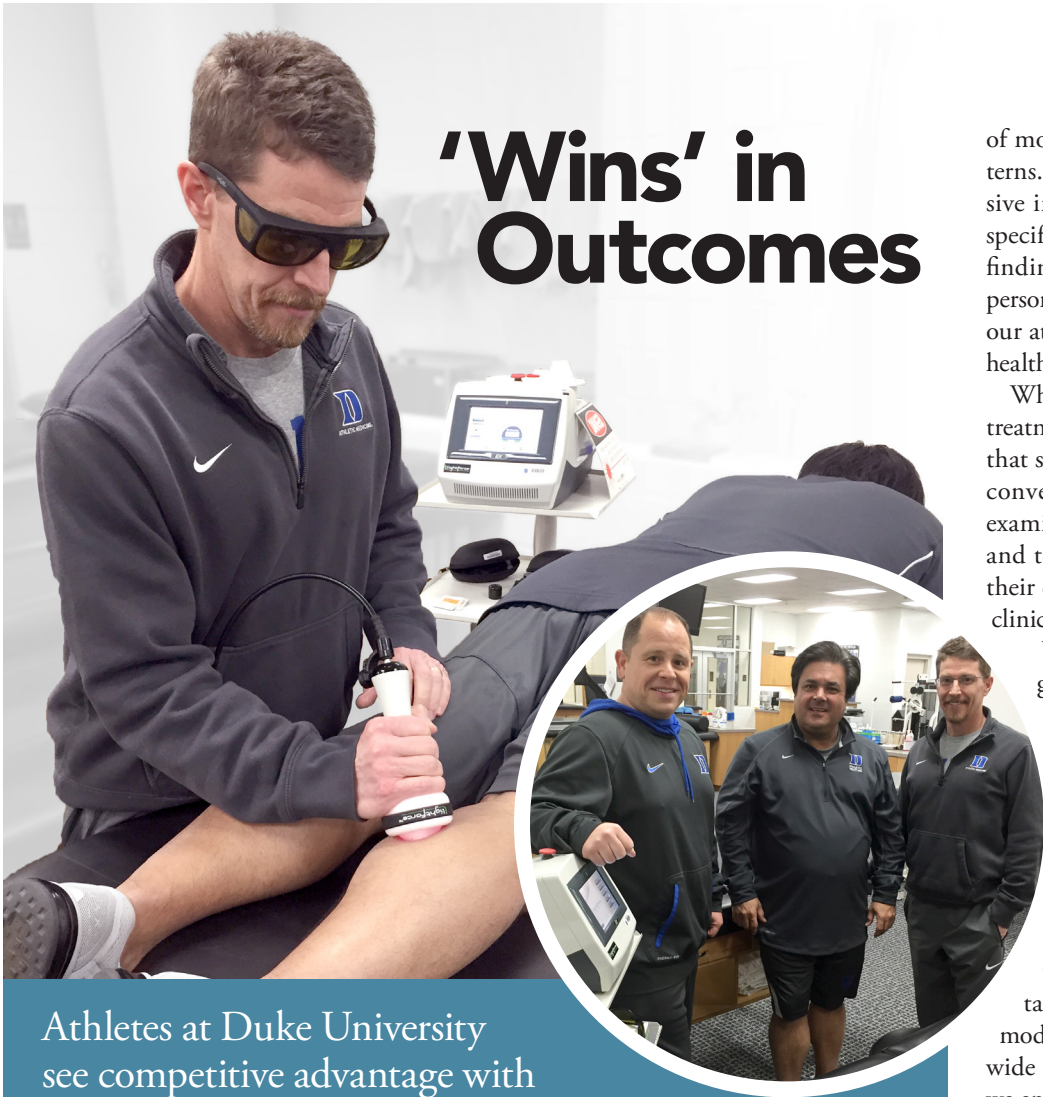


'Wins' in Outcomes



Athletes at Duke University see competitive advantage with laser therapy By Kerry Mullenix, PT, SCS, LAT, ATC, Robert 'Hap' Zarzour, MA, LAT, ATC, and Jose Fonseca, MS, LAT, ATC

Winning in athletic medicine requires many of the same core concepts as winning in collegiate competition. Commitment, preparation, focus, and execution are just a handful of common terms you'll hear.

Additionally, the programs that are typically successful are innovative, willing to assess and accept progressive change, and work together as a team when it matters most.

Care Collaboration

Injuries are part of athletics, and every program is sure to face them. At Duke University, we strive to provide the best in diagnostic care and treatment of our student-athletes. Starting with injury prevention and sports performance, we collaborate as a team to minimize movement-related injuries.

Athletes are assessed to determine range

of motion, strength, and movement patterns. Profiles are created and comprehensive intervention programs are designed specifically for the athletes based on these findings. We believe this team effort and personalized approach provides an edge for our athletes as we strive to keep everyone healthy and performing at their best.

When evaluating and implementing new treatment methodologies, we're looking for that same edge or advantage over current conventional approaches. We regularly examine and consider many new products and techniques and attempt to quantify their efficacy through data, literature and clinical experience and outcomes.

We strive for innovation but are guarded against fads that don't have merit. When we come across something that truly makes a difference, we look to maximize the benefits and incorporate it as part of our arsenal to minimize injuries and speed recovery when injuries do occur.

Deep-tissue laser therapy is one technology that has exceeded expectations and given our team a valuable modality we can count on for treating the wide range of musculoskeletal conditions we encounter.

Making an Impact

We investigated laser therapy for the first time 8-9 years ago. There was not a lot of literature available on the modality at the time. While consulting with our colleagues, we heard mixed reviews. After an initial evaluation, we determined that the current technology did not meet our needs.

When high-powered lasers started to gain momentum in the marketplace, we were persuaded to take a look at the new technology. After a short time, it was apparent that this was truly a different type of laser. We saw better results on a more consistent basis.

Our experiences — and those of trusted

Inset photo: Jose Fonseca, 'Hap' Zarzour, and Kerry Mullenix are charged with keeping students at Duke University healthy and on the field. They've found deep-tissue laser therapy a worthwhile addition to their rehab protocols.

colleagues — led us to the conclusion that results and outcomes were directly related to dosing parameters. Delivering enough energy to the area was important. Higher power allowed us to deliver the energy effectively and efficiently.

With higher power, players feel something happening. It's like the cells are getting excited; they feel warmth. There is a much better interaction with the tissue, and benefits are felt immediately.

Making the switch to a higher-power laser provided us with “wins” we can count on. It's helping us reduce inflammation, increase range of motion, accomplish more with our soft-tissue and joint work, and address chronic conditions in our athletes. The laser has been a hit in all of our athletic training rooms for treating musculo-tendinous issues, acute sprains and strains, post-surgical cases, non-surgical ligamentous injuries, and isolated dermatological issues.

We have looked to incorporate the laser into more of what we do. We're especially pleased when we can identify measurable results by incorporating the modality.

When using laser in conjunction with joint mobilizations, we will often assess a joint glide for baseline movement and irritability, then apply laser, and then re-assess the joint. The results we see are consistent — joints that were difficult to mobilize before laser move with significantly less effort.

Whether treating the cervical spine or joints of the extremities, we are seeing similar results; applying deep-tissue laser before manual therapy or mobility exercises is improving not only the movement, but also the quality of that movement.

One enlightening moment happened when we were having difficulty mobilizing the ankle of an athlete to the extent we wanted to. Following treatment with high-power laser and joint glides, the change was noticeable and effective. The experience helped solidify this technology in our treatment paradigms.

Up Against the Clock

Time is never on your side when it comes to getting athletes back in action. Finding the right combination of therapies and

implementing them at the appropriate time is always a difficult task given everyone's schedules. Our goal is to make the most of the time allotted in order to safely return our student-athletes to competing at their best.

These student-athletes keep incredibly busy schedules. In addition to the standard practice and game schedule (much of which includes a significant amount of travel), the life of a student-athlete at Duke involves morning workouts, attending classes, team meetings, tutoring and study sessions, just to name a few. Treatment and therapy sessions are a priority, but how do you fit them in? We are very respectful of our athletes' time and know that when they come to the training room, we have to make the most of the time we have with them.

This is where the laser has proven to be a most valuable asset. If we are limited on time, laser therapy is still going to be one of the treatments we perform because it's fast and effective. It gives us a quantifiable return with regard to results.

We often apply laser first because it loosens up the tissue and generates blood flow. It typically increases mobility and aids in range of motion. In many ways, it prepares the body for the soft-tissue work, manual therapies, or exercises we intend to conduct. Ultimately, treating with the laser adjunctively is allowing us to accomplish more and we feel it's a great complement to everything else we do.

Plans for Expanded Use

We're excited to explore more opportunities with high-powered laser therapy. We are learning about potential applications beyond our current treatments. In football, we're looking at laser to treat headaches, sinuses, and the occasional TMJ case. Ultimately, we want to get to the point where we are incorporating laser therapy as much as we can.

We implemented dry needling into our program almost two years ago, and now have three PTs on our staff certified in this technique. We have learned from other colleagues that deep-tissue laser treatment after

dry needling often yields much less soreness.

In the past we would have reached for ice, but now we often apply laser therapy instead, and are seeing improved results. This is an example of discovering a new application that might speed recovery and give us an edge in outcomes.

In the future, we hope to make laser therapy even more accessible for our staff and athletes. Having the laser close by and available when you need it is important. We're looking to add more units so that all our athletic teams can utilize the therapy without compromise. Ideally, we'll have units that are staples in our athletic training rooms, as well as units on the road.

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Making a Difference

The medical role within collegiate athletics can be exceptionally demanding and often comes with a lot of pressure. It's also incredibly rewarding as we strive to make a difference with the student-athletes and the growth of our athletic programs at Duke.

Our student-athletes' health and well-being come first, and we are committed to evaluating and researching new therapy approaches and techniques to benefit them. In doing so, we evaluate dozens of things yearly.

Laser therapy has really stood up as a valuable tool we can use adjunctively in the delivery of our care. To this end, we will continue to seek inventive and effective applications for this expanding technology. ■

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