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## Intrepid Center Enlists Laser Therapy

Innovative interventions return injured servicemembers to prior levels of function

By Paula Kodosky, DPT, Lisa Smith, DPT, and Marcy Pape, MPT

NATIONAL INTREPID CENTER OF EXCELLENCE

The National Intrepid Center of Excellence (NICoE) in Bethesda, Md., was built with the mission to lead the way in advancing the treatment and research of traumatic brain injury (TBI) and psychological health (PH) in order to influence the U.S. Military Health System.

We have implemented a complete, interdisciplinary approach designed to provide servicemembers (SMs) with vigorous, all-encompassing treatment programs. Our purpose is to rehabilitate SMs with the goal of returning them to a functional status.

Uniformed servicemembers come to the NICoE with a dual diagnosis of a traumatic brain injury and a psychological health diagnosis or complaint. Specialized treatment programs are designed and implemented to treat the entire patient.

From head to toe, we identify and employ evidence-based treatments to aid recovery. During their four-week outpatient program, SMs receive interdisciplinary treatment that can include neurology, audiology, primary care, nutrition, speech therapy, physical therapy, and complementary and alternative medicine.

### Not Your Everyday PT Department

The 72,000-square-foot NICoE is adjacent to the Walter Reed National Military Medical Center, on the grounds of Naval Support Activity Bethesda.

Everything about the NICoE environment is unique. It starts with the patient population and expands to various chronic conditions and the treatment approach. Multiple complex conditions are treated, and the department's physical therapists are challenged by time constraints in which to accomplish clinical goals.

As physical therapists, we are one component of the interdisciplinary program and provide individualized treatment for our SMs, as we take into consideration the entire person. Each SM enters our PT program for a complete evaluation of the musculoskeletal, neurological, and vestibular systems, leading to our diagnosis of cumulative injuries.

The majority of servicemembers have multiple musculoskeletal complaints that are revealed during examination, with most complaints being chronic in nature. It's not uncommon to see an SM with a condition

that has persisted for 20 years or more.

Providing relief and solutions is our goal. We stay committed to implementing leading-edge technologies and techniques to make an impact on these hard-to-treat cases. The NICoE is dedicated to advancing clinical care through collaborations with federal, academic, and industry partners to find ways to optimize our SMs' health and functional status. It's through this endeavor that we become exposed to different therapies and promising technologies.

During the SMs' participation in the four-week program at the NICoE, we see them only six times on average to address all their concerns. At the NICoE, we employ traditional therapies while pushing the envelope with new technology, including deep-tissue laser therapy.

### Key Component of the Therapy Plan

We began integrating laser therapy over a year ago in conjunction with neurology as a potential solution for headache management, and have experienced some success. As we became more comfortable with laser therapy, it became a standard treatment option and adjunct to other physical therapy interventions for treating headache and musculoskeletal conditions.

Therapeutic laser is one technology we consistently use on both common and uncommon conditions. Treatments are fast and painless, as well as non-invasive and drug-free, making it ideal for this patient population.

We have found that Class IV laser therapy is especially effective and efficient when treating many body parts at the same time (which we commonly do). The ability to treat multiple areas in a relevant period of time makes a big difference in this fast-paced environment.

Servicemembers receiving laser therapy report results ranging from reduction in pain to increased ease and range of motion, ultimately leading to increased functionality. Many experience initial pain relief after laser; however, we also evaluate their response 48 hours after treatment to assess whether laser therapy will be a key component of their treatment. Typically, we know after the first two treatments whether the SM is going to be responsive to laser.

We have been utilizing the therapy laser

with consistent success on shoulders, planar fasciitis, and lateral epicondylitis. As mentioned prior, we use the laser to treat headaches with varying degrees of success, depending on the type of headache. Headaches in this population can negatively impact the ability to participate in treatment programs.

Therefore, when effective, therapeutic laser proves helpful for multiple disciplines. Another option to maximize the success of laser therapy is when the modality is used in conjunction with craniosacral therapy, leading to significant reductions in pain scale.

A specific example of an uncommon situation in which we witnessed the effectiveness of laser therapy was one SM who was post-sciatic nerve transplant. The patient was treated with laser utilizing the on-board sciatic protocol.

The patient's entire nerve tract was traced with the laser and the results were noticeable. The SM experienced significant pain reduction from the treatment, affecting many aspects of the SM's life, from increased functional mobility to improved sleep, to name a few.

### The Path to Recovery

Laser therapy has earned a regular place in our program as a valid intervention. We feel confident that laser therapy is helping us down the path to recovery with our SMs, and we are happy to have it on hand as an adjunctive tool.

At the NICoE, we continuously consider innovative new ways to help our SMs recover faster. We continue to use laser therapy adjunctively with other techniques, and look forward to more research to support new applications. ■

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