Trigger Point Dry Needling

HSHS St. Anthony’s Memorial Hospital’s Physical Rehabilitation and Wellness continues to offer evidence-based, high-quality care and techniques that are designed to optimize patient outcomes. Trigger point dry needling (TDN) is one of the newest techniques unique to the Physical Therapy department.

Trigger point dry needling is a technique used to treat pain and movement dysfunction that involves using a very thin, monofilament needle to penetrate the skin and stimulate underlying trigger points. As the name implies, “dry needling” does not include injecting any type of medication or solution into the body.

Our orthopedic physical therapist has attained extensive additional training in the implementation of TDN, and has found it to be an extremely helpful adjunct to treatment injuries to muscles, tendons, and joints.

Dry needling can be used to treat a number of conditions including, but not limited to: tension headaches, temporomandibular dysfunction, thoracic outlet syndrome, rotator cuff or impingement syndrome, low back pain, chronic pain, tennis elbow (lateral epicondylitis), carpal tunnel syndrome, hamstring/groin pain, patellofemoral syndrome/tendonitis, Achilles tendonitis and plantar heel pain, along with a number of other diagnoses.
It was supposed to be a normal afternoon outing to the park with his family in May 2017. But that changed drastically when Jason Haley went over the front handlebars of his bicycle, fracturing multiple bones in his face and suffering a spinal cord injury that left him without use or feeling from the neck down. After extensive inpatient and outpatient physical therapy Jason was making a miraculous recovery, being able to transfer independently, push himself in his wheelchair, and even walk with the assistance of a walker. Jason returned to outpatient rehab in November 2017 with physician orders to begin a treatment plan including aquatic therapy. After the evaluation, Jason’s treatment plan consisted of two days per week of one land-based therapy, and one aquatic-based therapy for Physical Therapy (PT) and Occupational Therapy (OT). In the beginning, Jason’s 60-minute aquatic treatments were overlapping co-treatments between Occupational Therapy and Physical Therapy. In these treatments, we focused on core strength and stability, base of support, and balance recovery combined with trunk twists, upper extremity movements, and reaching in standing (position). These movements included transitions from squatting and sitting to standing position in waist high water.

With improved stabilization, we began to shift treatments to 30-minute PT, 30-minute co-treatment, and 30-minute OT. The split treatments allowed PT focus on ambulation with the aquatic walker, specifically on leg positioning during the gait cycle, and decreasing upper extremity movement during swing phase. The treatment focus shifted to more dynamic treatments, and simultaneous bilateral upper extremity movements to work on balance recovery and stability. OT has continued to work on upper extremity strengthening and coordination on land and water during trunk control, trunk rotation with reaching, and bilateral upper extremity strengthening.

As ambulation, stabilization, and gait cycle progressed, Jason has been able to ambulate in chest high water without any assistive device with continued focus on foot positioning and reciprocal arm movements. We also have added ambulation backward and lateral sidestepping to improve movements in all planes.

Currently, we have progressed to adding the use of the lazy river to challenge Jason’s strength and stability with ambulation. We have also added ladder climbs for full body strengthening and coordination. We are continually advancing Jason’s treatments based on function with his daily life. Jason would like to be able to lift his wheelchair into the bed of his truck, and drive his truck with hand controls on his own. His ultimate goal is to be walking on his own without an assistive device.

Jason has been able to guide his treatments secondary to his intense motivation and ability to communicate any functional movement deficits. The water has allowed intense training on balance, strengthening, and ambulation with gravity eliminated to facilitate progress to carry over to land-based therapies. Having gravity eliminated has allowed strengthening in specific positions that Jason was unable to achieve on land in the beginning. Jason continues his treatment plan with a combination of land and aquatic based treatments. Keep up the hard work, Jason!
Creating a Better Future for Our Kids

At HSHS St. Anthony’s Physical Rehabilitation and Wellness, we have made great strides in our ability to treat the pediatric population. We have recently acquired a new pediatric treadmill and a pediatric swing which gives us the ability to more effectively analyze a child’s gait and correct any biomechanical faults to improve function.

The swing allows us to effectively strengthen children’s core strength as well as train their vestibular system to improve balance. The swing also comes with various types of swings including a platform swing, bolster swing, and a hammock swing which allows us to tailor our treatment to meet the needs of the child.

Physical therapists can offer beneficial treatments and services for:

- Legg-Calvé-Perthes disease
- Postural abnormalities
- Functional movement disorders
- Post-op orthopedic surgery
- Incomplete bladder emptying
- Toe walking and intoeing
- Torticollis
- Plagiocephaly
- Gait abnormality
- Developmental delay
- Cerebral palsy
- Down syndrome
- Hyper or hypomobility
- TBI, spinal cord injuries, stroke
- Arthrogryposis multiplex congenita
- And many, many more....

Creating a Better Future for Our Kids

Victoria, who prefers to go by “Torey,” came to me about a year ago with a diagnosis of hydrocephalus. When she first arrived, she utilized a walker as her primary means of ambulation. Often she wanted to be carried because she wasn’t confident in her own ability to walk.

Our first plan of action was to work on strengthening her core and legs as well as work on some flexibility. Additionally, we had set a goal for Torey to walk unassisted so she could get rid of her walker. Her plan of care was to focus on developmental progression incorporating functional positions such as half-kneeling, tall kneeling, and single limb stance.

Early on, Torey made huge strides as we progressed into walking without the walker. Each and every session, she was walking further without falling to the floor. You could see her confidence grow.

We also worked on stair climbing. At first she required some handhold assistance to go up and down the stairs. She required lots of verbal and tactile cueing to use a reciprocal pattern. Now Torey is able to go up stairs independently using one handrail and we are starting to practice using no handrail by manually stabilizing her trunk if necessary.

Torey also enjoys climbing the rock wall to strengthen her legs and utilizing the pool at our facility to help strengthen her legs, reduce tone, and improve her balance.

Early Intervention Services

HSHS St. Anthony’s Memorial Hospital provides Early Intervention services (Speech, Occupational and Physical Therapy) in Effingham and the surrounding counties including Southern Illinois. When a child turns three years of age and continues to require ongoing therapy services, HSHS St. Anthony’s Memorial Hospital provides these therapies in an outpatient setting and allows collaboration with the early intervention team to provide the best therapy experience.

Early Intervention is funded by the State of Illinois to provide therapy services to children from birth to three years of age who demonstrate developmental delays in speech and language, gross motor skills, fine motor skills, adaptive skills, social/emotional engagement and feeding.

These services are provided in the child’s natural environment (home, daycare, grandparents’ home, foster home, etc.) The goal of the Early Intervention program is to educate the caregivers on activities to incorporate into their daily routines.

Learn more about Early Intervention in our story about Ryker on page 6.

Victoria Makes “Big Strides”
by Alex Kastl, PT, DPT

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During Torey’s journey in therapy, we acquired a pediatric treadmill that allows us to effectively identify her gait biomechanics to solve where there may be a limitation or breakdown in her gait cycle. Torey had a tendency to intoe more on the left, so I applied a rotation strap on her left leg and it has improved her intoeing tremendously.

Overall Torey has made huge strides in therapy and has become very independent and confident in her own abilities. She will continue to make further progress each day to allow her to be independent and reach her full potential. Torey hopes that she can be a great example for other kids and is excited to share her story. Way to go, Torey!
Since being in the Early Intervention program and working with occupational therapy, Ryker has begun to pick up objects in an unsupported sitting position. He has often been seen reaching and grabbing for objects that he is able to reach. Ryker has shown great improvement in fine motor skills and self-feeding. He now uses a combination of hand-over-hand assistance and hand-over-mouth assistance to better his feeding skills. Ryker has also shown great progress in his core strength and has begun to sit independently. He is able to reach for toys over his head and across his body. He is now able to roll to obtain toys that are out of reach and actively plays with his twin brother.

Meet Ryker & His Therapy Team

Brad and Amy Miller were surprised but excited to learn they were pregnant with twins. Amy reported a very normal pregnancy up until 26 weeks gestation where she learned one of her twin boys was diagnosed with Spina Bifida. Ryker had his first surgery at one day old. Since his first surgery, Ryker has endured a very long journey of additional surgeries including shunt placement and revisions, tracheostomy, decompression surgeries for Chiari Malformation type II, and recently had his tonsils and adenoids removed. Ryker spent the first three months of life in hospitals. Upon discharge, Early Intervention was recommended to target developmental skills that were now delayed due to his prolonged NICU stay.

The collaboration of Speech, Occupational and Physical Therapy is imperative for the development of the child. Core strength needs to be achieved before a child can sit in a chair and control their head for feeding. They also need core strength before they can walk. A child needs to have fine motor control before they can self-feed with utensils. They also need to be able to control their sensory system before they can process the input provided to their body during rolling, crawling, walking, and eating.

Physical Therapy
by Keli Dhom, PT

Ryker is seen one time per week to address strength in his core and lower extremities, range of motion, and gross motor delays. At the start of physical therapy, Ryker was performing at a one- to two-month-old level. He was sensitive to position changes and lacked head and trunk control. This impacted his ability to roll, sit and bear weight through arms and legs. Based on the level of involvement, children with Spina Bifida have varying levels of function.

Since receiving PT services, Ryker is now able to sit independently and reach for toys overhead and across his body during play. He is rolling independently and is motivated to move for toys. He will play in supported standing as well as hands and knees position with improved head and trunk control. His favorite activity during physical therapy is bridging.

Occupational Therapy
by Sarah Buhnerkempe, MOTR/L

When Ryker came home from the hospital at three months of age, he was developmental at a one-month level for his fine and visual motor skills. He was unable to track objects from left to right due to tightness in his neck where his shunt was placed. He had a difficult time reaching while in a sitting position and playing with toys like his twin brother. Ryker was unable to tolerate tummy time to increase his head control which is imperative for feeding. He was very sensitive to touch on his hands and face which later resulted in difficulty with starting solid foods.

Since being in the Early Intervention program and working with occupational therapy, Ryker has begun to pick up objects in an unsupported sitting position. He will allow for hand over hand assistance to complete activities and will now touch food and bring it to his mouth for self-feeding. He has started to roll to obtain and grab toys that are out of reach and actively plays with his twin brother.

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Speech Therapy
by Karen Roley, MS CCC-SLP

Ryker has made great gains in feeding and speech therapy in the past year. He has had to learn to tolerate a Passy Muir valve to assist with vocalizations as well as improving his swallow function. Although Ryker was primarily receiving all nutrition via g-tube upon discharge, the family goal was to have the g-tube removed at one year of age. Fifteen months later, Ryker still has his g-tube but is now accepting up to six ounces of formula via bottle feeds as well as accepting tastes of soft table foods.

During therapy session, pre-chaining was initiated at an early age. The novel techniques of Pre-chaining and Food Chaining© (Fraker/Walbert/Cox) have been developed as an additional method of treatment when working with children who have or at risk for developing feeding aversion or severe food selectivity. Pre-chaining programs are developed to prevent aversive response to oral input and develop or maintain oral skills. Due to Ryker’s surgeries, frequent trach changes and narrow airways, Ryker continues aversive to oral input. As you can see by his big smiles, Ryker is improving his skills everyday! Keep on smiling Ryker!