



TBI News & Views is published tri-annually by the Northern New Jersey Traumatic Brain Injury Model System (NNJT BIS) for people with traumatic brain injuries (TBI) and their families. The NNJT BIS is funded by the National Institute on Disability, Independent Living and Rehabilitation Research (grant #90DPTB0003) and is a collaborative effort of Kessler Foundation, Kessler Institute for Rehabilitation, University Hospital, Hackensack University Medical Center, St. Joseph's Regional Medical Center, Morristown Medical Center, and Jersey City Medical Center.

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PERSONAL PERSPECTIVE

The Ladder

By Andy Napolitano

On June 29, 2010, I was working in a furniture store. We had just finished unloading the weekly delivery when the roll-up door got stuck at the top. I climbed a ladder to see what was wrong. As I did, the door came down onto the ladder, causing me to fall 15 feet to the concrete floor.

The ladder I climbed that day became a metaphor for the ladder I climbed during my recovery from the traumatic brain injury (TBI) I sustained.

Rung 1: My wife, my two children, and my friends were my stability. They became my true advocates as they rallied along with me during the many years of my recovery.

Rung 2: My wife incorporated my passions for music and the NY Yankees, playing my favorite songs and keeping the TV tuned into the games while I was in a coma.

Rung 3: This step involved all the professionals at the Kessler Institute for Rehabilitation in Saddle Brook who diligently worked with me. Their psychologists, physical therapists, occupational therapists, speech therapists, nurses, and doctors all encouraged me to never give up. During one of my speech therapy sessions, the therapist asked my family what could improve my aphasia. As my kids started talking about rock music,

I blurted out, "Mott the Hoople!" The therapist thought I mispronounced something, but my kids said, "No, they were a group in the early 70s!"

Rung 4: The next step was being able to participate in my daughter's wedding. I practiced getting in and out of a car with my Kessler physical therapist. I attended the wedding using a wheelchair but was able to stand up and give my daughter away with the assistance of a spotter.

Rung 5: A big step in my ladder was working to walk up and down two flights of stairs with a spotter on each side of me. It was difficult, but I did it!

Rung 6: At Kessler, I was able to move from a wheelchair to a cane and eventually progressed to a workout routine I could do on my own.

Rung 7: With the use of a Hoyer lift to get into the pool, I was able to do aquatic therapy. Walking around in the water and finally swimming like I used to was so freeing.

Rung 8: Conquering technology and games was next. I was trained to use an iPad and computer. I wrote highlights of New Jersey historical information and Revolutionary War places. I was also determined to learn to play games like Rummikub™, Scrabble™, and other word puzzles. Scattergories™



Andy and Cathleen Napolitano

became a favorite of mine. It took time, but I became very successful at it. A staff member at a long-term care center taught me how to play Contract Rummy™ by using 3x5 cards to show me how the winning hands could look.

Rung 9: My next step was to return home and live with my wife. While I still have tinnitus and gait issues, I have been independent. My passion for live music is alive and well, and I have attended 14 concerts so far.

Rung 10: The last rung involves my increasing involvement with the brain injury community. I've participated in many TBI research studies at Kessler Foundation to help discover ways to improve the lives of people with TBI.

Ultimately, the ladder I fell from has given me the framework for my recovery, and it has completely changed my perspective on how I've lived my life since my injury. ■

RESOURCE REFRESH

Camp TREK: New Challenges, New Opportunities

By Kristin Olsen, Director of Communications, Brain Injury Alliance of New Jersey (BIANJ)

Camp TREK (Together in Recreation, Exploration and Knowledge) is the Brain Injury Alliance of New Jersey's (BIANJ) week-long residential social and recreational program for adults with brain injury. Since its inception over 20 years ago, Camp TREK has become as a vital program of the BIANJ, providing a safe, understanding environment that fosters lifelong friendships, connections, and invaluable experiences. Campers take part in a range of activities such as art, dance, poetry, swimming, outdoor sports, and nature study. The week also affords much needed respite for caregivers who often provide 24-hour care during the rest of the year.

In 2020 and 2021, Camp TREK was held virtually for the safety of campers and staff. Participants were still able to see friendly faces, engage in art therapy, listen to the infamous Camp TREK band, and enjoy dance classes. Campers took virtual farm tours, sang karaoke, and held their annual Talent Show. Virtual Camp TREK also allowed for 14 new campers to be a part of the experience, with one caregiver saying, "I was surprised at how involved my daughter became with the virtual camp experience—thank you!"

To be eligible for Camp TREK, applicants must reside in New Jersey, have a diagnosis of brain injury, and be over the age of 18. The Brain Injury Alliance of New Jersey is looking forward to hopefully hosting camp in person again in 2022. For updates and information, visit bianj.org. ■



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The Brain Injury Alliance of New Jersey is a statewide non-profit organization whose mission is to improve the quality of life for anyone impacted by brain injury by providing support, advocacy and information while promoting brain injury prevention. BIANJ is a chartered state-affiliate of the United States Brain Injury Alliance (USBIA), and, together united, they are inspiring hope and improving the lives of individuals with brain injury.

EXPERT OUTLOOK

The Heart of Gait Training

By Shannon Motisi PT, DPT, Board-Certified Clinical Specialist in Neurologic Physical Therapy, Clinical Specialist-Inpatient Brain Injury Unit, Kessler Institute for Rehabilitation



Shannon Motisi PT, DPT, NCS is a Board-Certified Clinical Specialist in Neurologic Physical Therapy. A graduate of Quinnipiac University, Shannon has been practicing neuro rehab for 10 years at the Kessler Institute for Rehabilitation in West Orange, NJ.

Individuals who have sustained a brain injury and are beginning their rehabilitation journey often cite their goal as "to be able to walk again." The question for rehabilitation specialists is, *how do we make this happen?* As physical therapists who specialize in neuro recovery, our job is to provide the most effective and efficient evidence-based treatment to help our patients achieve their goals and return home as quickly and safely as possible.

The brain injury rehabilitation team at Kessler Institute for Rehabilitation – West Orange campus has implemented a **high intensity gait training**

program to benefit patients with a traumatic or non-traumatic brain injury, who seek to improve their walking ability.

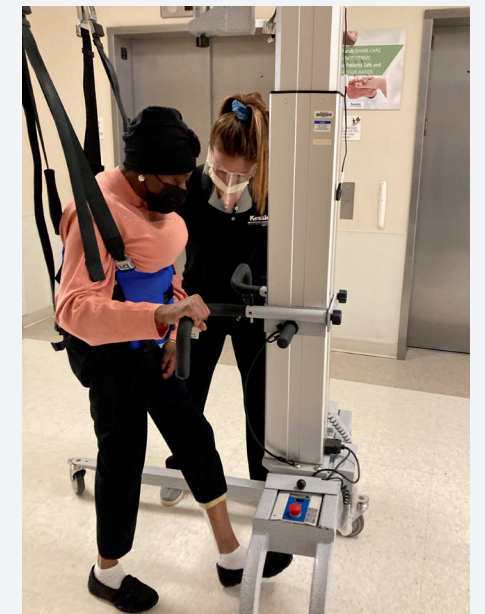
High intensity gait training (HIGT) is a specialized treatment based on walking practice that is vigorous enough to keep the participant's heart rate above a certain target level, thereby increasing blood flow and leading to positive changes to the brain. This approach, which relies on greater repetition of walking practice at high intensities, is now a recognized clinical guideline for improving walking function in individuals with stroke and brain injury.

With medical clearance, individuals participate in walking trials designed to keep their heart rate at a target range of 75-85% of their maximum. Heart rate monitors allow the therapy team to continuously gauge the patient's status. The walking trials are performed over ground (which may also include stairs or other types of elevations) or on a treadmill. In addition, the trials are constantly varied to keep the patient within the target heart rate zone and address the specific areas of walking required to make it successful. This may include walking on an incline, walking backwards, resisted walking, side-stepping, and stepping over obstacles.

Depending on the level of assistance a patient requires, the therapy team

will introduce different equipment for HIGT. For example, the use of a body weight support system allows us to treat individuals either over ground or over a treadmill. Various other walking devices may also be used to offer the support needed to reach the high repetition of stepping that this program requires.

This innovative program has proven to be successful in engaging our patients. They are increasingly motivated to attain their target heart rate and look forward to weekly reassessments of balance, walking speed, and endurance. In turn, this is leading to improved outcomes and helping patients achieve their individual mobility goals. ■



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“It’s such hard work, but it has really helped me walk better. I can see the difference in my walking after doing this intense training.”

– HIGT participant