Brain-e-News
INFORMATION FROM JEFFERSON MOSS REHABILITATION RESEARCH INSTITUTE TRAUMATIC BRAIN INJURY MODEL SYSTEM

Thomas Jefferson University
HOME OF SIDNEY KIMMEL MEDICAL COLLEGE

FALL 2025

Finding New Ways to Boost Mood after TBI

Depression and anxiety are common after moderate to severe traumatic brain injury (TBI), often making it harder to re-engage in life, maintain relationships, and enjoy daily activities.

Unfortunately, these symptoms don't always fade with time, and many people with TBI struggle to find effective treatments.

Our team has been studying Behavioral Activation (BA)—a simple but powerful approach that helps people improve mood by gradually increasing meaningful activities, such as socializing, cooking, walking, or creative pursuits. For people with TBI, who may face barriers to resuming past activities, BA focuses on finding new ones that align with personal values.

To test this approach, we developed BA with Technology (BAT), an 8-week program combining therapy sessions with a smartphone app. The app prompted participants throughout the day to check in about their mood and activities, with results used to guide therapy. A comparison group received motivational text messages but not the full BA program. We enrolled 60 participants, and results were encouraging: those in the BAT program—especially those with higher distress at baseline—showed greater improvements in mood than the comparison group. Across the board, BAT participants reported engaging in more rewarding activities and feeling a stronger sense of accomplishment.

Importantly, even individuals with severe TBI and cognitive challenges used the app successfully and benefited from the program. These findings suggest that blending therapy with mobile health tools can help people with TBI rebuild meaningful routines, lift mood, and regain a sense of control. While more research is needed, BA may offer a valuable non-medication option for managing depression and anxiety after TBI.

RESOURCES

Jefferson Moss Rehabilitation Research Institute
www.mrri.org

The Center for Outcome Measurement in Brain Injury
www.tbims.org/combi

Brain Injury Association of America
www.biausa.org

Brain Injury Resource Line
1-800-444-6443

Brain Injury Association of Pennsylvania
www.biapa.org
1-833-242-7248

Brain Injury Alliance of New Jersey
www.bianj.org
1-732-745-0200
Family Helpline
1-800-669-4323

Brain Injury Association of Delaware
www.biade.org
1-302-346-2083

Model System Knowledge Translation Center (MSKTC)
www.msktc.org

www.brainline.org

New Face of the Model System

Allie earned dual bachelor's degrees in Exercise Science and Psychology from Immaculata University (2018) and completed her PhD in Kinesiology at Michigan State University (2025), specializing in Athletic Injury and Rehabilitation.

Her undergraduate and graduate research focused on concussion recovery—from studying the effects of motivational interviewing in collegiate athletes to examining how exercise and hippocampal hormones influence recovery in a preclinical TBI model.

Her dissertation evaluated the feasibility and usability of ecological momentary assessment (EMA) to track symptoms and quality of life after concussion, highlighting the value of individualized, real-time monitoring.

At the TBI Lab, Allie recruits participants and conducts assessments for a new study on daily activity patterns after TBI. She enjoys being part of a collaborative and supportive team and looks forward to expanding her expertise in digital health tools across the TBI spectrum.

Outside of work, Allie enjoys running, reading, and spending time with her dogs and family.

Welcome to the team, Allie!

The Race for Recovery Brings Community Together

On Sunday, October 6th, we couldn't have asked for better fall weather for the Brain Injury Challenge—Race for Recovery, our annual 5K Run, Walk, and Wheelchair Roll. 366 people joined us this year—families, friends, and teams all coming together to celebrate recovery, raise awareness, and support people living with brain injury.

A special highlight came when Teresa Nelson, mother of Brandon Bonilla, a former Moss patient, shared what this event means to her family. Every year, they show up as Team Brandon, proudly dressed in Batman gear—because Brandon is a true Batman fan! Her words reminded us all why we do this and truly inspired the crowd.

This year's event—co-sponsored by Jefferson Moss-Magee Rehabilitation's Brain Injury Programs and the Brain Injury Association of Pennsylvania (BIAPA)—was our best in recent years! We broke records for participation, teams, and fundraising, bringing in more than $17,000 to support people with brain injury across Pennsylvania.

A huge thank-you to everyone who helped make it possible—from the amazing committee of clinicians who planned the event, to the volunteers from MossRehab and BIAPA, and to everyone who donated, cheered, or joined in the fun. Your energy and enthusiasm made this year's Challenge truly unforgettable!

Recovery after Disorders of Consciousness

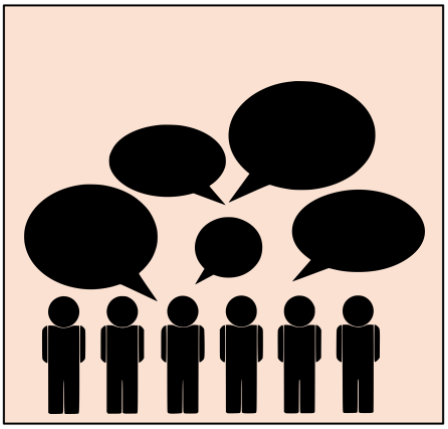
After a severe traumatic brain injury (TBI), some individuals enter what's known as a disorder of consciousness (DOC)— a state in which they appear awake but aren't aware of themselves or their surroundings and can't communicate reliably. For many years, it was believed that if a person didn't regain consciousness within a few weeks, meaningful recovery was unlikely.

Today, we know that's not always true. Research has shown that some people continue to recover awareness and function gradually over several years. Still, because longer periods of unconsciousness often lead to lasting physical and cognitive challenges, there has been concern that those who "wake up" late might experience significant emotional distress or poor quality of life.

A recent study, "Quality of Life and Psychosocial Health after Recovery from Disorders of Consciousness" (published in Journal of Neurotrauma), explored this question. The research included nearly 700 people with TBI who were admitted to inpatient rehabilitation at MossRehab and other centers nationwide. All entered rehab in a DOC and were followed up by phone one year after injury.

By that time, about half could answer questions about their own thoughts and feelings. Among them, rates of depression (16%) and anxiety (14%) were low, and their reported life satisfaction was similar to that of the general population. Additional follow-ups at two and five years showed the same pattern—suggesting that when individuals regain the ability to communicate, they generally report good mental health and meaningful lives.

These results highlight the importance of ongoing rehabilitation and support for people with severe brain injuries. Even after a long recovery, many go on to find purpose, happiness, and connection in their lives.



Empowerment Group Meeting

The Elkins Park Empowerment Group meets on the second Monday of each month from 5-6:30 PM virtually. Please contact Rachel Cataldi for more information.

Phone: **215-456-9560**
Email: **rachel.cataldi@jefferson.edu**

Jefferson Moss Rehabilitation Research Institute
50 E. Township Line Road
Elkins Park, PA 19027
Attn: Lauren Krasucki

NIDILRR
National Institute on Disability, Independent Living, and Rehabilitation Research

The National Institute on Disability, Independent Living and Rehabilitation Research has designated Moss as a Model System for traumatic brain injury since 1997. The TBI Model System seeks to improve lives by creating and disseminating new knowledge about the course, treatment, and outcomes of TBI.