Making New Connections: Brain and Body Wellness through Yoga

Kristin Brooks and Karley Brouwer
OBJECTIVES

• Participants will learn the benefits of yoga to address physical, emotional, and cognitive challenges.

• Participants will complete a series of breathing and mindfulness exercises while transitioning through adapted seated yoga postures.

• Participants will receive resources and information on ways to incorporate learned skills into daily routine and lifestyle.
ABOUT US

• **KRISTIN BROOKS, MPP**
  – 500 Hour Yoga Instructor
  – Origami Yoga Instructor and Hilltop Yoga Instructor
  – LoveYourBrain Yoga Teacher Training Certified

• **KARLEY BROUWER, CTRS, CDP, CBIS**
  – Certified Therapeutic Recreation Specialist
  – Recreational Therapist at Origami Brain Injury Rehabilitation Center
  – LoveYourBrain Yoga Teacher Training Certified
A traumatic brain injury is acquired and is caused by a blow or jolt to the head disrupting brain function and damaging nerve cells.

Over 2.8 million TBIs occur in the U.S. annually, leading to over 50,000 deaths.

3.2-5.3 million people in the U.S. currently live with a TBI-related disability.

TBI causes 30% of all injury-related deaths in the U.S.

Unlike most other physical injuries that can completely heal over time, brain injuries can have permanent life-altering consequences that affect functioning, behavior and personality.
LOVE YOUR BRAIN YOGA

FOR PEOPLE AFFECTED BY TRAUMATIC BRAIN INJURY AND THEIR CAREGIVERS
Yoga and meditation have many healing benefits for TBI and can change the structure and function of the brain.

Improve attention skills by increasing the thickness of the pre-frontal cortex, associated with focus and decision-making.
AUGMENT MEMORY

(AZULAY ET AL., HEAD TRAUMA REHABIL 2013)

by changing brain structures associated with memory, including the hippocampus

(HÖLZEL ET AL., SOC COGN AFFECT NEUROSCI 2010)

ENHANCE SELF-ESTEEM

(DONELLY ET AL., BRAIN INJURY 2016)
REDUCE MENTAL FATIGUE
by supporting better information processing
(JOHANSSON ET AL., BRAIN INJURY 2012)

REDUCE STRESS
by shrinking the amygdala, our fear and anxiety response center
(HOLZEL ET AL., PSYCHIATRY RES 2011)
BOOST
STRENGTH
BALANCE
ENDURANCE
& FLEXIBILITY
(SCHMID ET AL., DISABIL REHABIL 2015)
ACCOMMODATIONS

- SPASTICITY
- POOR BALANCE
- WEAKNESS
- FLEXIBILITY
- VISION
- DIZZINESS
- NERVOUS SYSTEM (CALMING THE SNS)
- LEARNING AND MEMORY
- SOCIALIZATION
What is Therapeutic Yoga?

Therapeutic yoga is defined as the teaching of yoga postures and practice to the treatment of health conditions to prevent, reduce, or alleviate structural, physiological, and emotional pain, suffering and limitations.

Four basic principles at the foundation of yogic teachings that are related to the TBI community:

- The human body is a holistic entity: injury or illness in any one dimension affects the whole.
- Individuals and their needs are unique: practice must be tailored accordingly.
- Yoga is self-empowering: students are their own healers and take an active role in their journey toward health.
- The quality and state of a person’s mind is crucial to healing: practicing a positive mind-state increases resiliency and boosts healing.
MINDFULNESS

- Paying attention to the present moment with curiosity and without judgement.
  - Helps reduce stress
  - Less reactive
  - Increase in self-awareness
  - Meditation and pranayama (breath) are ways to practice mindfulness
MEDITATION

- Meditation is a process of learning how to pay attention.
- Improve concentration
- Regulate emotions
- Reduce stress and anxiety
- Decrease sleep disturbances
- Enhance mental flexibility and positive thinking
PRANAYAMA (BREATHING)

- The practice of mindfully regulating the breath.
- The brain is 2% of body weight but requires 20% of body’s oxygen
- Pranayama helps to maintain efficient oxygenation to the brain while calming the nervous system
SEATED PRACTICE
Goal is to support people affected by TBI to build community and foster resilience.

It’s a free 6-week yoga series for people affected by TBIs.

Each class is 90 minutes and includes breathing exercises, gentle yoga, guided meditation and group discussion.
**HOW IS LYB YOGA TBI-CENTERED?**

- Adapt specific poses to prevent dizziness and headaches
- Offer similar movements in a similar sequence
- Use soft lighting and music
- Use strategies to focus attention, release negative thoughts
- Use group discussion and empowering themes to build community and resilience

"Sloveness of movement is the key to awareness and awareness is the key to learning. Slower movement leads to more subtle observation and maps differentiation, so that more change is possible." — Norman Doidge, 2016
EVIDENCE-BASED PRACTICES: YOGA AND MEDITATION

• Evaluated the impact of LYB yoga program with Dartmouth College and found improvements in executive functioning and quality of life.

• Other benefits of these practices for brain injury rehabilitation:
  • Attention (Cole Mil Med 2015)
  • Self Efficacy (Azulay J Head Trauma Rehabil 2013)
  • Strength and Balance (Schmid Disabil Rehabil 2015)
  • Memory (Azulay J Head Trauma Rehabil 2013)
  • Mental Fatigue (Johansson Brain Injury 2012)
  • Emotional Wellbeing (Silverthorne Int J Yoga Therap 2012)
CLASS THEMES

- Empowerment
- Living in the Present
- Confidence
- Resilience
- Self Love
- Patience
- Community
- Self-Awareness
- Gratitude
- Wholeness
- Balance
- Optimism
“More body awareness & flexibility, less fear of falling (again), comfort and inspiration from other members, and courage to keep doing what I can do for building resilience.”

“It was through yoga, that I realized I was walking around holding my breath. I learned the importance of deep breathing and how to guide my breath. It is so relaxing and released a lot of tension.”

“I could tell it was designed for people “like me”. I felt supported and comfortable, knowing that whatever we bring, whoever we are, we are okay.”

“I’m starting to sleep!”
UTILIZING LYB AS A RESOURCE

• VISIT LOVEYOURBRAIN YOGA ONLINE!
  — LOVEYOURBRAIN.COM
  • RESOURCES
  • PROGRAMS
  • HERE
Improve the quality of life of people affected by traumatic brain injury through programs that build community and foster resilience.
CONTACT US

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• Data and Information have been retrieved from LoveYourBrain
QUESTIONS?