



MTBI RESEARCH

MILD TRAUMATIC BRAIN INJURY

KEYSTONE RESEARCH STUDY

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MAKING THE INVISIBLE WOUNDS VISIBLE

A Prospective, Randomized, Controlled, Three-Arm Clinical Trial
Military Veterans, Special Operations Forces & NFL Athletes | \$20M Fundraising Initiative

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THE PROBLEM: A CRISIS HIDDEN IN PLAIN SIGHT

Thousands of veterans, Special Operations Forces operators, and professional athletes are living with the persistent consequences of mild traumatic brain injury long after the initial event — whether from repetitive impacts, blast exposure, or the cumulative demands of training and combat. Chronic headaches, dizziness, brain fog, sleep disruption, emotional dysregulation, and anxiety that feels more physical than psychological quietly destroy careers, relationships, and lives while remaining largely invisible to conventional medicine.

Current DoD and clinical protocols focus almost exclusively on the brain as the site of injury and stop there. What they do not evaluate is the craniocervical junction — where the skull meets the upper cervical spine — which has been the missing link in mild traumatic brain injury science for decades and may account for a significant portion of the symptoms that brain-focused protocols have never been able to explain or resolve.

Who Is Being Failed?

Combat Veterans

Invisible wounds that manifest as PTSD-like symptoms, cognitive decline, and chronic pain — often misdiagnosed, undertreated, or dismissed entirely.

Military SOF Operators

Blast overpressure, breaching, parachute opening shock, combatives, and large blast proximity cause cumulative CCJ stress that standard DoD evaluation protocols miss entirely.

NFL Athletes

Thousands of repetitive sub-concussive and concussive impacts across careers. Many carry unresolved symptoms long after leaving the field.

THE MISSING LINK: THE CRANIOCERVICAL JUNCTION

The craniocervical junction is the most neurologically and vascularly complex region in the human body. A single misalignment resulting from blast, impact, or whiplash can disrupt multiple critical systems simultaneously:

Brainstem dysfunction: Affects balance, vision, swallowing, autonomic control, and pain regulation

Vascular restriction: Vertebral artery insufficiency can impair posterior brain blood flow; jugular vein compression elevates intracranial pressure

CSF & glymphatic disruption: Impairs toxin clearance and drives neuroinflammation without direct brain injury

Autonomic dysregulation: Locks the nervous system in fight-or-flight — producing anxiety, hypervigilance, sleep disorders, and PTSD-mirroring symptoms

Vestibular-ocular mismatch: Generates dizziness, vertigo, motion sensitivity, and visual instability

Why Injuries Look Invisible But Still Affect the Brain

A significant portion of the persistent symptoms associated with mild traumatic brain injury, including headaches, brain fog, sleep disruption, emotional dysregulation, dizziness, and cognitive decline, can be traced to craniocervical junction dysfunction as a primary driver rather than direct brain damage.

This is precisely why conventional brain-focused protocols so often plateau. They are addressing the downstream effect while the root cause goes unidentified and untreated.

This study will be the first to isolate and directly compare brain-driven and CCJ-driven mechanisms in a rigorous, multi-arm clinical trial, generating the root-cause pathophysiological map that the field has been missing for decades.

STUDY DESIGN: THREE ARMS, ONE ANSWER

ARM 1

Brain-Focused

Hyperbaric Oxygen Therapy + qEEG-guided Photobiomodulation Targets metabolic dysfunction, oxidative stress & neuroinflammation directly within brain tissue.

ARM 2

Structure-Focused

Image-guided CCJ realignment using Advanced Orthogonal Upper Cervical Care. Isolates the mechanical correction effect.

ARM 3

Combined Intervention

HBOT + Photobiomodulation + Advanced Orthogonal Care tests synergistic effects when both brain and structural mechanisms are addressed simultaneously.

400 Participants | Military Veterans, SOF Operators & NFL Athletes | Baseline, 30, 90 & 180-Day Assessments | < 2 Years to Publishable Data

STRATEGIC IMPACT

Why This Study Changes Everything

This is not simply another mTBI study. This is the scientific foundation for a policy shift — one designed to replace the Department of War's outdated brain-bounce model with a root-cause pathophysiological framework that explains and resolves the full spectrum of persistent symptoms.

- Reshape DoD & VA clinical guidelines for mTBI screening, diagnosis, and treatment
- Improve return-to-duty decision-making and reduce long-term disability in SOF operators and combat veterans
- Address the epidemic of invisible wounds — suicide, PTSD-mirroring, cognitive decline — at their root cause
- Reduce the long-term burden on VA healthcare through earlier, more targeted intervention
- Provide NFL athletes with a treatment pathway previously unavailable to professional sports medicine
- Generate publishable, peer-reviewed evidence strong enough to drive federal policy change across DoW, VA, and beyond

JOIN THIS MISSION

We are seeking \$20,000,000 in combined philanthropic and institutional support, alongside organizational endorsements from leaders in veteran health, TBI, invisible wounds, suicide prevention, and athlete welfare.

HOW TO SUPPORT

Financial Contribution

Help fund the \$20M research initiative

Letter of Endorsement

Signed organizational support letter — lend your name and mission to this cause

Research Partnership

Institutional collaboration, IRB support, or co-investigator role

Participant Referral

Connect qualifying veterans, SOF operators, or NFL athletes to the study