

EMERGING THERAPIES FOR TRAUMATIC BRAIN INJURY AND POST TRAUMATIC STRESS



Coastal Authority Care Foundation is a nonprofit that focuses on education, funding and coordinating treatment for veterans with service-connected traumatic brain injury (TBI) and post traumatic stress (PTS) for evidence-based therapies that are not yet covered by insurance but reduce the risk of suicide by healing the wound in the brain. Therapies we support include hyperbaric oxygen therapy (HBOT), neurofeedback, MeRT (magnetic e-resonance therapy), vibroacoustic therapy (VAT), photobiomodulation. These are evidence-based, emerging therapies that initiate the body's own natural healing response to heal the wound in the brain, improve the brain-body connection, alleviate chronic symptoms, reduce pain, and mitigate the risk of suicide for veterans and their families.

Traumatic brain injury and post traumatic stress are the two most prevalent injuries suffered by members of the U.S. Armed Forces. The long wars in Iraq and Afghanistan exposed the same service members over multiple deployments to repeated physical and psychological trauma. The Defense and Veterans Brain Injury Center reports total cases of TBI from [2000 to Q1 2024 to be 505,896](#) with 82% of them categorized as mild TBI (concussion). Initially, there may not have been an observable head injury on imaging tests and some of the symptoms may have been similar to other problems that stem from combat trauma (source: <https://www.research.va.gov/topics/tbi.cfm>).

Suicide among veterans has increased dramatically since 9/11/2001 with undiagnosed/untreated TBI coming to light as a likely contributing factor. Studies show individuals who suffer TBI are twice as likely to contemplate suicide compared to those without. Receiving multiple concussions has been associated with an even greater risk. A [psychological autopsy study](#) conducted by USSOCOM revealed special operations forces have a 30% higher rate of suicide compared with the rest of the military.

TBI is caused by a jarring of the head possibly from a fall, explosion, repeated gunfire exposure or a blow to the head. The jarring causes damage to brain tissue, blood vessels and cells that link areas of the brain and the brain to the body. Common symptoms include but are not limited to confusion, vertigo, sleep disturbance, memory loss, headaches, blurred vision, tinnitus, mood swings, anger outbursts, depression and anxiety. These symptoms are insidious and worsen over time if left untreated, often leading to breakdown in relationships, divorce, separation, loneliness, job loss, early-onset dementia and suicide. Many veterans will not receive early diagnosis or will not seek treatment and in individuals with chronic, persistent symptoms of TBI, traditional medical interventions are less than successful. TBI/PTS are destroying the lives of our veterans at an alarming rate and leaving them with health issues, poor quality of life and suicidal ideation.

HYPERBARIC OXYGEN THERAPY: HBOT is the use of 100% oxygen at higher than atmospheric pressure. By going under pressure, oxygen is forced into every tissue and cell helping to induce the body's own natural healing process. Studies show HBOT can dramatically and permanently heal the wound in the brain and improve chronic symptoms of TBI months or years after the original head injury. Pre and post-treatment SPECT scans show improvement in blood flow and EEG shows improved brain function. Improvements are also seen in cognition and symptom severity using gold standard testing. We coordinate treatment with Tier 1 Therapy Centers in Norfolk, Virginia for hyperbaric oxygen therapy. They have 12+ years of experience working treating veterans with TBI and PTS. The cost is approximately \$6000-7000 per person for evaluation and treatment.

NEUROFEEDBACK: EEG measures electrical patterns at the surface of the scalp which primarily reflect cortical electrical activity or "brainwaves." This data provides a "roadmap" about parts of the brain that are not functioning properly. Neurofeedback is used to send electromagnetic waves into targeted areas of the brain to retrain it to achieve improved functioning. We coordinate treatment with Tier 1 Therapy Centers and NEUCOA in Virginia Beach, VA for neurofeedback. The cost is approximately \$6000-\$7500 per person for evaluation and treatment.

ELIGIBILITY: Veterans with service-connected TBI/post concussion syndrome, PTS and/or chronic pain.

GEOGRAPHIC AREAS COVERED: United States. Veterans can live in Virginia or be travelling into the area from other states for treatment.

FUNDING SOURCES: Fundraisers, grants and donations.

PROGRAM INCEPTION: April 2019