

NEUROLOGY & HYPERBARICS

Approximately 1 billion people, of all ages, are currently affected by neurological disorders, with an estimated 6.8 million related deaths that occur every year world-wide. This staggering statistical evidence illustrates the substantial impact of neurological disorders. New evidence has shown how hyperbaric oxygen therapy (**HBOT**) has helped individuals regain neurological activity and functionality. For neurodevelopmental and neurodegenerative disorders, in addition to neurological injuries, HBOT provides the brain with increased levels of oxygen to help recover/repair brain tissue, increase neuronal stem cell growth and improve cognitive functioning. Clinical studies have demonstrated the benefits of HBOT for neurological conditions with the following:

IMPROVE BRAIN FUNCTIONING & PERFORMANCE WITH HBOT

- Stimulates Angiogenesis
- Improves Cerebral Oxygenation
- Enhances Memory and Mental Performance

ATTENUATE NEUROINFLAMMATION WITH HBOT

- Reduces Cerebral Edema
- Decreases Intracranial Pressure
- Reduces Cerebral Infarction
- Reduces Blood-Brain Barrier Breakdown
- Minimizes Oxidative Stress

INCREASE REGENERATION OF THE NERVOUS SYSTEM WITH HBOT

- Stimulates Neurogenesis
- Promotes Proliferation and Mobilization of Neural Stem Cells
- Facilitates Neuroplasticity

IMPROVE BRAIN REPAIR & RECOVERY WITH HBOT

- Recovers & Repairs Damaged Brain Tissue
- Develops & Regains Cognitive/Motor Functions

AMELIORATE NEUROLOGICAL CONDITIONS WITH HBOT

- Neurodevelopmental Conditions (Autism, Cerebral Palsy, Fetal Alcohol Syndrome)
- Neurodegenerative Conditions (Alzheimer's, Parkinson's, Huntington's Disease)
- Neurological Injuries (Stroke, Traumatic Brain & Spinal Cord Injuries, Concussions)

Study: Brain Function Improves with HBOT

A prospective, randomized, crossover, controlled trial was published in 2013 testing the effectiveness of HBOT for improving brain function and quality of life for mild-traumatic brain injured (mTBI) patients suffering chronic neurocognitive impairments. A total of 56 mTBI patients, 1-5 years after injury, with prolonged post-concussion syndrome, were evaluated. Patients in the treated group were assessed at baseline and after 40 HBOT sessions. Whereas patients in the crossover group were evaluated three times: at baseline, after a two-month control period of no HBOT and after two-months of 40 HBOT sessions. Significant improvements were confirmed in cognitive function and quality of life in both groups after HBOT, however, no significant improvement was observed following the control period. HBOT was shown to induce significant brain function improvements, neuroplasticity and increased brain activity according to SPECT imaging.

Boussi-Gross R, Golan H, Fishlev G, Bechor Y, Volkov O, et al. (2013) Hyperbaric Oxygen Therapy Can Improve Post Concussion Syndrome Years after Mild Traumatic Brain Injury - Randomized Prospective Trial. PLoS ONE 8(11): e79995

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