

# CEREBRAL PALSY & HYPERBARICS

Cerebral Palsy (CP) affects 1 in 303 children in the U.S. (8,000 new cases every year) making it the most devastating motor disability in childhood. This tragic disorder affects movement, posture and other motor skills and may result in the need for life-long care. Hyperbaric oxygen therapy (HBOT) has been shown, in some studies, to ameliorate the effects of CP. Many forms of Cerebral Palsy result from a lack of oxygen to the brain. The affected brain tissue, or penumbra, can be recovered or improved by introducing increased levels of oxygen. HBOT has been shown to be a promising treatment with multiple studies reporting improvements with its application. Studies have demonstrated the benefits of HBOT for CP with the following:

## Enhance Neurological Repair & Regeneration with HBOT

- Attenuates the Effects of Hypoxia on the Neonatal Brain
- Promotes Neurogenesis
- Moderates Mitochondrial Disorders
- Enhances Stem Cell Mobilization and Proliferation
- Increases Penumbra Tissue Recovery
- Escalates Neuroplasticity

## Improve Overall Function with HBOT

- Advances Cognitive Function
- Improves Gross/Fine Motor Skills
- Enhances Speech & Language
- Alleviates Spasticity
- Lessens Frequency of Seizures
- Stimulates Better Eye Contact
- Improves Balance & Walking



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## Study: Motor Function Improved with HBOT

A study conducted with 25 participants assessed the effects of HBOT with children diagnosed with spastic diplegic CP. The children were evaluated after 20, one hour HBOT sessions. The results affirmed improvements in gross motor function (three of the five items) using the gross motor function measure (GMFM) and the fine motor function (three of six hand tests) utilizing the Jebsen Test for hand function. Additionally, reduced spasticity in three of the four muscle groups was confirmed by means of the modified Ashworth Scale. All tests were assessed by a physician specializing in CP.