



The Wellness Lab®
HYPERBARIC OXYGEN

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NEUROLOGICAL AND HBO

**Hyperbaric Oxygen promotes healing
of the brain and nervous system by
flooding the body with oxygen.**

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Neurological conditions

The term neurological comes from neurology, which is the branch of medicine that deals with problems affecting the nervous system. Hyperbaric Oxygen promotes healing of the brain and nervous system by flooding the body with oxygen. This can improve neurological conditions by allowing the damaged tissue to repair itself.

Hyperbaric Oxygen has been observed to cause molecular changes in the central nervous system (CNS) of individuals afflicted with neurological conditions.

Hyperbaric Oxygen works by increasing oxygen content in the brain to supra physiologic levels, enhancing mitochondrial function and modulating over 8,000 genes on our DNA.

How Hyperbaric Oxygen Can Improve Neurological Conditions

Hyperbaric Oxygen has been employed as a treatment for a variety of neurological indications, including emergency situations such as drowning, smoke inhalation, and electrocution. In addition, HBO is also used for chronic conditions such as traumatic brain injury and multiple sclerosis.

Cerebral Palsy

Those with CP see the following changes after HBO

Cerebral palsy (CP) is a group of disorders that affect a person's ability to move and maintain balance and posture. CP is the most common motor disability in childhood. Cerebral means having to do with the brain, palsy means weakness or problems with using the muscles

- ✓ Advances in cognitive function
- ✓ Improved gross/fine motor skills
- ✓ Enhances in speech and language
- ✓ Alleviates spasticity
- ✓ Lessens frequency of seizures
- ✓ Stimulates better eye contact
- ✓ Improves balance and walking

A clinical trial consisting of 71 children concluded that Hyperbaric Oxygen proved to be beneficial for children with CP. The group noted that sleep was improved and all children felt safe within the Hyperbaric Oxygen chamber.

The USA Ocean Hyperbaric Neurologic Centre documented the beneficial effects of

Hyperbaric Oxygen for CP via SPECT imaging scans. It was noted that Hyperbaric Oxygen not only relieves hypoxia, but also jumpstarts the brain to much better organisation and function. In the very young children, the SPECT scans showed better internal milieu for the growth of new brain tissue. The centre noted that the clinical effects are “remarkable”.

The use of Hyperbaric Oxygen in CP will give the brain a better environment in which to grow new tissue

In addition, seizure disorder may be actively treated with Hyperbaric Oxygen. The USA based neurological centre has seen outstanding results and have treated 60 cases of seizure disorder and have been able to reduce the frequency of seizures in nearly every case, as well as being able to reduce most of the medications.

Cerebral Oxygenation and the recoverable brain

A course in Hyperbaric Oxygen therapy frequently results in a permanent improvement in both flow and metabolism. Studies have shown recoverable brain tissue that has been identified using SPECT imaging and increased cerebral oxygenation under hyperbaric conditions.

Alleviating Neuropathic Pain

HBO is an effective approach for treating neuropathic pain. It is suggested that neural protection, anti-inflammatory and inhibition of nerve injury-induced altered neural activity may contribute to the analgesic effect of Hyperbaric Oxygen.

New Hope

Clinical studies published this year present convincing evidence that HBO is a great neurotherapeutic method for brain repair. It is widely acknowledged that the combined action of hyperoxia and hyperbaric pressure leads to significant improvement in tissue oxygenation, while targeting both oxygen and pressure sensitive genes. This results in improved mitochondrial metabolism with anti-apoptotic and anti-inflammatory effects.

HBO induces neuro-protection, as shown in animal models, due to the observed tissue oxidation, improved mitochondrial redox, preservation of mitochondrial integrity, hindering of mitochondria-associated apoptotic pathways as well as anti-inflammatory effects.

Traumatic brain injury

There is now convincing evidence that HBO can revitalise chronically impaired brain functions and significantly improve the quality of life of mild traumatic brain injury (TBI) patients, even years after injury

Hyperbaric Oxygen has been proven in clinical trials to lead to significant improvements in the quality of life of TBI patients. Furthermore, analysis of brain imaging showed significantly increased neuronal activity after a 2-month period of HBO compared to the control group which did not receive HBO.

SPECT scans from the trial showed cognitive function restoration and changes in brain functionality in previously stunned areas.

Stroke

A randomized trial published persuasive evidence that HBO can also revitalise chronically impaired brain function and significantly improve the quality of life post-stroke patients, even years after the event

Again, SPECT imaging scans were well correlated with clinical improvements and revealed restored activity mostly in stunned areas in the surroundings of necrotic foci.

Underlying Repair Mechanisms

HBO can initiate vascular repair and improve cerebral blood flow, induce

Improved Cerebral Plasticity

New trials provide evidence that HBO can induce cerebral plasticity

HBO has been shown to improve myelinisation, regeneration of axonal white matter, angiogenesis and changes in the glial fabric

HBO acts as a potent means of delivering to the brain sufficient oxygen needed for the activation of neuroplasticity and restoration of impaired functions.

regeneration of axonal white matter, stimulate axonal growth, promote blood-brain barrier integrity and reduce inflammatory reactions as well as brain edema.

Brain insults may result in a variety of brain injuries, including impairment of microvascular integrity and cerebral perfusion. This, in turn, leads to reduced metabolism and neuronal activity, which leads to a loss of synapses and tampered neuronal connectivity. The stunned areas are characterised by anaerobic metabolism and ATP depletion culminating in stagnation and shortage of energy for the healing process.

These areas may persist like this, dysfunctional but alive, for years after injury.

At the cellular level, HBO can improve cellular metabolism, reduce apoptosis, alleviate oxidative stress and increase levels of neurotrophins and nitric oxide through enhancement of mitochondrial function in both neurone and glial cells, and may even promote neurogenesis of endogenous neural stem cells.

Regarding the mitochondria, it is important to note that stroke and TBI engender depolarisation of the mitochondria membrane and induction of mitochondrial permeability transition pore, which reduces the efficiency of energy production and elevate the level of reactive oxygen species. HBO can inhibit mitochondrial permeability transition pore and thus have the potential to reverse this abnormality.

View the
Studies

See What the
Team Are
Saying



<https://www.o2oasis.com/wp-content/uploads/2014/11/Newhope-Hyperbaric-Oxygen-Therapy-Is-Proving-To-Be-Able-To-Take-Children-Significantly-Beyond-The-Limits-Of-The-Improvements-That-Were-Previously-Thought-Possible.pdf>

Chronic
Conditions
Hyperbaric
Oxygen

IV Drips

Glutathione IV: A Natural Approach To Managing Menopause Symptoms



<https://www.tandfonline.com/doi/abs/10.1080/01616412.2016.1275454>

What is
Glutathione?
Glutathione is
known to be
one of the
most potent
antioxidants
and
detoxifiers,
protecting
cells from
damage and
ageing. It is
a...



<https://www.o2oasis.com/wp-content/uploads/2014/11/High-Dose-Oxygen-Therapy-For-Cerebral-Palsy-And-The-Brain-Injured-Child.pdf>

March 1, 2024



<https://www.o2oasis.com/wp-content/uploads/2014/10/Cerebral-Oxygenation-And-The-Recoverable-Brain.pdf>

Hyperbaric Oxygen For Sudden Hearing Loss

How
Hyperbaric
Oxygen can
help with
Sudden
Hearing Loss



<https://pubmed.ncbi.nlm.nih.gov/22354664/>

Hyperbaric
Oxygen is an
effective
emerging
adjunct
therapy for
Sudden



<https://www.tandfonline.com/doi/full/10.1586/14737175.2014.884928>

Sensorineural
Hearing Loss
(SSNHL).
Historically,
managing...

July 12, 2024

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<https://hyperbaricoxygentherapy.com/hbot-helps-children-with-cerebral-palsy>



<https://www.mycerebralpalsychild.org/treatment/hyperbaric-oxygen-therapy/>



<https://oxfordrecoverycenter.com/wp-content/uploads/2017/02/A-follow-up-on-more-than-1000-children-with-cerebral-palsy-treated-with-HBOT-What-have-we-learned.pdf>



<https://www.cerebralpalsyguidance.com/cerebral-palsy/treatment/hyperbaric-oxygen-therapy/>

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Email Address *

Phone Number *

Best time to contact me *

Tell us more about you and any medical condition *

0 / 180

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Please note that although the use of Hyperbaric Oxygen has been established in the treatment or management for a variety of indications, the evidence for its use remains uncertain which means that it is not proven by “randomized prospective controlled clinical experiment or trial” or “double blind study” which is considered to be the strongest form of scientific evidence by conventional medical standards.

