



Advanced Hyperbaric Recovery™
Hyperbaric Oxygen Therapy of Marin™

H.O.P.E.
forhealinginstitute
H.HYPERBARIC-O.OXYGEN-P.PROVIDING-E.ENERGY



Greetings!

We love kids! And were sure that you do too.

In this month's newsletter, in recognition of Autism awareness month, we would like to highlight the ways hyperbaric oxygen therapy (HBOT) is used in the treatment of Autism, Cerebral palsy, and brain-injured children.

Dr. Dan Rossignol from the International Child Development Resource Centre, in Florida says: "We're certainly not talking about a cure, we're talking about improvements in behavior, improving certain functions and quality of life.

Also, in recognition of National Infertility Awareness Week (last full week of April) we will highlight the ways HBOT has been used to help with infertility.

4 Facts about Cerebral Palsy & Autism:



1. Encephalitis is thought to be part of developmental disorders. The encephalitis can be initiated by viral infection, by exposure to vaccines, and/or by other autoimmune processes. SPECT scans show HBOT can heal encephalitis of the brain.
2. Loss of function in the brain can be either due to tissue swelling, which is reversible, or tissue destruction, which is not. The recoverable areas can now be identified by a SPECT scan imaging, this imaging also shows HBOT cause a reduction in cerebral edema.
3. Autism is a neurodevelopmental disorder that currently affects as many as 1 out of 166 children in the United States. Recent research has discovered that some autistic individuals have decreased cerebral perfusion, evidence of neuroinflammation, and increased markers of oxidative stress.
4. Tomography (PET) research studies have revealed hypoperfusion to several areas of the autistic brain, most notably the temporal regions and areas specifically related to language comprehension and auditory processing. Several studies show that diminished blood flow to these areas correlates with many of the clinical features associated with autism including repetitive, self-stimulatory and stereotypical behaviors, and impairments in communication, sensory perception, and social interaction.

Four Benefits of HBOT:



1. By providing more oxygen as is only possible under hyperbaric conditions, areas which are not "dead but sleeping" can be identified. This phenomenon has been discussed for many years in stroke patients and authorities have even stated that the critical parameter is not blood flow it is oxygen delivery. Under normal circumstances, blood flow and oxygen delivery are inextricably coupled, but the use of hyperbaric conditions can change this situation for the better.
2. In addition, animal studies have shown that HBOT has potent anti-inflammatory effects and reduces oxidative stress. Furthermore, recent evidence demonstrates that HBOT mobilizes stem cells from human bone marrow, which may aid recovery in neurodegenerative diseases. Based upon these findings, it is hypothesized that HBOT will improve symptoms in autistic individuals.
3. Summary of the effects of HBOT both in acute and semi-acute and long-term neurologic conditions: HBOT reduces any pressure within the brain caused by swelling, restoring the functions of the blood brain barrier and cell membrane; It neutralizes toxic products in the brain, and over a period of time, enhances growth of new blood vessels; It also acts as a scavenger of free radicals and promotes internal cleaning of debris; HBOT also reduces the stickiness of blood products (white blood cells and platelets), and makes oxygen available for use without energy transfer (when the hemoglobin carries oxygen, it requires energy to deliver to the tissue spaces); With HBOT the free oxygen is available immediately for metabolic use.
4. HBOT improves oxygen diffusibility throughout the brain, lowering lactates and raising ATP in affected areas; improving glucose metabolism by lowering production of substances, like aspartate and glutamate, which are

responsible for over-response of the receptors; improving metabolic processes and perfusional flow distribution, bringing the generation of free radicals in the intracranial area under greater control.

Monthly Case Study:

Physicians at the US army base in Fort Augusta, Georgia conducted a study on nine children, all with anoxic brain injury.

All subjects received 80 HBO treatments [in a medical, hard shelled chamber] (100% oxygen) at 1.70 ATA (60 minutes for each session) daily (Monday-Friday) for 4 months.

Each patient served as his or her own control as compared to baseline scores. Improvements in GMFM in the categories of lying and rolling, crawling and walking, sitting and walking, running and jumping were statistically significant ($p < 0.05$). The total time necessary for parental care also showed a statistically significant improvement ($p < 0.03\%$) in reduction of custodial time required.

Three children demonstrated improved swallowing function and were able to ingest a variety of liquids and foods; there was a reduction in strabismus in two subjects, nystagmus was resolved in one participant, and one patient experienced complete resolution of a grade 3 vesicoureteral reflux, obviating the need for surgery.

Overall improvement was 26.7% at 30 treatments, up to **58.1% Improvement at 80 HBOT treatments in a medical grade hard chamber.**

What do our patients have to say?!

Young Girl Suffering From Brain Injury:

"Within the first couple of sessions we noticed changes immediately. We were not doing any other



therapies but her speech improved to 4-5 word sentences and became more complex. Her social abilities improved virtually 300%.

She emotionally matured. She became more like a normal 4 year old. She had a wandering eye, and during the hyperbaric dives we noticed her eye was holding position much better than it ever had before.

Her OT and PT instructors noticed changes in her fine motor and gross motor. Overall the dives have changed her life and given us all hope that she may be able to cope in mainstream school in the near future."

-Her Mother, San Rafael

National Infertility Awareness Week:

HBOT has been suggested as a possible means to improve the success rate of both "natural" and IVF pregnancies (1). Studies show that one of the main reasons of infertility is reduced tissue blood perfusion (Ischemia) and consequently low tissue oxygenation or hypoxia.

HBOT benefits in the treatment of infertility by(2):

- Increasing the amount of oxygen carried to the tissues by forcing oxygen into all the organs and promotes the growth of the microcirculation.
- Enhancing immune capabilities, enabling wound healing, infection control, alleviation of tissue ischemia, and reducing painful inflammation and swelling.
- Eliminating toxins and metabolic by-products from the body, which are greatly increased in patients with inadequate fertility responses.

HBOT may be beneficial for egg development in follicular stage as well as endometrial proliferation and development for implantation. Studies suggest improved estrogen response, implantation, and pregnancy rates after HBOT(1).

How HBOT can help with Female Infertility?

- HBOT improves the blood flow in the uterine tissue causing endometrial thickening.
- Improves endometrial receptivity by providing adequate vascularization and oxygenation.
- Normalizes hormonal and receptor levels.
- Improves estrogen response.

How does HBOT help with Male Infertility? HBOT has been found to greatly reduce and even eliminate dysfunctions of low oxygenation evidence by:

- Normalized physical structure and volume of the testes.
- Increased sperm production.
- Improved quality of semen.

Reference:

(1) PHYSIOLOGY AND MEDICINE OF HYPERBARIC OXYGEN THERAPY, By Tom S. Neuman & Stephen R. Thom, 2008.

(2) INFERTILITY, BaroMedical © 1999-2014

We're everywhere!
Don't forget to follow us:



**Free
tour!!**

Our facility and our staff at Advanced Hyperbaric Recovery have been awarded multiple times as being some of the best in the world!! Call our office today to schedule your free personalized tour of our facility and time to talk about case studies specific to your condition with one of our Certified Hyperbaric Technologists(CHT).

Offer Expires: 5/1/2015

Thank you for your interest in our newsletter and for partnering with us to help improve quality of life through medical grade hyperbaric oxygen therapy. We have access to published case studies on many different conditions that have been shown to improve with HBOT. If you have any other questions please [contact us](#) for more information.

Happy healing,

"Our Team"



Advanced Hyperbaric Recovery LLC
Hyperbaric Oxygen Therapy of Marin
and volunteer of the
H.O.P.E. For Healing Institute
a 501c-3 Non-Profit

900 Larkspur Landing Cir. #115

Larkspur CA 94939

(415)785-8652

Info@ImproveHealing.com

HyperbaricOxygenTherapy.com



Send to a Colleague