

Mild Hyperbaric Therapy As An Immune Modulator

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Mild Hyperbaric Oxygen treatment in a portable chamber, at 1.3 ATA and 24% oxygen, administered daily for ten consecutive sessions (1 hour each) improves brain function as measured by SPECT brain scan and a test for attention and reaction time.

Patients often report a sense of well-being and youthfulness after hyperbaric therapy.

We wondered whether immune function is positively affected by hyperbaric therapy. We chose apoptosis (a function of programmed cell death) and natural killer cell activity (a function of immune surveillance) as parameters in nine patients.

Our preliminary data show that 10 mHBO sessions can positively affect immune function: natural killer cell function increases and apoptosis values decrease. More sessions may be needed to affect positive results in an even higher percentage of patients.

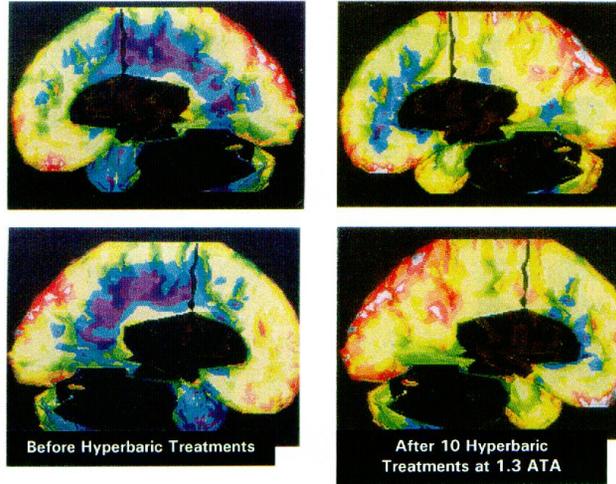
We conclude that mHBO can improve immune function. Since apoptosis numbers increase with age the reversal of that process may have significance with regard to aging.

Is It Safe?

Yes! The mild hyperbaric chamber is completely safe. Since our chambers use filtered ambient air, they can be used regularly without the danger of oxygen toxicity in the body.

The majority of clients report a pleasant, comfortable experience. In addition, mHBT can be a safe adjunct to most other therapies.

S.P.E.C.T. Scans



These SPECT scans were taken from a person with impaired brain function before and after 10 hyperbaric treatments at 1.3 ATA. The treatments were administered for one hour per day for five consecutive days for two weeks. The darker blue and purple areas indicate low activity. The lighter red and yellow areas indicate high activity.

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Disclaimer: Although mild hyperbaric therapy has been reported to be beneficial for a wide range of conditions, this treatment is not meant as a cure for any condition or disease, and no therapeutic outcomes can be guaranteed

Mild Hyperbaric Therapy Treats Many Chronic Diseases and Conditions



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What Is Hyperbaric Therapy?

Hyperbaric Therapy is a medical treatment in which a person is exposed to increased atmospheric pressure inside an inflatable chamber. The typical pressure reaches between 1.1 and 1.5 atmospheres, which can also be expressed as 3 to 6 pounds per square inch. The increase in pressure allows more oxygen to reach the cells of the body which has many healing and therapeutic benefits.

How Does Hyperbaric Therapy Work?

According to Henry's Law of Physics, an increase in atmospheric pressure allows more gas to be dissolved into any given liquid. Henry's law is displayed in every can of soda. When soda is canned at the factory, it is put under pressure so that more carbon dioxide can be dissolved into the soda causing it to be carbonated. When the can is opened, the pressure is released. Without the pressure to keep the gas dissolved, the soda will become flat in a few hours.

This same principal applies to oxygen and plasma, the liquid part of the blood. When the body is under pressure, plasma, cerebral fluid, and synovial fluid will dissolve more oxygen than they would if they were not under pressure. Not only does this increase the amount of available oxygen to the tissues, it allows oxygen to reach areas of the body that would normally be difficult to reach.

What Is the Treatment Frequency Recommended?

Forty-five to 60 minutes, two to three times per week for four to six weeks. Future treatments would be as required to maintain health and fitness. Every person is different, and the specific reason for treatment will dictate the frequency and duration.

Hyperbaric Therapy Benefits Many with the Following Conditions:

- ◆ ADD / ADHD
- ◆ Asthma / Allergies
- ◆ Altitude Sickness
- ◆ Alzheimer's / Dementia
- ◆ Autism Spectrum Disorder
- ◆ Brain Injury
- ◆ Burns
- ◆ Cerebral Palsy
- ◆ Chronic Fatigue Syndrome
- ◆ Circulation Issues
- ◆ Diabetic Complications
- ◆ Digestive Disorders
- ◆ Disc Herniation
- ◆ Dizziness
- ◆ Fibromyalgia
- ◆ Flu
- ◆ Frequent Flying / "Jet Lag"
- ◆ Headaches / Migraines
- ◆ Hypoxia
- ◆ Immune Deficiency
- ◆ Infection - (Bacterial, Fungal, Viral)
- ◆ Inflammation
- ◆ Lyme Disease
- ◆ Multiple Chemical Sensitivity
- ◆ Multiple Sclerosis
- ◆ Muscle / Tendon / Joint Pain
- ◆ Premature Aging
- ◆ Rheumatoid Arthritis
- ◆ Sleep Disorders
- ◆ Smoking
- ◆ Sports Enhancement & Injury Recovery
- ◆ Stress / Anxiety / Depression
- ◆ Stroke
- ◆ Surgical Recovery
- ◆ Toxic Environmental Exposure
- ◆ Wound Healing
- ◆ AND MORE!!!

What is the Mechanical Effect of Increased Pressure?

Any free gas trapped in the body will decrease in volume as pressure exerted on it increases (Boyle's Law). Reduction in bubble size may allow it to pass through the circulation, or at least travel into a smaller vessel which will reduce the size of any resulting infarction. This effect is useful in the management of gas embolism and decompression sickness.

Flooding the body with oxygen forces the rapid elimination of other gases, thus reducing damage caused by toxic gases such as carbon monoxide. The elevated pressure used during hyperbaric oxygen therapy further accelerates the elimination process.

Hyperbaric oxygen acts as an alpha-adrenergic drug. Vasoconstriction can result in reduction of edema following burns or crush injuries. Even with a reduction in blood flow, enough extra oxygen is carried by the blood so a net increase in tissue oxygen delivery occurs with hyperbaric oxygen.

Anaerobic bacteria does not contain the natural defenses to protect them from the superoxides, peroxides and other compounds formed in the presence of high oxygen tensions. More important, many of the body's bacterial defense mechanisms are oxygen dependent. When tissue pO₂ drops too low, effective ingestion and killing by phagocytic leukocytes is retarded. Reoxygenation of those tissues allows phagocytosis and other host defense mechanisms to come back into play.

Hyperbaric oxygen physically dissolves extra oxygen into the plasma (Henry's Law). The quantity of oxygen carried and transferred to ischemic tissue by the blood is increased. Relieving the ischemia with this increased oxygenation promotes osteoclastic and osteoblastic activity, collagen matrix formation and the breakdown of many toxins. The extra oxygen also helps the ischemic tissue meet the increased metabolic need required by healing processes.