INFLAMMATION & HYPERBARICS

Inflammation is an integral finding in numerous medical conditions and coincides with nearly all types of injuries and insults to the body. Numerous studies have reported chronic inflammation in Alzheimer's disease, Atherosclerosis, Autism, Cancer, Stroke, Diabetes, Traumatic Brain Injury and many other chronic health challenges. Hyperbaric oxygen therapy **(HBOT)** has been demonstrated to substantially attenuate inflammation throughout the body. HBOT drives increased levels of oxygen into the body, which travels through the plasma, subsequently reducing inflammation and pain. Studies have shown that HBOT increases anti-inflammatory levels and provides increased cellular aid to heal target regions. As oxygen serves as one of the primary mechanisms to ameliorating inflammation, HBOT creates the environment where this process is stimulated and enhanced. Studies have demonstrated the benefits of HBOT for inflammation with the following:

SUPPORT ANTI-INFLAMMATORY PROCESS AT THE CELLULAR LEVEL WITH HBOT

- Decreases Acute/Chronic Inflammation
- Minimizes Pain & Discomfort
- Increases Anti-Inflammatory Cytokines
- Reduces Swelling
- Induces Fibroblast Activation

REDUCE NEUROINFLAMMATION WITH HBOT

- Ameliorates Autism Symptoms
- Supports the Prevention & Treatment of Stroke
- Reduces Risk of Alzheimer's & Parkinson's Disease

DECREASE GASTROINTESTINAL INFLAMMATION WITH HBOT

- Remediates Inflammatory Bowel Disease
- Ameliorates Ulcerative Colitis
- Improves Nutritional Absorption

RELIEVE SOFT TISSUE/JOINT INFLAMMATION WITH HBOT

- Remediates Osteoarthritis & Rheumatoid Arthritis
- Ameliorates Tendinitis
- Accelerates Recovery from Sports-Related & High-Impact Injuries

PREVENT THE ONSET OF CHRONIC INFLAMMATORY-RELATED DISEASES WITH HBOT

- Attenuates Cancer Risk & Progression
- Reduces Risk of Atherosclerosis, Heart Attack & Stroke
- Ameliorates Diabetic Conditions Linked to Inflammation

Study: Atherosclerosis & Inflammation Attenuated with HBOT

A study published in 2008 examined the effects of HBOT for atherosclerosis (plaques of fatty material that line the walls of arteries) with mice. Two groups of mice were treated with either 5 or 10 weeks of HBOT, whereas two other groups remained untreated and were used as a control group. After the introduction of low density lipoprotein, the treated group exhibited positive changes

in the immune/inflammatory response. This represents a critical component of the beneficial effects of HBOT. This study demonstrated that HBOT significantly reduced the circulating levels of low density lipoprotein that can cause heart disease, kidney disease and stroke. Additionally, HBOT resulted in a substantial attenuation in the production of pro-inflammatory cytokines in response to an inflammatory stimulus, and showed a marked increase in the production of anti-inflammatory cytokine Interleukin 10 by spleen cells. The observed improvements were already noted after only 5 weeks of treatment.

Ahmet Kaya, Figen Aydin & Taskin Altay, Levent Karapinar, Hasan Ozturk & Cengiz Karakuzu (2008) Can major amputation rates be decreased in diabetic foot ulcers with hyperbaric oxygen therapy? International Orthopaedics (SICOT) 33:441–446

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