Hyperbaric Oxygen & Chronic Pain Hyperbaric

Oxygen Therapy: A New Treatment for Chronic Pain

Hyperbaric oxygen therapy (HBOT) is a treatment providing 100% oxygen at a pressure greater than that at sea level. HBOT is becoming increasingly recognized as a potential treatment modality for a broad range of ailments, including chronic pain. In this systematic review of 25 published studies, HBOT was shown to reduce pain using animal models and early clinical research indicates HBOT may also be useful in modulating human pain.

Sutherland AM, Clarke HA, Katz J, Katznelson R, Hyperbaric Oxygen Therapy: A New Treatment for Chronic Pain. Pain Pract. 2016 Jun; 16 (5): 620-8. Doi: 10.1111/papr. 12312. Epub 2015 May 19. PMID: 25988526.

Hyperbaric Oxygenation Therapy alleviates chronic constrictive injury-induced neuropathic pain and reduces tumor necrosis factor-alpha production.

The development of hyperalgesia and allodynia after chronic constrictive injury (CCI) is associated with significantly increased tumor necrosis factor (TNF)-alpha and interleukin (IL)-1 beta. Theoretically, if the production of TNF-alpha and/or IL 1 beta could be reduced, neuropathic pain syndrome may be alleviated. Recently, a benefit of Hyperbaric oxygenation therapy (HBOT) in the treatment of pain disorders has been suggested. This study was intended to test the

hypothesis that HBOT may alleviate CCL-induced neuropathic pain, and the alleviated neuropathic pain may be associated with reduced production of TNF-alpha and/or IL-1beta.

The data show that HBOT alleviates CCL-induced neuropathic pain and inhibits endoneuronal TNF-alpha production, but not IL-1beta in CCL-induced neuropathic pain. This suggests that reduced TNF-alpha production may contribute to the beneficial effect of HBOT.

.LiF, Fang L, Huang S, Yang Z, Nandi J, Thomas S, Chen C, Camporesi E. Hyperbaric oxygenation therapy alleviates chronic constrictive injury-induced neuropathic pain and reduces tumor necrosis factor-alpha production. Anesth Analg. 2011 Sep; 113(3):626-33. Doi: 10.1213/ANE.Ob013e31821f9544. Epup2011 May 19.PMID: 21596875.