

How hyperbaric oxygen therapy can transform healthcare


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From Dr. Hoffman:

I'm excited to share with you something that I'm convinced is a true medical breakthrough, a therapy that has the potential to revolutionize care for a variety of extremely challenging medical conditions. From post-Lyme syndrome to chronic regional pain syndrome (formerly called reflex sympathetic dystrophy), post-stroke, poorly healing wounds, and now even cancer, hyperbaric oxygen therapy (HBOT) is earning a place in our armamentarium of innovative treatment modalities. I've devoted a series of podcasts to it, including some really astonishing dispatches from the frontlines of research illustrating the powerful synergy of diet combined with HBOT for challenging cancers. No question that HBOT may offer innumerable benefits that we've only begun to explore!

Hyperbaric Oxygen Therapy at Hyperbaric Medical Solutions®

How this underutilized treatment can transform healthcare

Hyperbaric Oxygen Therapy (HBOT) is commonly used to treat non-healing wounds, radiation tissue damage, osteomyelitis (bone infections), decompression sickness (the "bends"), severe burns, among others. Many people don't realize, however, that HBOT has had positive outcomes in the treatment of certain other conditions considered "off-label" (non-FDA approved). These conditions include: traumatic brain injury, stroke, multiple sclerosis, complex regional pain syndrome (CRPS), many autoimmune and neurocognitive conditions, as well as in healing and recovery for sports-related injuries and pre-and post-surgical procedures. 

The fact that some conditions are not FDA approved only means that at this time the FDA does not believe there is enough evidence to make HBOT the standard of care for a particular diagnosis. It is important to understand, however, that in many parts of the world HBOT is used for the treatment of these conditions, and research has confirmed efficacy.

Hyperbaric Medical Solutions® is the premier non-hospital based HBOT provider in the Tri-State area, offering HBOT for both FDA-approved conditions and certain non-FDA approved conditions. With three locations in the metro New York region, including Midtown Manhattan, as well as Woodbury and Medford on Long Island, and further expansion slated for 2016, **Hyperbaric Medical Solutions®** offers state-of-the-art HBOT in comfortable and convenient outpatient facilities. **Hyperbaric Medical Solutions®** prides itself on achieving hospital-level care in a private office setting, providing a lower cost and more patient-friendly alternative to hospital-based centers.

HBOT itself is a generally safe and well-tolerated natural medical treatment designed to support health and manage disease, with an emphasis on improving the lives of those with chronic illness. In practice, during HBOT, a patient breathes 100% oxygen within an enclosed total body chamber under increased controlled atmospheric pressure. HBOT increases the oxygen saturation throughout the body, resulting in a cascade of positive healing effects, such as reducing inflammation,

developing new blood vessels, restoring the health of collagen, bone and cartilage, and mobilizing the body's own stem cells to repair tissue and organ damage. HBOT is a simple, non-invasive and painless treatment, which has very few risks.

A closer look at some of these mechanisms demonstrates what makes HBOT so effective in helping to treat such a wide variety of conditions. For instance, HBOT has been scientifically proven to reduce inflammation, which is at the root of so many disease processes. To that end, HBOT helps ameliorate both acute and chronic inflammatory conditions by reducing pro-inflammatory cytokine release, which are proteins in the body that increase inflammation and generally exacerbate disease. With more oxygen present in the blood system during HBOT, blood vessels can restrict their flow to damaged tissue and reduce the fluid build-up without compromising the higher oxygen levels needed for the body's repair.

Other dynamic mechanisms involved in HBOT are the creation of new blood vessels, commonly known as neovascularization or angiogenesis. Angiogenesis is of particular importance in areas of the body where circulation is compromised, either by injury or blockage. Non-healing wounds and strokes are just two of the many conditions that can greatly benefit from the enhanced blood flow that occurs with HBOT. Reduction of tissue hypoxia is also vital in treating these conditions. Cancer, complications of diabetes, and many other major health concerns may benefit from the ability of HBOT to increase the efficiency of your immune system and reduce inflammation. By increasing tissue oxygenation with HBOT, optimal cellular function can be achieved. More oxygen creates more energy for accelerated repair and enhanced regeneration of tissue.

These innovative properties help make HBOT a very effective wound-healer. Diabetic foot wounds, for instance, which are an FDA-approved indication for HBOT, are estimated to impact as many as 15% of the 23 million Americans living with diabetes. Many of these wounds will become infected, and many will result in amputation. Although HBOT has helped prevent many amputations, currently only a small fraction of patients at risk of amputation from infected diabetic foot wounds access HBOT. **Hyperbaric Medical Solutions®** seeks to help change that by increasing the awareness of both doctors and patients.

Positive outcomes have also been reported in pre-and post-surgical procedures, especially in the area of plastic surgery and orthopedics. HBOT has been proven to maximize the viability of post-op compromised tissue, speed recovery and return to full function, and also reduce the instance of re-grafting or repeat flap procedures. **Hyperbaric Medical Solutions®** encourages patients to receive pre and post-surgical HBOT in order to improve healing times, reduce swelling, demarcate viable and non-viable tissue, and optimize vascularity. Post-operative HBOT reduces swelling and inflammation, decreases bruising, enhances oxygen availability for injured tissue, promotes fibroblast proliferation and collagen regeneration, enhances antibiotic efficacy, reduces the incidence of infection, and enhances stem cell proliferation from bone marrow and migration to the area of injury.

HBOT's innovative and unique processes have led to successes in treating a variety of conditions and ailments. Many people don't realize, for instance, that despite advances in radiation dosing and targeting, upwards of 10% of cancer patients receiving radiation treatment experience debilitating delayed radiation injuries. Some physicians report the incidence in their practices in even greater numbers. Radiation damage may include chronic pain, bleeding, erectile dysfunction, chronic diarrhea or constipation, difficulty salivating, ringing in the ears, laryngitis, difficulty swallowing and/or opening the jaw, non-healing wounds, bowel or bladder incontinence, and nerve dysfunction. Studies demonstrate, however, that HBOT is the most effective treatment for radiation injuries. It is the only curative therapy for

radiation injury, with average improvements of **nearly 80%** reported in some studies. In short, no other treatment for radiation damage actually heals the tissue as well as HBOT.

In sum, **Hyperbaric Medical Solutions®** has seen its patients experience remarkable results for many different conditions, ranging from traumatic brain injury to radiation injury. **Hyperbaric Medical Solutions®** is available for new patient consultations and treatments in each of its locations. Call or visit its **website** to schedule your appointment today to see how HBOT can help you on your journey to achieving optimal health.

Dr. Henry Prince – Medical Director

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