



Hyperbaric Oxygen Therapy

Hyperbaric oxygen therapy is a medical treatment in which the entire body is placed under increased atmospheric pressure and the patient breathes 100% oxygen. This treatment is administered in a pressurized chamber which causes a 10-fold increase in plasma oxygen concentration with a resulting increase in oxygenation of the cells, organs and tissue of the body.

Hyperoxygenation allows tissues throughout the body, especially those tissues are in need of healing, heal faster and better. Hyperbaric oxygen therapy is used to treat a diverse group of conditions. It may be the primary treatment for some conditions, or it may be used as part of a combined program involving antibiotics, other therapies and/or surgery.

The concept hyperbaric oxygen therapy (HBOT) is simple. The air that we breathe contains 21% oxygen. Breathing 100% oxygen while an individual is at normal barometric pressure has limited benefits. However, by breathing pure oxygen in an increased pressure environment, we are able to deliver 3-4 times the amount of oxygen to those tissues with good blood circulation and as much as 100 times more to tissues with poor circulation (such as brain tissue damaged by stroke or head injury). This hyperbaric (above normal pressure) delivery of oxygen offers many unique therapeutic benefits that cannot be achieved by any other method.

In order to provide individuals with HBOT, a pressurized environment is required. The patient is placed within a spacious chamber, which is then pressurized to the level ordered by their physician. Each treatment takes approximately one hour and is closely supervised by our highly trained and experienced Hyperbaric Technologists.

What Conditions Are Effectively Treated With Hyperbaric Oxygen?

There are more than one hundred and ninety conditions that are effectively treated with HBOT. We have seen remarkable results in patients with the following health concerns:

- Stroke and complications of stroke
- Head and spinal cord injuries
- Crush injuries
- Multiple sclerosis
- Chronic fatigue syndrome
- Burns and complications of burns
- Blood poisoning
- Acute rheumatoid arthritis
- Carbon monoxide poisoning
- Lyme's disease
- Macular degeneration
- Brown-recluse spider bites

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- Silicone implant rejection
- Slow-healing wounds (noninfectious)
- Recovery from plastic surgery and skin grafts
- Poor circulation and vascular problems (often eliminating the need for amputation)
- Diabetic wounds and peripheral vascular disease
- Wound and skin infections including flesh eating bacterial infections and gangrene
- Radiation necrosis and radiation cystitis and intestinal problems
- And many other health concerns

What Are The Benefits Of Hyperbaric Oxygen Therapy?

All of the benefits provided by this therapy are the result of this extra oxygen being carried within the bloodstream and diffusing into the tissues and fluids of the body. Under the increased oxygen pressure of HBOT, sufficient oxygen can be dissolved in plasma to meet all tissue oxygen requirements. This effect allows oxygen to be delivered to tissues where red blood cells can't reach and maintains tissue viability in compromised circulation conditions.

HBOT provides many health benefits including:

- Increased oxygen delivery to "oxygen-starved" tissue.
- Stimulation of the formation of new blood vessels and neuro-pathways
- Reduced fatigue from chronic conditions.
- Immune system stimulation and modulation.
- Healing of damaged tissues.
- Direct anti-microbial action.
- Reduction of effects from toxic substances and radiation.

Some patients experience benefits with only one or two treatments. However, it may be necessary to undergo 30 or more treatments for significant and long-lasting benefits to occur. The two major criteria that affect the success of HBOT are the type and severity of your condition, and the length of time you have had it.

Since these vary greatly from person to person, it is difficult to be more specific without being completely familiar with your case. Our physician and technical staff will develop an initial treatment plan based on your specific needs and modify this plan as your treatment progresses. Your initial treatment plan will be discussed with you prior to starting HBOT. When changes are indicated, your opinions will be an important part of the decision making process.

HBOT is beneficial for a multitude of other reasons. White blood cells that kill bacteria become more efficient in clearing infections, particularly bone infections like osteomyelitis that otherwise would result in amputation. HBOT reduces swelling and edema and is beneficial for cosmetic and plastic surgery. New growth of blood vessels (neovascularization) is increased and can prevent amputation of limbs from gangrene in diabetics. Neovascularization also helps decrease stroke symptoms caused by the loss of oxygen to the parts of the brain affected by stroke damage.

What Does HBOT Feel Like?

Hyperbaric oxygen treatments are typically painless. You simply sit or lie comfortably and restfully in the HBOT chamber while wearing an oxygen mask or hood. You can listen to music, watch TV or nap if you wish. Some people may experience a sensation of fullness in their ears during certain stages of the treatment. This is similar to the sensation you might feel while flying in an airplane or driving up or down a mountain, as the eardrums respond to changes in pressure. As part of your introduction to the treatment, you will be taught several easy methods to avoid ear discomfort.

Are There Special Preparation For HBOT Treatments?

In order to begin your HBOT you will need:

- A complete history and physical exam.
- A heart and lung examination to rule out heart problems or obstructive lung disease.
- An ear, nose and throat exam to be sure your ears and sinuses can tolerate pressure changes.
- A complete review of medicines and supplements to assure compatibility with hyperbaric treatment.

There are a few other preparations that may be necessary before starting your HBOT program. These will be discussed with you, in detail, by the hyperbaric medical team.

The Preventive Medicine Clinic of the Desert located in Palm Springs has the first chamber in the Coachella Valley available for elective use. For a schedule of free educational lectures about Hyperbaric Oxygen Therapy, please call 760-320-4292 to make an appointment for help.