



Hyperbaric Oxygen Therapy Patient Information

One of only two in Wichita, Kansas, our hyperbaric oxygen chamber is truly unique. Hyperbaric therapy was originally used to treat deep sea divers who were thought to be suffering from the formation of air embolisms due to a too rapid ascent from their deep sea dive. Over time Hyperbaric Oxygen Therapy (HBOT) has become an accepted treatment for other conditions for a variety of reasons:

- Greatly increased oxygen concentration in all body tissues, even with reduced or blocked blood flow.
- Stimulation of the growth of new blood vessels to locations with reduced circulation, improving blood flow to areas with arterial blockage (such as after a stroke or a head injury).
- Rebound arterial dilation, resulting in an increased blood vessel diameter greater than when therapy began, improving blood flow to compromised organs.
- An adaptive increase in superoxide dismutase (SOD), one of the body's principal, internally produced antioxidants and free radical scavengers.
- Greatly enhanced white blood cell action, thus allowing your immune system to eliminate stubborn chronic infections.
- Stimulation of the release of adult stem cells that promote tissue regeneration and healing.
- Normal room air is (at sea level) about 15 pounds per square inch. This is called "one atmosphere absolute." We abbreviate that as 1 ATA.

Most hyperbaric oxygen treatments take you down to 2 ATA or about 30 pounds per square inch. That's about the same amount of pressure as in the tires of a car. The increased air pressure, combined with an increase in oxygen to 100 percent, forces oxygen to dissolve in the liquid part of a person's blood. This "hyper-oxygenated" blood is delivered to all of the body's cells, tissues, and fluids at up to 10 times over the normal concentration! This is high enough to sustain life with no blood at all! The following information should be used to prepare for hyperbaric oxygen therapy.

Make the most of Hyperbaric

- Use the bathroom before entering the chamber
- Relax
- Take long deep breaths
- Listen to music
- Watch lecture
- Check out a book from the library



Everything is good – keep increasing pressure



Stop – keep pressure steady



Ear trouble – decrease pressure

Hyperbaric Don'ts

- Oil based make-up, perfumes, deodorant
- Nail polish
- Hairspray
- Shoes
- Any thing besides 100% cotton
- Metals – watches, jewelry, zippers, electronics
- Books – shiny text or pictures
- Newspaper
- Earplugs
- Alcohol or petroleum products
- Batteries or electrical equipment
- Hard contact lenses
- Newspaper

It's okay to have . . .

- Kleenex
- Bottled water (loosen the cap during pressurization and depressurization)
- Gum or snack (without plastic wrapping)
- Paper and pencil

Remember . . .

- Equalize ear pressure by head tilting, jaw jutting, yawning, sinus squeezing, chewing gum etc.

Side Effects and Risk

Anxiety – New experiences often cause anxiety, but usually subdue after the first treatment. If anxiety continues please speak with the doctor about ways to alleviate the problem.

Breathing – Slow depressurization is used to prevent damage to the lungs. It is important to breathe in and out normally and not hold your breath.

Finger numbness – This is temporary.

Fire – Due to the environment created inside the chamber there is an increased risk of fire. To minimize these risk certain materials are not allowed inside the chamber, please read the Don't list.

Hearing – During hyperbaric treatment fluid can build behind the ear drum. This usually ceases after the hyperbaric treatment.

Sleepiness – Most people feel fatigued and require more sleep after hyperbaric treatment, especially in the early treatment phase.

Tooth pain – Pressure can build in the teeth just as it does in the ears. If this pain correlates to the changes in pressure, dental work may be required.

Vision – Changes in vision can occur that are usually temporary. Myopia (nearsightedness) tends to occur more when the patient is over 40 years of age and do more than 20 treatments

Contraindications

Notify your doctor and operating technician of the following:

Medications:

- Mafenide (sulfamylon)
- Disulfiram (Antabuse)
- Doxorubicin (Adriamycin)
- Cis-Platinum
- Bleomycin

Illnesses:

- Pneumothorax
- Upper respiratory infection (colds)
- Chronic sinusitis
- Seizures
- Emphysema with CO₂ retention
- Uncontrolled fever
- Sickle cell anemia
- Spherocytosis, congenital
- Viral infections
- History of thoracic surgery
- History of reconstructive ear surgery
- History of optic neuritis
- Pulmonary lesions
- Cataracts

Others:

- Narcotics
- Steroids
- Anticonvulsants
- Smoking – due to the effect of smoking on the oxygenation of tissues, HBO will not be as effective or not at all effective
- Drinking alcohol – may impair the immune system and slow healing which would be counteractive to hyperbaric treatments
- Diabetes – Blood glucose should be checked prior to each treatment. Insulin dosages may need to be altered during the treatment course