

# Absolute Contraindications

If you are on any of the following medications. you MUST notify your HBO physician or HBO Techs Immediately:

- Doxorubicin (Adriamycin)
- Cis-Platinum
- Bleomycin
- Sulfamylon
- Disulfiram (Antabuse)
- Amiodarone (Cordorone)

If you have any of the following conditions, you MUST notify your HBO physician or HBO Techs Immediately:

- Any Known Malignancies
- Seizure Disorders
- Otosclerosis
- Pregnancy
- Emphysema
- Viral Infections
- Implanted Pacemaker
- High Fevers
- Congenital Spherocytosis
- Upper Respiratory Infections
- History of Pneumothorax
- Optic Neuritis
- Chronic Sinusitis
- History of Thoracic Surgery
- COPD/Emphysema

316 Nursing Home Drive  
Arcadia, Florida 34266  
863-993-7717

# Risks Associated With HBO

**Middle Ear Barotrauma:** This is the most common complication involved with HBO. The Eustachian tube openings in the nasopharynx are slit-like, and the patient may have difficulty in equalizing the middle ear pressure with the outside air during the compression phase of the treatment. Some patients may need to be evaluated by an ENT physician if they continue to have problems.

**Sinus Pain:** Sinus block during compression and decompression may produce some pain, particularly in the frontal sinuses. If a patient has an upper respiratory infection or congestion of any kind, please let the medical personnel know immediately.

**Pulmonary Barotrauma:** Over inflation with pressure may lead to lung rupture, which may present as an air embolus, mediastinal emphysema, or a tension pneumothorax. These incidents are very rare.

**Oxygen Toxicity:** This incident occurs less than 0.1% in thousands of treatments at 2.0 ATA. The overall risk of a seizure is minimal and many precautions are in place to prevent this risk. Lower oxygen concentrations, shallower depths, and precautionary medications can be given to reduce further risks.

**Claustrophobia (Confinement Anxiety):** This is often referred as a contraindication for HBO. and some patients decline therapy for this reason. Proper education, awareness, and medication can ease some patients' anxiety.

**Seizures associated with Diabetes:** With diabetes there is a risk of seizures occurring due to a low glucose count. During HBO your glucose may drop more than usual due to the increase in your metabolism. To prevent this make sure to eat a healthy, nutritious meal prior to your treatment.

**Myopia/Cataracts:** The exact cause is unknown, but presumed to be due to the cornea changing shape while under pressure. It reverses after cessation of HBO, up to 6 weeks. Cataracts may also be affected with extreme long term exposure to HBO. This side effect may not happen immediately, follow up with your eye doctor.

**Implanted Devices:** Cardiac pacemakers should be evaluated by HBO Techs. Most have been pressure tested and are safe for the treatments.

**Fire Hazard:** You are in 100% oxygen environment, although oxygen is not flammable; it is what you put into the environment that causes combustion. All that is allowed inside the chamber are UHMS approved items and YOU!

**The Wound Healing Institute**



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# The Ins and Outs of Hyperbaric Oxygen Therapy



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## What is Hyperbaric Oxygen Therapy (HBO)?

Hyperbaric Oxygen Therapy (HBO) is the administration of 100% oxygen while the patient is in a pressurized environment. The combination of pressure and oxygen increases the number of oxygen molecules that are dissolved in the blood plasma (liquid part of your blood) which then is delivered to the tissues (typically 10 to 15 times the usual amount). This stimulates the process of regenerating (growing) new, healthy tissue. Some benefits are: enhancement of white blood cells, enhancement of antibiotic activity, and vasoconstriction (reduces edema).

It is a painless procedure that can have dramatic results in certain diseases. For example, when a wound does not heal due to not enough blood supply, HBO can increase blood vessel growth which then starts the healing process. Hyperbarics originated from the iron lung and also from decompression illnesses associated with diving. We now use HBO for various conditions including adjunctive care with wound healing.

## What Will My Treatment Schedule Be Like?

Depending on the nature of your illness and progress, patients with wound healing problems typically require 20 to 60 treatments. Treatments are scheduled every day, Monday through Saturday. Our hours of operation are Monday through Friday from 7:00 am to 5:00 pm. Saturday hours are based on patient schedules.

Saturday is considered a part of your treatment plan and appointments are just as important as your treatments during the week. It is important that you try NOT to miss any appointments because it is the consecutive amount of oxygen in your tissues that will promote your wound healing process. If you are unable to make your appointment, you must call the wound center to cancel and then contact transportation. The courtesy of this call allows us to appropriately adjust the day's schedule.

## *In The Event of an Emergency Please Call 911*

## How Should I Prepare For My Treatments?

Following a consultation with a Hyperbaric physician, you will then be given a prescription for appropriate pre-testing (if needed).

The following items are PROHIBITED while in the chamber: hair oils and sprays, perfumes, deodorant, make-up, lotions, nylons, synthetic material, jewelry, titanium metal, and essentially all alcohol-based products. Please DO NOT drink any carbonated beverages an hour before treatment and drinking of alcohol is PROHIBITED at all times. Upon arrival for your treatment, you will be asked to change into our 100% cotton gowns and all valuables should be left at home. Due to the 100% oxygen environment inside the chamber, CONTRABAND of any kind is NOT ALLOWED.



## What is a Hyperbaric Chamber?

A hyperbaric chamber is a large, acrylic-hulled cylinder that can be compressed to greater than normal atmospheric pressure. Patients are treated at 2.0 ATA (Atmospheres Absolute) which is the equivalent of 33 feet of sea water, if you were to go diving. Each chamber has a comfortable stretcher which may be fully reclined. Patients have the capability to watch television, listen to music, and even take a nap if they wish to. Treatment time varies depending on a patient's particular need. Average treatment times are either 90 or 120 minutes, Monday thru Saturday. HBO is essentially painless, however, some patients may feel slight discomfort in their ears due to pressure change (ex: diving, or on an airplane). A medical professional administers each treatment along with the supervising physician and monitors patients needs at all times.

## How Does it Feel?

The first 10 minutes of the treatment will be a little noisy, and warm. During this time is when you will have to clear your ears. The techniques used to equalize your ears are as follows: Valsalva (pinching and blowing out with mouth closed), swallowing, moving your jaw, and yawning, much as if you were on an airplane. The temperature will then adjust to about 70 degrees throughout the rest of treatment. The remainder of the treatment should be a time to relax, sleep, or catch up on movies. Patients of all ages generally tolerate the treatments very well. You may feel fatigued and experience some popping, and crackling in your ears during and after your treatment. Please notify us if it continues for a longer period of time.

## What If I Am A Smoker?

To receive the maximum benefit from your HBO, patients are STRONGLY encouraged to not smoke while undergoing this course of therapy. Smoking (even one cigarette) causes blood vessels to constrict, this decreases the blood and oxygen supply to the tissue, counteracting the benefits of HBO. There are many successful smoking cessation products available.

## Are There Any Side Effects?

Occasionally, some patients experience visual changes after several treatments, which causes them to become more nearsighted. This is only temporary and should disappear within six weeks after you complete your treatments. Other side effects are extremely rare.

## HBO Indications

- Diabetic wounds of the lower extremity
- Chronic Refractory Osteomyelitis
- Radiation Injuries
- Acute Traumatic Peripheral Ischemia
- Acute Peripheral Arterial Insufficiency
- Compromised Skin Grafts
- Soft Tissue Necrosis
- Crush Injury, Compartment Syndrome
- Problem Compromised Wounds
- Idiopathic Sudden Sensorineural Hearing Loss
- Delayed Radiation Injury (Soft Tissue and Bone)

*The average treatment times are either 90 or 120 minutes*

