



Patient and Family Guide to Hyperbaric Oxygen Therapy



What is Hyperbaric Oxygen Therapy?

Hyperbaric Oxygen Therapy is a medical treatment that is used to treat a limited but diverse series of illnesses. It is the primary treatment for disorders such as Carbon monoxide poisoning, decompression sickness and arterial gas embolism. It is also an effective adjunct in a combined program involving antibiotics, dressing changes and surgery for the enhancement of healing. This includes:

1. Chronic osteomyelitis
2. Radiation tissue injury (both soft tissue and bone)
3. selected problem wounds
4. crush injuries, and
5. Skin graft or flap support.

A hyperbaric chamber is a clear plastic cylinder that is specially designed and built to withstand increased pressure, and allows patients to receive hyperbaric oxygen.

How does Hyperbaric Oxygen Therapy work?

Hyperbaric Oxygen Therapy is the medical use of 100% oxygen at increased atmospheric pressure. This increased pressure provides more oxygen to the body than is possible under normal atmospheric conditions. Most treatments are between 2 and 3 atmospheres of pressure, typically referred to as diving, as the pressure change closely approximates scuba diving. This increase of pressure dissolves more oxygen to the body tissue and blood so that the body is saturated with more oxygen than normal to enhance healing.

How often are treatments given?

The length and frequency of treatments will be individualized for you and your condition and will be scheduled with your other treatments. Hyperbaric Oxygen Therapy is a very important part of your total care program.

For most conditions patients are treated once or twice a day – Monday to Friday – and treatments may last 2 – 2.5 hours. Some emergency conditions will require one or two treatments. In some cases of wound healing support, the effects are gradual and 20 – 40 treatments may be required.



Who gives my Hyperbaric Oxygen Treatments?

Your referral to the Hyperbaric Oxygen Therapy Unit (HBO) was made by a consulting hyperbaric physician who has had specialized training in hyperbaric medical training. Our physician team includes emergency physicians, general surgeons, plastic surgeons and intensivists.

While in the chamber your treatment is managed by a registered Respiratory Therapist with specialized training in hyperbaric medicine. This therapist will always be in the room and you will be able to see and talk to the

therapist throughout your treatment.

What will I feel during the Hyperbaric Oxygen Treatment?

Once the treatment begins you will hear the oxygen coming into the chamber. It may sound like hissing or a waterfall.

You will feel a fullness in your ears as your eardrums adjust to the change in the chamber pressure. This is very similar to the feeling you experience when you are in an airplane or an elevator. You will be taught how to clear your ears, or equalize pressure, before you start your treatments.

As the chamber is being pressurized you may feel a rise in air temperature. This will return to normal once the treatment pressure is reached. You may also have to wear a mask intermittently for a procedure we will teach you called “air breaks”.



If you experience any problems while the chamber is being pressurized or during the treatment tell the Respiratory Therapist.

Risks and Benefits

Depending upon the reasons for your referral to the Hyperbaric unit, hyperbaric Oxygen can provide you with one or more of the following benefits.

- Increased oxygen delivered to injured tissue
- Greater blood vessel formation

- Enhanced wound healing
- Improved infection control
- Preservation of damaged tissue
- Elimination of toxic substances
- Reduced effects from toxic substances
- Reduction or elimination of tissue obstruction by gas bubbles

Hyperbaric Oxygen Therapy is used to treat

- Osteoradionecrosis
- Reduction of implant loss in irradiated bone
- Soft tissue radiation injury
- Burns
- Carbon monoxide poisoning
- Diving accidents “the bends”
- Gas gangrene (soft tissue infection)
- Poor wound healing, eg diabetes
- Compromised skin grafts and flaps
- Crush injury

Are there any risks to hyperbaric oxygen therapy?

Yes, but most of them can be dramatically reduced with the proper management. The risks can be divided into two types, safety and physical risks.

Physical Risks

Ear Discomfort

Increasing the pressure in the hyperbaric chamber can cause ear discomfort. If you are unable to equalize the pressure by swallowing or yawning you can have a small hole made in your eardrum. This is called myringotomy, and will heal quickly once treatments are finished.

Oxygen Toxicity

Oxygen toxicity can occur if a patient is overly sensitive to oxygen. This is very rare and affects only 1 person in 10000. Signs of oxygen toxicity are tingling in the fingers, nausea dry cough, seizures and chest pain.

Visual Changes

After a long number of treatments some changes in vision may be noticed. Any changes usually return to pretreatment vision levels in 6 weeks to 6 months period.

Safety Risks

Fire is the biggest safety risk because of the 100% oxygen in the hyperbaric chamber. You will be asked not to take anything into the hyperbaric chamber without asking the therapist.

You may not take in

- Cigarettes
- Jewelry/watches
- Lighters
- Matches
- Anything paper
- Metal objects
- Contact lenses

- Hearing aids

You will be asked to remove anything with oil in it such as:

- Lipstick
- Hair oil
- Hair spray
- Ointments
- Liniments
- Makeup
- Cream
- Nail polish
- Cologne or perfume
- Deodorant

You will be given a special gown to wear during the treatment. It is made of 100% cotton to reduce the risk of fire. Please do not wear any other clothing into the hyperbaric oxygen chamber without checking with the therapist.

What else do I need to know?

You will be asked to sign a consent form for hyperbaric oxygen treatment once you understand the benefits and risks of hyperbaric oxygen therapy. If you have any questions or concerns talk to your doctor.

You need to go to the bathroom before you start your treatment.

You may eat a light meal but no carbonated drinks (pop) 2 hours prior to the treatment. No smoking 2 hours prior and 2 hours after treatment. Smoking decreases the amount of oxygen that can be transported by the blood. It is strongly recommended that patients do not smoke during the course of treatment.

IF YOU ARE AN INSULIN DEPENDENT DIABETIC, PLEASE TAKE YOUR INSULIN AND REGULAR DIET PRIOR TO YOUR TREATMENT.

If it is necessary for you to cancel an appointment, the earliest possible notice would be greatly appreciated.

About us

The staff at the Caritas hyperbaric oxygen program is committed to giving you the best possible therapy. We have a dedicated group of consulting physicians closely aligned with our C.O.M.P.R.U. program, a world class centre of excellence. We strive to continuously improve our services based on your feedback. Should you wish to contribute to the support of this program, please contact the Caritas foundation. If you have any questions or problems please do not hesitate to call us at (780) 7352537.

