

necessary, treatments will be continued with follow-up evaluations every 10 treatments. The total number of hyperbaric treatments needed varies from patient to patient and depends largely on the condition being treated. Most patients require 20 to 40 sessions of hyperbaric oxygen to achieve desired results.

### *Can I smoke?*

Smoking is prohibited during any course of hyperbaric therapy. Nicotine, a byproduct of cigarette and cigar smoke, causes constriction of small blood vessels. Hyperbaric oxygen therapy stimulates the growth of small blood vessels in the area of a wound. Smoking during a course of therapy would counteract the beneficial effects of treatment. Hyperbaric treatment will not be started until the patient is smoke free for at least two weeks. If there is a high level of suspicion that a patient is smoking during the course of treatment, we reserve the right to randomly test and discontinue treatment if positive results are received.

### *Do I need to take any precautions during treatment?*

Because the chamber environment is oxygen enriched, there are several guidelines that must be followed to prevent fire or any other hazards. You may find some of these inconvenient, but they are all essential for your safety and the safety of other patients undergoing treatment.

You will be required to wear 100 percent cotton uniforms during treatment. These uniforms will be provided for you. Undergarments may be worn except nylons. All jewelry, especially watches, should be removed before entering the chamber. Cosmetics, hair spray, perfume, and all other oil or alcohol-based products are not to be worn during treatment. No electronic devices, lighters, or flammable materials will be allowed inside the chamber environment. Any exceptions to these guidelines need to be approved by the chamber operator prior to each day's treatment.

### *Physician referrals?*

Mail or fax physician letter of referral and pertinent medical information to:

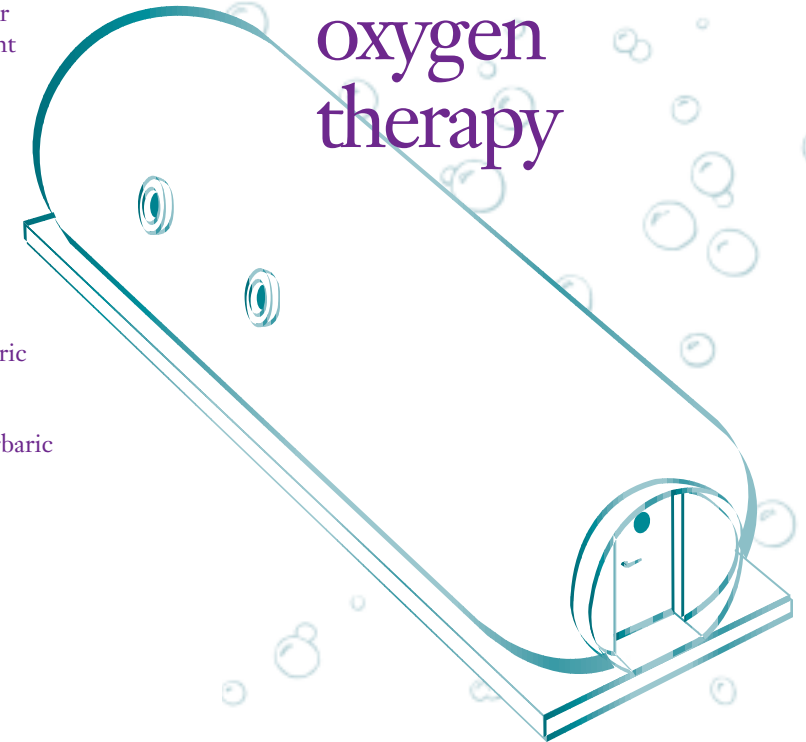
Hyperbaric Medical Director  
Respiratory Care Department  
Lutheran General Hospital  
1775 Dempster St.  
Park Ridge, IL 60068  
Fax: 847.696.0461

### *Further questions?*

For general information or questions regarding hyperbaric oxygen therapy, call:

Clinical Specialist for Hyperbaric  
Oxygen Therapy  
**847.723.5090**

# Hyperbaric oxygen therapy



 **Advocate**  
Lutheran General Hospital

## *What is hyperbaric oxygen therapy?*

Whenever someone mentions the word “hyperbaric,” the response is usually “hyper what?”

“Hyper” means greater than and “baric” relates to the term “baros” meaning pressure. Hyperbaric oxygen therapy is simply the administration of oxygen at greater than normal (barometric) pressure. A hyperbaric chamber is an environment where patients breathe oxygen while the pressure surrounding them is increased.

There are two types of chambers, monoplace and multiplace. Monoplace chambers are small cylinders in which one patient is treated. These chambers are pressurized using 100 percent oxygen. Multiplace chambers, like the one at Lutheran General Hospital, are large cylinders allowing for the treatment of several patients at one time with the addition of inside attendants. Multiplace chambers are pressurized with air (21 percent oxygen) while patients receive oxygen through masks during treatment.

## *How does hyperbaric oxygen therapy work?*

The earth’s atmosphere constantly exerts pressure on your body. During hyperbaric treatment inside a chamber, the patient breathes oxygen while the pressure exerted on the body is increased two to three times. This increase in pressure dissolves oxygen into the blood and body tissues to a much higher level than you are able to obtain under normal conditions. Oxygen at these increased levels can be beneficial in treating a variety of chronic, as well as emergency disorders, such as:

- diabetic nonhealing wounds
- radiation wounds
- compromised skin grafts or flaps
- chronic bone infections
- carbon monoxide poisoning
- decompression sickness (bends)
- arterial gas embolism
- gas gangrene

There are several ways in which hyperbaric oxygen is effective in treating these disorders. Hyperbaric oxygen therapy increases the oxygen level in irradiated, compromised and chronically infected tissues. This elevated oxygen level stimulates the creation of new small blood vessels and enhances the body’s ability to fight local infection. The combination of these factors promotes healing in problem wounds.

## *What will I experience inside the hyperbaric chamber?*

During the first 10 to 15 minutes of treatment, you will hear air entering the chamber and start to feel a fullness in your ears as the pressure inside the chamber steadily increases. To relieve this fullness feeling in your ears, you will need to “clear” them using one of several techniques taught by the inside attendant. While the chamber pressure increases, you also will notice an increase in temperature. The temperature soon will stabilize and remain comfortable throughout the treatment session. An inside attendant will assist you in placing an oxygen mask over your face. This oxygen mask will provide you with 100 percent oxygen during treatment. You will be required to wear this oxygen mask for 30-minute intervals during treatment.

When the chamber has reached the prescribed pressure, there will be no further need for you to “clear” your ears. The remainder of the treatment will be at the prescribed pressure. During this time, you may relax, read a book, listen to music, or even fall asleep.

Each hyperbaric treatment session will last 2 hours. At the end of the 2-hour session, chamber pressure will be reduced to a normal level. As the pressure in the chamber decreases, you will experience a “popping” sensation in your ears. You may have felt this sensation in the past

during airplane travel or driving down a mountain. This “popping” sensation is normal and will subside once chamber pressure is back to normal. Chamber temperature will decrease slightly and, at certain times during the year, you also may experience a “fogging” effect inside the chamber. Once chamber pressure has returned to normal, the door is opened and the session is complete.

## *Are there any side effects?*

Hyperbaric oxygen therapy is very safe. Rarely, patients will report a slight change in their eyesight during therapy. It is important to understand that this is a temporary change. Vision usually returns to pretreatment levels within six weeks of completing therapy. You should be able to continue your normal daily routine after completing treatment each day.

## *How often will I need treatments?*

Outpatient therapy for wound healing typically requires daily treatment with an initial course of at least 20 treatment sessions. Treatments are provided Monday through Friday (except holidays). A follow-up evaluation with the medical director of the hyperbaric center and/or referring physician will take place after completion of the first 20 – 30 treatments. If further hyperbaric therapy is