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HYPERBARIC OXYGEN THERAPY

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Hyperbaric Oxygen Therapy

Hyperbaric oxygen therapy treats wounds and other medical conditions by supplying you with 100% oxygen inside a special chamber. It heals damaged tissue by helping your body grow new skin, blood vessels and connective tissues. Side effects may include ear injuries, claustrophobia and sinus congestion and pressure.

Overview

What is hyperbaric oxygen therapy?

Hyperbaric oxygen therapy treats chronic wounds and other medical conditions. Room air contains 21% oxygen, while hyperbaric oxygen therapy provides you with air that contains 100% oxygen. A pressurized chamber delivers oxygen that's two to three times higher than normal air pressure, which helps your [lungs](#) gather and absorb more oxygen. Oxygen helps the tissues in your body heal and withstand infections.

Healthcare providers use hyperbaric oxygen therapy alone or with other medical treatments, such as medications or surgery. Most people receive hyperbaric oxygen therapy on an outpatient basis for one to two hours each session. Depending on the type of treatment, you may sit or lie down during the procedure.

Other names for hyperbaric oxygen therapy include HBO therapy or HBOT.

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For what is hyperbaric oxygen therapy used?

The U.S. Food and Drug Administration (FDA) has approved hyperbaric oxygen therapy to help treat the following:

- Air or gas bubbles in your blood vessels (air or gas embolism).
- The bends (decompression sickness).
- [Burns](#).
- [Carbon monoxide poisoning](#).
- [Gangrene](#) caused by the bacteria *Clostridium* (gas gangrene).
- [Hearing loss](#).
- Injuries that cut or break your skin (wounds).
- Loss of [vision](#).
- Radiation injuries.
- Severe [anemia](#).
- Severe bone and skin infections.
- [Skin grafts](#).
- Trauma from force or pressure on a body part (crush injury).

Are there unapproved uses of hyperbaric oxygen therapy?

Yes, there are unapproved uses of hyperbaric oxygen therapy. Medical spas or alternative medicine centers may claim that hyperbaric oxygen therapy helps treat many conditions, including the following:

- Age-related symptoms or conditions (anti-aging).
- [Autism spectrum disorder](#) (ASD).
- [Cerebral palsy](#).
- [COVID-19](#).
- [Depression](#).
- [Hair loss](#) (alopecia).
- [HIV and AIDS](#).
- [Migraine headaches](#).
- [Sports injuries](#).
- [Strokes](#).

However, there currently isn't enough research and testing to conclude that hyperbaric oxygen therapy safely and effectively treats these conditions. You should only receive hyperbaric oxygen therapy for an approved condition from an experienced healthcare provider in an accredited medical facility. Ask your healthcare provider if they have certification through the Undersea and Hyperbaric Medical Society.

Is hyperbaric oxygen healthy?

Yes, hyperbaric oxygen is healthy. It's pure oxygen, which helps your [immune system](#) fight bacteria and generate stem cells. Stem cells are special cells in your body that help create other types of important cells, including blood cells, brain cells and muscle cells.

Why is hyperbaric oxygen therapy used?

Hyperbaric oxygen therapy helps your body heal. To work properly, the tissues in your body must have enough oxygen. If your tissues are injured, they need even more oxygen. The increased pressure in hyperbaric oxygen therapy helps your blood carry oxygen through your body, especially injured tissues. It also helps your [white blood cells](#) protect your body from infection.

How often should you do hyperbaric oxygen therapy?

Hyperbaric oxygen therapy sessions usually last between one and two hours. Your healthcare provider may schedule sessions once a week or five days a week for up to 30 or more total sessions.

Is hyperbaric oxygen therapy safe for everyone?

No, some people shouldn't receive hyperbaric oxygen therapy. It may be dangerous to receive it if you have:

- A [collapsed lung](#) (pneumothorax).
- A lung disease that may increase your risk of getting a collapsed lung, including [chronic obstructive pulmonary disease](#) (COPD), [cystic fibrosis](#) and [emphysema](#).
- A [fever](#) or [cold](#).
- Recently injured your ear.
- Recently had ear surgery.

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Procedure Details

What happens before hyperbaric oxygen therapy?

Before receiving hyperbaric oxygen therapy, your healthcare provider will assess many factors, including the condition for which you're receiving treatment, your age and your overall health.

These assessments will help them determine how long your therapy should last and how many

sessions you need. Be sure to discuss your medications and medical implant devices with your healthcare provider. Some medical implant devices, including [pacemakers](#) made in the 1960s, may malfunction after exposure to a hyperbaric environment. Your healthcare provider will also review any potential side effects with you.

Additionally, discuss any skin care products that you use. Pure oxygen can make certain items, including skin care products, ignite at lower temperatures.

You'll change into a hospital gown and remove any metal objects or electronic devices outside the hyperbaric chamber. These items could create sparks, which could cause a fire in the high-oxygen environment. You can only bring in a small bottle of water.

Because the hyperbaric oxygen therapy sessions usually last between one and two hours, it's a good idea to use the restroom right before entering the chamber.

What happens during hyperbaric oxygen therapy?

During the procedure, you sit or lie in a special chamber. Some hyperbaric chambers treat only one person (monoplace chamber). In a

monoplace chamber, you'll lie on a table that slides into the hyperbaric chamber, where you'll continue lying while receiving treatment.

Your healthcare facility may have a hyperbaric chamber designed for use by multiple people at once (multiplace chamber). In a multiplace chamber, you'll receive your oxygen treatment through a specialized mask. In some facilities, you'll wear a lightweight, see-through oxygen hood.

Once the door to the hyperbaric oxygen therapy chamber has closed, you might hear a slight hissing sound as oxygen fills the chamber and the pressure inside slowly grows. Your ears may feel clogged ([barotrauma](#)) or start to pop, similar to flying in an airplane or traveling through mountains. You can relieve this pressure in your ears by yawning or taking a sip of water, holding your nose and swallowing the water. You'll breathe normally throughout the therapy.

If you're in a monoplace chamber, you may pass the time by watching television or a movie, sleeping or listening to music, a podcast or an audiobook.

If you're in a multiplace chamber, you may also play card games or read a book or magazine.

A healthcare provider will be in the room throughout the procedure to answer any

questions and monitor your condition and overall health. They may have you take short breaks during the treatment to breathe normal air.

What happens after hyperbaric oxygen therapy?

Toward the end of hyperbaric oxygen therapy, your healthcare provider will gradually decrease the pressure inside your chamber so your body can adjust to the pressure outside of the chamber.

Your healthcare provider will remove you from the chamber or help you remove your mask or hood. Then, they'll examine some of your [vital signs](#), including your [blood pressure](#) and [pulse](#), and check your ears. If you have [diabetes](#), they'll test your blood sugar (glucose).

Once your healthcare provider determines that you no longer need monitoring, you can change back into your clothes and leave.

You may feel sleepy after hyperbaric oxygen therapy. It isn't necessary to have a family member or friend drive you home, but it might be a good idea.

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Risks / Benefits

What are the advantages of hyperbaric oxygen therapy?

Many people benefit from hyperbaric oxygen therapy, especially if they have chronic wounds.

Hyperbaric oxygen therapy can help your body heal by helping grow new skin, blood vessels and connective tissues. It's very safe when performed by an experienced healthcare provider.

What are the risks or complications of hyperbaric oxygen therapy?

Hyperbaric oxygen therapy poses some risks, including:

- **Claustrophobia**: Monoplace chambers are small and confined, which can trigger claustrophobia. Side effects may include [anxiety attacks](#) or [panic attacks](#). Your healthcare provider may prescribe a mild sedative to help you remain calm during treatments.
- **Middle ear injuries**: Injuries may include an earache, tensor tympani muscle bleeding ([hemorrhage](#)), fluid in your ears (effusion) or [eardrum rupture](#).
- **Sinus congestion**: Side effects may include a [runny nose](#), a stuffy nose, mucus drainage

down the back of your throat (postnasal drainage) or a [sinus headache](#).

- **Temporary [nearsightedness](#):** In people who receive at least 20 daily treatments, between 20% and 40% lose their ability to see things at a distance for a short period. It more commonly affects those who have diabetes or are over 65. Most people have a complete return to their baseline vision.
- **Oxygen poisoning:** Though rare, oxygen poisoning (toxicity) may occur if your lungs breathe in too much extra oxygen. Side effects may include coughing and [shortness of breath](#) (dyspnea). Severe cases may result in death.
- **Seizures:** In rare cases, some people receiving hyperbaric oxygen therapy have had seizures. Side effects include convulsions, sensory disturbances and [fainting](#).

Recovery and Outlook

What is the recovery time after hyperbaric oxygen therapy?

You can return to your usual daily activities immediately following a hyperbaric oxygen

therapy session.

Most people see benefits from hyperbaric oxygen therapy after several sessions. It's important to continue your full course of treatment and stay in touch with your healthcare provider. Frequent monitoring enables you and your providers to identify potential complications earlier.

When To Call the Doctor

When should I see my healthcare provider?

Contact your healthcare provider to explore hyperbaric oxygen therapy if you have a chronic wound or other medical condition that might benefit from this treatment. Your healthcare provider will help you determine whether this procedure is right for you.

If you get hyperbaric oxygen therapy and develop breathing problems, call your healthcare provider or local emergency department right away.

Additional Common Questions

Can I get hyperbaric oxygen therapy if I'm pregnant?

No, you shouldn't get hyperbaric oxygen therapy if you're pregnant. Your placenta is a temporary organ that connects a growing fetus to your uterus during pregnancy. Hyperbaric oxygen therapy can cause the muscles around the blood vessels in your placenta to narrow (constrict), which may cause low oxygen levels in the fetus's blood (fetal [hypoxia](#)).

In cases where a pregnant person has carbon monoxide poisoning, a healthcare provider may recommend hyperbaric oxygen therapy. They'll only recommend it if they believe its benefits outweigh its risks.

A note from Cleveland Clinic

Hyperbaric oxygen therapy is a relatively safe treatment for many conditions, and side effects are generally temporary and mild. The process is so calm that many people spend the time doing relaxing activities or even sleeping.

Medical spas and alternative medicine centers may offer hyperbaric oxygen therapy to treat unapproved conditions, but you should only receive hyperbaric oxygen therapy from an experienced healthcare provider for an approved condition.



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