

OXYGEN THERAPY

Information Booklet

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Introduction

Please ensure you read through this booklet completely to familiarize yourself with the Oxygen Therapy process. It is important to speak with a member of our staff team before starting your protocol if you have any questions. We ask you to pay particular attention to the health and safety procedures.

Please Note

We do not provide medical advice, diagnose health conditions, or prescribe treatments. Access to, and participation in our oxygen therapy service is based on an assessment of the self-declared information you have provided on your client registration regarding your condition, symptoms and medications. Your treatment protocol is based on existing evidence within the field of hyperbaric medicine. These procedures ensure we have mitigated, where possible, any risks. Our standard practice is also to notify your GP of your request for oxygen therapy.

We provide Oxygen Therapy which is also known as Hyperbaric Oxygen Therapy. This involves breathing in pure (98%) oxygen in a pressurized environment at no more than 2 atmospheres (ATA).

Hyperbaric Oxygen Treatment is a medical procedure providing oxygen in a hyperbaric chamber at pressures higher than 2 ATA.

What is Oxygen Therapy?

Oxygen Therapy refers to intermittent treatment of the entire body with 98% oxygen at greater than normal atmospheric pressure. Normal atmospheric pressure is 1 atmosphere absolute (1ATA).

The air which we normally breathe is comprised of around 21% oxygen, 78% nitrogen and 1% other gases.

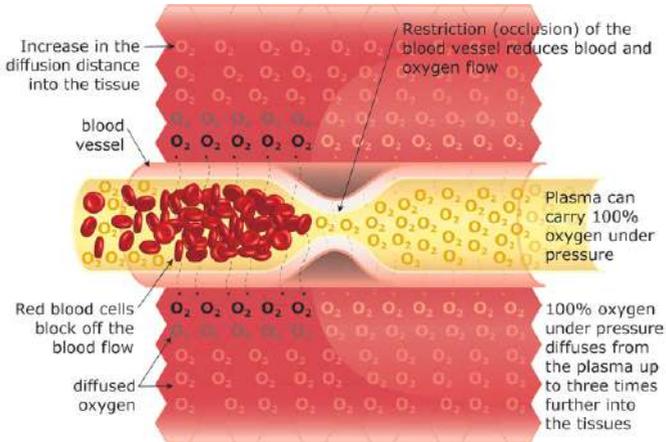
During Oxygen Therapy, pressure is increased up to a maximum two times (2ATA) while breathing 98% oxygen through a mask.



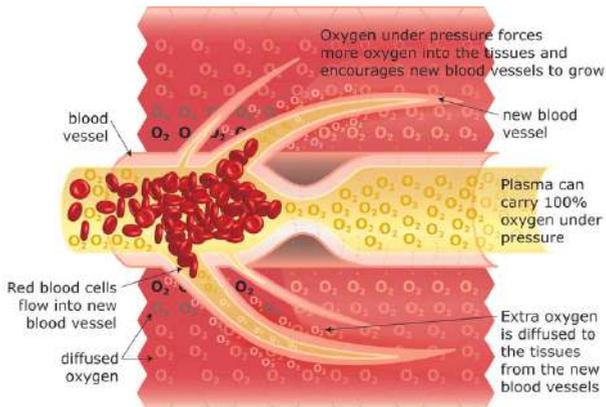
Oxygen Therapy is an "adjunctive treatment" for many people meaning it is used in conjunction with other treatments as part of a self-care and healthcare regime.

How it works

Increased pressure, combined with 98% oxygen, dissolves oxygen in the blood plasma and in all body cells, tissues and fluids at up to 10 times normal concentration.



Healing cannot take place without oxygen. Many illnesses and injuries occur and linger at a cellular level, such as circulatory issues, strokes or non-healing wounds, as adequate oxygen cannot reach the damaged area and the body's natural healing ability is unable to function properly.



Oxygen Therapy provides this extra oxygen naturally with minimal side effects.

The benefits

- ✓ increases oxygen concentration in all body tissues
- ✓ stimulates growth of new blood vessels, improves blood flow to areas with any arterial blockage
- ✓ increases blood vessel diameter, improving blood flow to compromised organs, rebound arterial dilation
- ✓ stimulates adaptive increase in superoxide dismutase (SOD) - an internally produced antioxidants and free radical scavengers.
- ✓ enhances white blood cell action to aid the treatment of infection
- ✓ improves sleep quality
- ✓ reduces fatigue



Conditions it can help

Scientific research and clinical practice have proven oxygen therapy to be safe and effective for a wide range of conditions. Systems and medical problems. Research is ongoing, and we update our practice on a regular basis to reflect new research findings.

Conditions treated include (but not exclusively):

MS

ME/CFS

Skin Grafts

Migraine

Stroke

Chronic Regional Pain

Osteomyelitis

Sensorineural Hearing Loss

Crohn's disease

Decreased immune function

Wound healing

Fibromyalgia

Crush Injuries

Cerebral Palsy

Cluster headaches

Traumatic Brain Injury

Anaemia

Lyme Disease

Radionecrosis

Sports injuries/recovery

Post Cancer Radiotherapy

Diabetic leg ulcers

Excluded conditions

Oxygen therapy is very safe, but in general, you should NOT receive this treatment if you:

-  Have a pacemaker
-  Are pregnant
-  Have a collapsed lung, or certain lung conditions/diseases.
-  Take certain chemotherapy drugs
-  Take the drug disulfiram (Antabuse)
-  Use the topical cream sulfamylon
-  Have heart failure; oxygen therapy can make symptoms worse
-  Have a cold or a fever, this could increase the chances of ear pain.
-  Are claustrophobic
-  Have a history of epilepsy
-  Have a history of panic attacks/anxiety
-  Have a history of inner ear problems/sinus problems
-  Take blood thinning medication such as Warfarin.

Therapy Protocols

Oxygen Therapy is administered according to a protocol. Safe time and dose limitations have been established for different medical conditions and/or symptom and are approved and recognised within the field of hyperbaric medicine.

We provide three pressures: 1.5ata (16.5ft). 1.75ata (24ft) and 2ata (33ft). You may be asked to complete a pre and post protocol evaluation. These forms are important as they help you and us to monitor your progress.

A treatment protocol involves the atmospheric pressure and number of sessions. Initial protocols can vary between 15 and 40 sessions at a rate of at least 3-5 per week, but certain conditions may require attendance twice a day and for a varied number of total sessions.

To maximize the benefits you will need several sessions to achieve oxygen saturation or oxygenation. For management of certain symptoms and long-term conditions, after your initial protocol, we recommend weekly top-ups to help maintain the benefits, and to help maintain your saturation levels.

OXYGEN SATURATION

Example protocol (MS)

4 sessions at 1.5ata; 4 sessions at 1.75ata; 7 sessions at 2ata. Consecutively (minimum of 4 per week) Weekly top-ups to manage condition/symptoms and maintain oxygen levels.

Risks explained

All treatments and therapies have potential side effects or risks associated with them. There are some risks associated with Oxygen Therapy however these are EXTREMELY RARE and we take great care to minimise any risk.



Barotrauma

During pressure change you may have discomfort in your ears, sinuses or teeth. There is also the possibility of a small tear in the lung tissue and an escape of air into surrounding tissue outside of the lungs (pneumothorax).

PLEASE NOTE: slow depressurisations, as is standard practice in our chamber and all our sessions, minimizes the risk of barotrauma, as does breathing normally.

Oxygen toxicity

Breathing oxygen at increased pressure for extended periods can result in central nervous system or pulmonary oxygen toxicity. Our sessions are never longer than 60 minutes or at a greater pressure than 2ata, so the risk is extremely low.

PLEASE NOTE: If you feel any unusual symptoms such as facial twitching, nausea, ringing of the ears, visual issues or irritability, YOU MUST NOTIFY the Operator immediately. This can be fixed by removing your mask or hood for a few minutes. If it continues, we can remove you from the chamber session.

History of seizures

Oxygen therapy may lower the seizure threshold and cause seizures in previously stable people with epilepsy.

Risk of near sightedness (myopia)

Undergoing over 20 sessions can occasionally reduce the ability to see things that are far away. This is usually TEMPORARY and VERY RARE.

Temporary improvement in far sightedness (Presbyopia)

Undergoing over 20 sessions can occasionally improve the ability to see close up or read without glasses. Vision should return to normal within six weeks.

Numb fingers

You may notice numbness in your fingers. It is temporary and will subside within 8 weeks after your last session.

Serous otitis

Fluid in the ears sometimes accumulates when breathing high concentrations of oxygen. This may cause a muffled feeling in your ear. This disappears after oxygen therapy ceases and may often be eased with decongestants.

Fatigue

It is quite normal to feel fatigue during your treatment protocol. This is normal and will resolve over time.

Pain

Some people (particularly Arthritis /Fibromyalgia clients) may experience intensification of pain during the initial stages of their protocol. This will resolve over time.

Optic neuritis

There have been very occasional reports of clients with optic neuritis having deterioration in vision. Oxygen therapy should be used with caution in this condition.

Prescribed Medication

Certain medications DO NOT react well in the oxygen chamber. It is important that you advise staff of all medications, and of any changes to your medication.



Decompression illness

Anytime you enter a pressurised environment there is a possibility of decompression illness (DCI) caused by nitrogen in your blood becoming absorbed in the tissues. You will be breathing oxygen for your treatment therefore your nitrogen intake is extremely limited. Your treatment is designed to allow you to safely undergo treatment while minimising the risk of DCI.

Gas embolism

A gas embolism occurs by the expansion of respiratory gasses during a reduction in atmospheric pressure (ascent) which enters blood vessels. This risk is minimized by thorough pre session assessments and our controlled ascent rates.



Oxygen chamber safety

With the use of oxygen in any form there is always an increased risk of fire. We adhere to strict safety regulations to minimize any risk. In the event of an emergency remain calm. The chamber operator and staff are trained to deal with any emergencies that may arise. Follow the directions given to you by the operator.

Prohibited Items – DO NOT take into the chamber

- Lighters/Matches
- Makeup, Vaseline, Lip balm and Vicks VapoRub
- Oil or fragrances
- Microwavable hand or body warmers
- Handbags, bags (Please store in lockers), or walking aids
- Electrical items with over 24volt power supply
- Food or drink apart from water (water bottles must have been open prior to entering the chamber)
- Loose batteries
- Sweets
- Chemical cleaners or solvents
- Electronic car keys

Mobile phone, laptops, iPads etc. can be taken in at your own risk.

Please ensure mobile phones are switched to flight mode. Do not make or receive calls whilst inside the Chamber.



Self-Care activities



It is important that you eat prior to your oxygen session. The chamber environment lowers blood sugar levels. Symptoms of low blood sugar may include sweating, shakiness, weakness, extreme hunger and slight nausea; dizziness and headache; blurred vision; a fast heartbeat and feeling anxious

Medication

Please discuss your medications with staff during registration and assessment. Some are contraindicated during oxygen therapy. If medication is due during treatment, please advise a staff member and bring them with you so that you can take them at the correct time.

Smoking

Nicotine may reduce the uptake of oxygen. Smoking results in reduced blood supply to fingers and toes. Nicotine also irritates mucus membranes and may make it difficult to equalize your ears and sinuses which can result in damage to your middle or inner ear.

Alcohol and Recreational Drug Use

Alcohol and recreational drug use may be incompatible with undergoing Oxygen Therapy.

Caffeine

Caffeinated drinks such as coffee, tea, and some carbonated drinks have similar effects to smoking. Please try and avoid such drinks prior to a session.

Milk/Milky Products

These items increase your mucus production and may irritate your mucus membranes.

Your First Session

Before you go into the chamber:

- A staff member will fit you with a mask and show you how to adjust it (please remember the size for future use)
- Wi Fi is available so you can take mobile devices into the chamber (at your own risk)
- Items such as handbags must be placed in a locker
- You can take in water bottles if they have been opened and you have had a sip out of the bottle
- Wheelchair users and people with mobility aids enter first

Inside the Chamber

- Take a seat directly under a position number
- Attach hoses to your mask, if you need assistance the operator will help you
- You can ask for a stool.
- The operator will introduce you to the other clients in the chamber and read through a safety protocol
- The operator will show you the alarm and intercom, which keeps you in contact during the session

The start of the session

- The operator will close the door and talk via the intercom
- You will hear air rush in and an unusual, but not unpleasant sensation in your head. It will get warmer
- Your ears may block. Take a breath, pinch your nose and breathe out against it. Having a sip of water helps.
- If your ears hurt, or you are experiencing discomfort, pull the alarm. If you are experiencing severe pain, you MUST ask to leave the chamber

At Pressure

- Sit with your mask on, and breathe normally
- Pull the alarm cord if you experience any discomfort, nausea, or light headedness
- If the oxygen levels need to be adjusted, the operator will do a 'Flush'. This lets air in and out replacing oxygenated air with air that has a lower oxygen level.

Depressurisation

- The operator will advise you that the session is finished and the depressurisation has commenced
- It will be cooler, and a mist may form in the chamber. This is just air expanding and cooling down
- The operator will open the door once the chamber is fully depressurised

Important

- Our intercom allows constant access to the Chamber Operator
- NEVER hold your breath whilst inside the chamber
- Breathe normally
- If you feel anxious during the session, remove your mask for a minute and breath normally
- If you are in pain, feel unwell or in discomfort during the session YOU MUST PULL THE ALARM CORD



PLEASE DO NOT ATTEND A SESSION IF YOU HAVE
A COLD, EAR AND/OR SINUS PROBLEM

Equalisation

For equalisation to be effective you should be free of nasal or sinus infections or allergies.

Valsalva

Pinch your nose and blow gently through your nostrils.

You should do this until you feel your eardrums move.

This method will increase the pressure in your throat allowing equalising air

into your middle ear. Do not blow forcefully while doing a Valsalva manoeuvre as you could rupture your eardrum.

Slow, frequent, and gentle Valsalva Manoeuvres can be very effective.



Swallowing

Swallowing with the mouth and nose closed and/or drinking water during pressurisation may assist equalisation.

Practice outside the chamber until you easily feel your ears "pop".

Do not wait until you feel discomfort or pain before equalising. If difficulty occurs in equalising, ask the operator to stop.



Alternative Methods

Ear buds have been shown to be effective

at reducing the discomfort and pain that can sometimes

be experienced inside the chamber. Wearing headphones

inside the chamber have also shown to help in

reducing pressure on the ears.



Masks and Mask Fitting

Before your first session, you will be fitted with a mask. We encourage you to purchase a mask (available at the Centre) we do have masks available at the Centre. The masks are very simple to use but if you have difficulties using your hands, or have limited strength or movement in your arms, then we can assist you with this before we start the session. Our most common masks are made from silicone so if you are allergic to this then please advise a staff member prior to your visit.

- ★ Small clips allow you to adjust the strap length
- ★ Hold the mask against your face, pull strap and place it on the top of your head as shown in the picture below.
- ★ Ensure that your chin is sitting within the mask
- ★ To test the seal, inhale, and place both hands over the two attachment holes of the mask. Gently exhale against your hands and listen for any air escaping.
- ★ Adjust your mask until it feels secure and comfortable



Fire Safety (chamber)

If there is a **Fire in the Chamber**

- ✓ **Pull the alarm cord** - we will activate the water deluge system and switch from 100% oxygen back to regular air.
- ✓ **Keep your masks on** - the air in your masks is smoke free.
- ✓ **Unblock your ears** - we will get you out as soon as possible.
- ✓ **Keep each other calm**

If there is a **Fire in the Centre** while you are in the **Chamber**

- ✓ **Stay calm** - you are in the safest place in the building.
- ✓ **Keep your masks on** - the oxygen has been switched over to regular air and is the safest thing for you to breathe.
- ✓ **Stay where you are.**

The Fire Service needs you to stay in the Chamber until they are ready to escort you. The chamber is slowly being decompressed. The Fire Service will finish depressurisation.

General Emergency Evacuation Plan

In the event of an emergency, the centre will be evacuated in an orderly fashion. This is in accordance with government legislation and allows us to render assistance where necessary.

Evacuation is based on levels of mobility (non-disabled, slight mobility issues, users of mobility aids from canes to wheelchairs). We advise that you identify which category you would fit into and note the evacuation plan suited to your needs.

Upon hearing the alarm, make your way to the best suited exit, taking into consideration proximity and accessibility. If you require assistance, let a member of our team know.

There are evacuation blankets located in the oxygen waiting area and one next to the reception area. In the event of an emergency these would be used to quickly evacuate wheelchair users or clients with severe mobility issues.

Listed opposite are the evacuation plans and a diagram indicating the points of exit around the property. Please familiarise yourself with the floor layout of the Centre, taking notice of suitable exits for your mobility level and proximity to various locations on the premises.

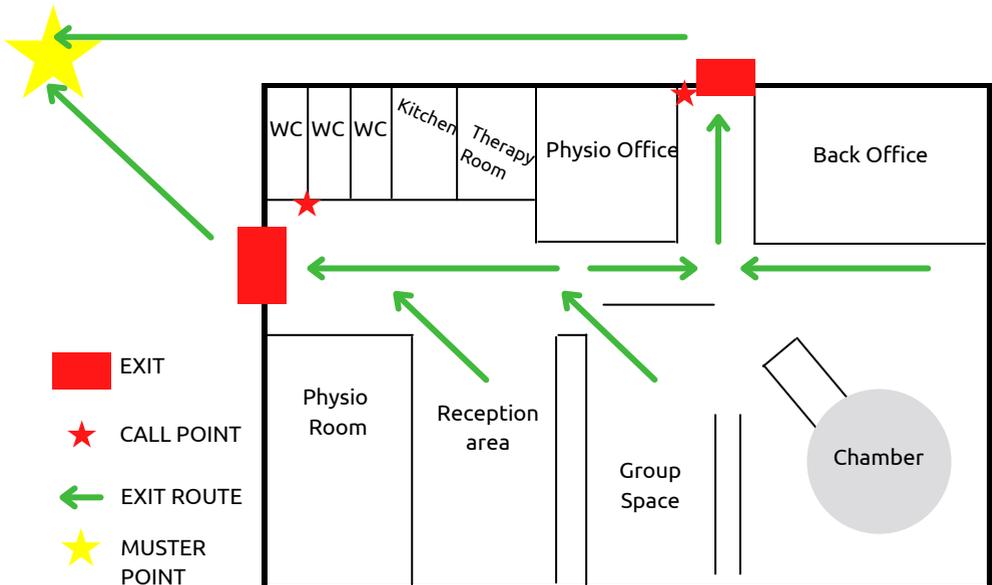


Non-disabled clients

Upon hearing the alarm, please leave the premises in calm and orderly fashion, to not cause panic, and assemble at the designated gathering point for a brief roll call.

Individuals with mobility issues

Depending on your mobility level, a member of the team will assist in your evacuation to expedite the process and get you to safety as quickly as possible. This might require the use of evacuation aids (the evacuation blankets) for efficiency.



Please let us know of any concerns, requests, or requirements you might have, and we will do our best to accommodate where it is possible or safe to do so.



Compass

Therapy. Support. Community.

for people with neurological conditions

The MS Therapy Centre Lothian
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Edinburgh
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The Multiple Sclerosis Therapy Centre Lothian is an independent charity, trading as Compass, specializing in providing practical self-management support, therapies, treatments, and activities for people living with neurological conditions. The MS Therapy Centre Lothian is a registered Scottish charity (SC014991) and a Company Limited by Guarantee (SC122837)

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