Consent – Guidelines for Hyperbaric Oxygen Therapy

Possible Side Effects with Hyperbaric Oxygen Therapy

Generally, patients experience no negative after-effects from hyperbaric oxygen therapy. However, some patients report a "crackling" in their ears between treatments. You can relieve this in the same way you clear ears during changes in pressure while in the chamber. Some patients report feeling lightheaded for a few minutes following a treatment, but this is brief, and the patients are able to continue with their normal daily activities.

- **Barotrauma**: Discomfort or injury associated with chamber pressure change. Injury usually occurs when neglecting to notify technician of discomfort or pain during chamber compression or decompression.

- **Serous Otitis**. Hyperbaric oxygen encourages increased sinus drainage in inner ear. Fluid accumulation and pressure could occur if there is obstruction or infection in the Eustachian tube. Discuss options with technician if inner ear pain or difficulty clearing ears in chamber occurs.

- **Dental or Sinus Related Pain**. Some individuals have had pain occur in a tooth, jaw or sinus area above or below eyes. This is from a trapped air bubble and can be resolved by making the technician aware as soon as pain starts.

- **Hypoglycemia (low blood sugar)**. HBOT hastens use of blood sugars. Good rule for anyone using HBOT; have comfortably eaten something before HBOT. Non sugary food or snacks are best. Snacks may be taken into chamber.

- **Low Blood Pressure**. If using blood pressure medication, your blood pressure is likely to start dropping as soon as the first treatment. Anticipate reducing blood pressure medication while using HBOT.

- **Diabetes (High Blood Sugar)**. Blood sugar levels typically decrease when HBOT is used while on blood sugar control medications. Medication adjustments will likely have to be made.

- **Visual changes**. During the course of multiple hyperbaric treatments taken in close succession, patient may notice some blurring of distant objects. Eye focus typically return to normal within a few weeks or months after stopping treatments. We recommend not having eye doctor visits while doing more than occasional hyperbaric treatments.

- **Fatigue**. Some people may feel fatigue following hyperbaric oxygen. This is not a typical response. Dehydration, constipation or depressed adrenals are suspect with post-HBOT fatigue. Please let the technician know if this occurs.

- **Oxygen Toxicity**.
  1. **Pulmonary (Lung)**. Results in chest tickle or pain while breathing resulting in a dry, non-productive cough and decrease in lung capacity. Pulmonary oxygen toxicity is unlikely in that studies showed that it requires 10 or more hour exposure to HBOT at 2.0 ata.
  2. **Central Nervous System (CNS)**. Symptoms start with feeling flush or sweaty, could progress to facial tightness or twitching, progressing to severe sweating and seizure. CNS toxicity is rare in that it requires extended treatment times in HBOT of 3 – 6 hours at 2.0 ata. Oxygen Toxicities seem to be hastened by dehydration, cold and stress.

- **Risk of fire**. With the use of oxygen in any form there is always an increased risk of fire, but strict precautions have been taken to prevent this. Please refer to ‘Chamber Contrabands’.

- **Numb Fingers**. A small proportion of patients notice a numb feeling in the fourth and fifth fingers of the hands during treatments. This should not be of concern and should disappear within six weeks of cessation of therapy.
HBOT Contraindications
(Condition under which HBOT should not be used)

Absolute Contraindication to HBOT
• Pneumothorax (untreated) - surgical relief removes this obstacle to treatment
• Detached Retina procedure that involves inflating the eye with a gas. HBOT treatments are safe once bubble is no longer visible to the patient when facing head downward (usually within 2 weeks after eye procedure)

Contraindicated when used in conjunction with:
• Doxorubicin – postpone HBOT for one week after its use
• Cis-platinum – slows wound healing when used during HBOT
• Disulfiram - blocks superoxide dismutase production
• Mafenide acetate (sulfamylon) -promotes CO₂ buildup when combined with vasoconstriction nature of HBOT
• Bleomycin: pretreatment pulmonary function testing with carbon monoxide diffusion capacity

Conditional Contraindications
• Implanted electronic devices may require manufacturer’s approval. Ie: pace maker, defibrillator, nerve block, auto med release.
  (no problems with stints, shunts, pics, traechs,
• Upper respiratory infections, mid ear or chronic sinusitis could cause difficulty equalizing ear pressure
• Emphysema with CO₂ retention (COPD) may cause difficulty in breathing
• Congestive heart failure (minimum ejection fraction of 25% for HBO treatments)
• Cataracts have been known to mature after as few as 48 HBO treatments at 2.5 ata. (typically occurring after 150 treatments)
• Asymptomatic pulmonary lesions seen on chest x-ray could lead to collapsed lung
• History of thoracic or ear surgery could have difficulty equalizing ear pressure
• Pregnancy has shown DNA damages to child in some studies during first trimester
• Hypoglycemic individuals take a non-sugary snack into chamber if low ‘BG’ symptoms occurs
• Insulin use reduction will likely be required during HBOT
• Uncontrolled high fever during HBOT may result in increased symptoms or difficulty clearing ears
• Patent foramen ovale (opening in the septum between the two atria of the heart that is normally present only in the fetus)

Effect of Oxygen on Stimulants, Medications or Herbs
• The effects of herbs and some drugs may be enhanced by hyperbaric oxygen.
• Insulin need may decrease. Anticipate changes.
• Minimal caffeine should be consumed in excess immediately before or after treatments. Circulatory constriction from caffeine is enhanced by oxygen constriction effects, and may result in headaches.
• Smoking after a hyperbaric treatments constricts circulation. Carbon monoxide in the smoke quickly monopolizes the oxygen carrying sites on the red blood cells, recreating a low oxygen environment in the body

Consent Signatures
I have read the possible side effects, contraindications and Effects of HBOT on stimulants, medications or herbs
I hereby consent to receiving HBOT:
Signature _________________________________ Date ___________________

Photo/Video Consent for In-Clinic Progress Assessment Only:
Signature _________________________________ Date ___________________

Photo/Video Consent for Promotional Purposes:
Signature _________________________________ Date ___________________