

## **Hyperbaric Medicine Service Patient Instructions to Prevent Ear Barotrauma**

### **“Clearing” your Ears**

Injury to the middle is an occasional side effect of hyperbaric medicine treatment. When pressure outside the eardrum increases, it causes the thin covering to press against the small bones and nerves behind it. This is what happens when landing in an airplane or swimming to the bottom of the pool. It is also what occurs when the hyperbaric chamber is being compressed at the beginning of the treatment. Fortunately there is a small tube (Eustachian tube) between the ear and the back of the throat that allows gas to fill the ear.

Clearing the ears, also known as equalizing or ‘popping’ the ears, is an easy skill for most people to learn. It is the process of letting gas through the Eustachian tube into the middle ear in order to equalize the pressure on both sides of the eardrum. Swallowing, yawning, and drinking water are all ways to clear your ears.

A very effective method is Valsalva or nose pinch. To do this take a deep breath, pinch the nostrils shut, keep the lips closed and blow. You will feel the sides of your nose puff out like little balloons. You may hear a ‘pop’. You should practice this method before your first treatment. We ask that you do not use this Valsalva method at the end of your treatment during decompression.

Clearing your ears is very important for your comfort. On your first treatment, the HBO clinician stays right next to you at the chamber to remind you to do this several times while the chamber is being compressed. You will feel some pressure on your ears which will clear when you use the techniques discussed. Should you start to feel ear pain, tell the clinician ‘Stop!’ The clinician will stop the chamber from compressing so to give you more time to clear your ears.

If you have difficulty clearing your ears, we recommend that you take a decongestant like Afrin or Sudafed prior to your treatment to prevent swelling from happening in your middle ear.

Sometimes a patient will be unable to equalize his or her ears. We will arrange for a referral for you to consult with an ear doctor (ENT) for the placement of pressure equalizing (PE) tubes, a simple outpatient procedure.

*Ask your HBO Clinician if you have more questions about ear clearing techniques.*