## Mild Hyperbaric Oxygen Information for Patients Hirani Wellness Medical Center Inc.

Mild hyperbaric oxygen therapy (called mHBOT) is very safe – so safe, that it can even be used at home. Mild HBOT is FDA approved for treating high altitude sickness caused by lack of oxygen to the tissues, but is not yet FDA approved for treating ASDs and is therefore considered "experimental" for this use. However, it has recently been discovered that mHBOT is helpful for a wide variety of children with developmental delays and ADD, with improvements reported in all areas, including cognitive ability, socialization, sleep, calmness, decreases in stimming, improved language, etc. Hyperbaric treatments are completely compatible with all other DAN!-based treatments, including chelation, and may even enhance the effectiveness of chelation and other treatments.

Many professional athletes travel with the mild hyperbaric chambers and sleep in them, as it improves their sports performance and recovery. Hyperbaric treatments have been safely and effectively used for a wide variety of conditions, including Lyme disease, chronic fatigue syndrome, cerebral palsy, cancer, wound healing, migraine, etc. – anything where immune dysfunction and/or perfusion problems are an issue. Please see the website <a href="www.hypertc.com">www.hypertc.com</a> for more information. An adult is required to accompany all children in the chamber. The child will wear a mask or nasal cannula to breath oxygen-enriched air when possible some children need to work up to wearing a mask. Although the adults will not be wearing the mask for the extra oxygen, they will also be getting the benefit of hyperbaric oxygen treatment and often report feeling better themselves. With the mask on, the oxygen concentration in the blood increases by about 90%. Without the mask, the oxygen concentration in the blood increases by about 40-50%, just from the increased pressure. Even if the child won't wear the mask, they will still benefit from HBOT therapy.

We have found that most children have no problem wearing the mask after they get used to it. Occasionally, older and/or higher functioning children are able to enter the chamber un-accompanied after a few sessions. The chamber is large enough for an adult to sit up, and long enough to lie down comfortably. One can lie down and take a nap, or sit up and read a book or listen to music – whatever you like. Children and/or adults can use electronic equipment such as a GameBoy or CD player, or DVD player. Children are allowed to drink water, as long as care is taken not to spill.

The mild increase in pressure in the chamber (a maximum of about 4 psi, "pounds per square inch") is the equivalent of diving to a depth of about 9-11 feet. The combination of this increase in atmospheric pressure and the increase in the percentage of oxygen inhaled, provides an optimal combination to enhance blood oxygenation, and brain and body blood flow, or perfusion. All microorganisms that infect the human body depend on creating or enhancing an oxygen-deprived environment in the body to enhance their survival – this includes viruses, bacteria, yeast, and parasites. As you know, infections with various kinds of microorganisms are associated with worsening of the symptoms of autism. Treating those infections with hyperbaric oxygen is a wonderful and natural way

to help improve the immune system, clear the body of chronic infections, and improve detoxification. All detox pathways require oxygen and blood flow to "take out the trash!"

Because the chamber is an enclosed space, some people may feel some anxiety or "claustrophobia" at first. If you have had difficulty in the past entering an airplane or an elevator, this might be an issue for you. The chamber has windows and is roomy enough, but it is a little bit like zipping yourself into a double or triple sleeping bag and inflating it. If the adult accompanying the child suspects that they will have difficulty in the enclosed space, it is recommended that the adult come once or twice alone to get used to the experience before bringing the child, so that the child does not pick up on that anxiety. The vast majority of people are able to get used to it after one or two sessions, and most are comfortable right away.

As the chamber is pressurizing, the ears may "pop" just as they do when flying in an airplane, or going up a tall building in an elevator. Some children may find this process uncomfortable at first, until they learn how to equalize the pressure. Opening the mouth widely can work, covering the child's ears with your hands can help, drinking - especially through a straw, swallowing, and holding child's nose and blowing can help. If necessary, specially designed ear plugs can be used to help with this issue. If anyone in the chamber has slightly blocked sinuses from allergies, it can cause temporary sinus pain as the chamber is inflating. This can feel like a stabbing pain behind the eyes. If that occurs, it is necessary to gently depressurize the chamber a bit, and then re-pressurize it more slowly. If a person has an ear infection or blocked sinuses, they should not enter the chamber until the illness has resolved. Once the chamber is up to 4 psi, then all pressurization sensations cease, and it is just a manner of keeping the child engaged and happy for the hour of the session.

Walkie talkies are provided so that the people inside have easy access to communication with the outside attendant, but it is possible to hear each other by simply talking loudly through the chamber wall. There is some noise from the two compressors that pressurize the chamber, but it is not overwhelming for most. However, it can be difficult to hear the speakers on small electronics, so sometimes headphones work better. Occasionally people may feel warm in the chamber or sweat a bit as they are detoxing. It may be helpful to bring a small hand towel to wipe yourself with, and an ice pack to cool yourself off with. It is recommended that everyone go to the bathroom before entering the chamber, and bring a bottle of water in case you get thirsty to increase your comfort level in the chamber.

Overall, the hyperbaric experience can be a very positive one, with patients looking forward to entering the chamber, as they learn how good it makes them feel!

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