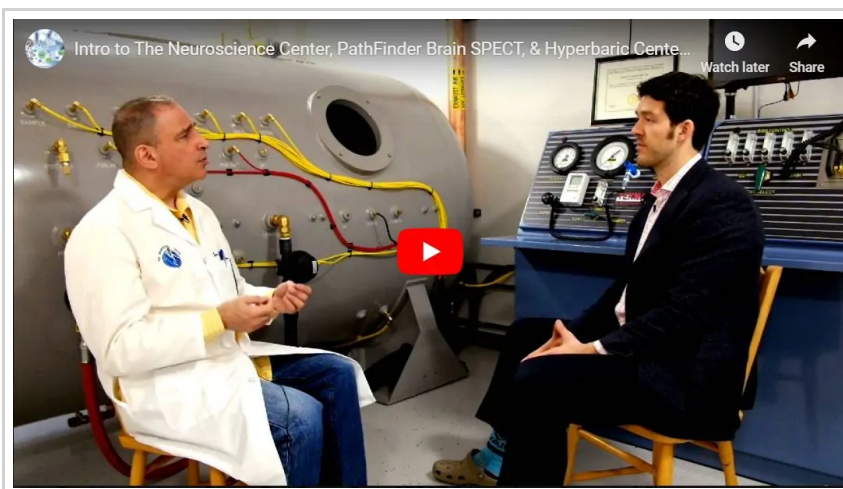




Blog

Hyperbaric Oxygen Therapy: A New Way of Treating Traumatic Brain Injuries and Stroke



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In 1662, a British clergyman and physician named

Henshaw came up with the idea to use pressure to treat people suffering from certain respiratory diseases. He believed that breathing pure oxygen in a pressurized room could help patients heal. With that belief, he built the very first hyperbaric chamber—a sealed room with valves and bellows.

Hyperbaric oxygen therapy (HBOT) has come a long way since then. There are now 13 FDA-approved uses for HBOT, including decompression sickness, air embolism, carbon monoxide poisoning, healing thermal burns and more.

Countries all over the world already use HBOT as a clinically proven treatment for brain injury and stroke recovery, although this is still considered an “off-label” use in the US.

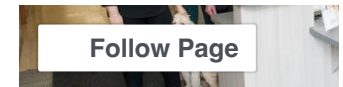
What Are the Benefits of HBOT?

HBOT has been shown to both heal the after-effects of stroke and Traumatic Brain Injury (TBI), as well as slow down the progression of cognitive decline seen in dementia ([Boussi-Gross et al, 2013](#)). The mechanisms of HBOT include reduced swelling, super-oxygenation of the injury site, and detoxification.

This highly pressurized oxygen delivered directly to the brain, facilitates mitochondrial functioning, stimulates neuronal cell growth, increases blood flow to the brain, reduces neuroinflammation, and

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promotes neuroplasticity.

In the case of stroke, HBOT does not resurrect dead brain tissue, but it can facilitate the functioning of dormant, idling nerve cells that have suffered secondary damage by stroke due to diminished oxygen. Improvements in motor functioning, cognitive processing, mood and increased ability to perform daily activities have been achieved, even with patients who are more than a decade post-stroke.

[Watch the full interview](#) with Dr. Steve Best on hyperbaric oxygen therapy and the conditions it is used to treat.

How does Hyperbaric Oxygen Therapy Work?

HBOT is a medical treatment that delivers 100% oxygen, at a higher atmospheric pressure than at sea level, to a patient's pulmonary system while they are within a pressurized chamber.

In the earth's atmosphere, we breathe approximately 20% oxygen and 80% nitrogen. During HBOT, pressure is increased two to three

times the normal atmospheric pressure while the patient breathes 100% pure oxygen, a level far greater than that which is available at a normal pressure in the environment. This helps us absorb up to 20 times more oxygen.

This dramatic elevation of dissolved oxygen in the plasma reaches the various organs/cells and in the process helps our immune system trigger the healing process.

Depending on the level of damage, a doctor determines how many sessions you need. One session can last anywhere between 30 minutes and 2 hours.

Who is HBOT Helping?

The state of Arizona signed off on legislation supporting HBOT in 2018 to treat veterans with TBI and PTSD, citing over 2300 veterans who had already been helped. Stroke survivors struggling with memory and mobility issues, professional and student athletes who have had concussions, and older adults facing dementia have found increased quality of life with HBOT (Nourmohammadi et al, 201).

Find Out **How the Hyperbaric Centers of Chicago Can Help You.**

Founded in 2013 as affiliate clinic of The Neuroscience Center, the Hyperbaric Centers of

Chicago offers HBOT with modern medical equipment and licensed, experienced staff.

[Click here to learn more about Hyperbaric Centers of Chicago.](#)

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The Neuroscience Center is an institution built on 40 years of experience. We are dedicated to providing high-level expertise in brain health & well-being.

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