

**Mayo Clinic News Network**

**Title: Healing with hyperbaric oxygen therapy** / Date: November, 2017

Intro: Diving deep and flying high, Mayo Clinic's Hyperbaric and Altitude Medicine program is approaching 10 years of service in Rochester, Minnesota. Even though the therapy is rooted in medical science, the process still strikes some people as a bit of a mystery.

"Many individuals have strong opinions as to what it is and what it isn't," says Dr. Paul Claus, the unit's medical director. "I think people just have to have an open mind, read the literature and look at the evidence. It came out of [deep-sea] diving experience, when oxygen was used to decompress divers who had been too deep too long and absorbed too much nitrogen."

Even though therapy sessions are still referred to as dives, today's applications are many – including treating diabetic wounds, gas embolisms, radiation injuries from cancer treatments and carbon monoxide poisoning. So how does it actually work? Dennis Doua reports

**Video**

**Audio**

<b>Total running time [4:10]</b>	/// VIDEO
<b>Dr. Paul Claus speaking</b>	<b>"In its simplest form, hyperbaric therapy, or hyperbaric oxygen therapy, is breathing oxygen at a higher pressure than atmosphere."</b>
<b>Dennis Doua speaking</b>	Dr. Paul Claus is the medical director for Mayo Clinic's Hyperbaric and Altitude Medicine program.
<b>TITLE: Dr. Paul Claus Hyperbaric and Altitude Medicine Mayo Clinic</b>	<b>"Oxygen therapy has been in medical therapy, both in the United States and around the world, for several decades now."</b>
<b>Andrew Melnyzenko speaking</b>	<b>"We benefit from a triple-lock hyperbaric chamber. It's rectangular in design. It is 10 feet wide and 14 feet long."</b>
<b>Dennis Doua speaking</b>	Mayo Clinic actually has two such chambers. Of the 2,500 or so facilities with multiplace hyperbaric oxygen units in the U.S., only a few dozen have the critical care capacity of this one.
<b>TITLE: Andrew Melnyzenko Technical and Safety Director Mayo Clinic</b>	<b>"So we have a unique chamber in that we have the ability to pressurize 12 patients at once."</b>
<b>Dennis Doua speaking</b>	Pressurized two to three times the atmosphere at sea level.
<b>TITLE: Nick Marosek Ambulatory Nurse Manager Mayo Clinic</b>	<b>"Your ears do pop, yes."</b>

<b>Dennis Douda speaking</b>	The sensation is similar to descending in an airplane; although, the passengers here are all outfitted with special headgear.
<b>Nick Marosek speaking</b>	<b>"And this is basically a clear plastic hood that's supplied. It's an oxygen tent, for all intents and purposes, and that delivers 100 percent oxygen for the duration of their therapy."</b>
<b>Dennis Douda speaking</b>	And why breathe the oxygen under pressure?
<b>Dr. Paul Claus speaking</b>	<b>"They're laws of physics and when you increase the pressure, you dissolve more molecules of oxygen in a fluid state. It triggers the body's response to produce new structure, new blood vessels, new connective tissue and to promote healing."</b>
<b>Dr. Shelagh Cofer speaking</b>	<b>"After her treatment it continued to fill in and heal."</b>
<b>Dennis Douda speaking</b>	That seems to be exactly what happened for 6-year-old Skylar. Multiple surgeries had repaired her cleft palate, but a small fistula, or hole, opened up on the roof of her mouth, where the resulting scar tissue had reduced the blood supply. Dr. Shelagh Cofer scheduled another surgery to close it, but because healing could be a challenge, she also turned to Dr. Claus' team to find a hyperbaric solution.
<b>Title: Dr. Shelagh Cofer Pediatric Otorhinolaryngology Mayo Clinic</b>	<b>"People thinking outside the box and really using a kind of innovative approach to treating a difficult problem."</b>
<b>Dave Boyett speaking</b>	<b>"It healed me really well, and quickly, and I was very, very pleased with it."</b>
<b>Dennis Douda speaking</b>	Dave Boyett was battling chronic, diabetes-related wounds. He'd already lost a big toe and was headed back to surgery to try to stop the spread of a dangerous infection.
<b>Dr. Paul Claus speaking</b>	<b>"He was ah, at risk of having to need a revision of that amputation and lose the lower part of his leg."</b>
Dennis Douda speaking	Dave and his doctors are convinced that dozens of preoperative dives in the therapy chamber are responsible for what he found instead - when he woke from surgery.
<b>Title: Dave Boyett Hyperbaric Oxygen Therapy Patient</b>	<b>"I looked down there and it was all bandaged up. My foot was still attached and it was huge. And, yeah I started to cry right there. I was so thankful."</b>

<b>Dennis Douda speaking</b>	Dr. Claus says, logically, the improved blood vessel growth within damaged tissues also carries more of a vital immune-boosting component.
<b>Dr. Paul Claus speaking</b>	<b>"Helps the white blood cells work more efficiently in those areas that are without adequate circulation and so it helps fight infection."</b>
<b>Dennis Douda speaking</b>	Because of the high concentration of oxygen, no handheld electronics are allowed in the chambers. The system is carefully monitored and equipped with multiple fire suppression systems. Additionally, a staff member is always present inside with patients.
<b>Andrew Melnyzenko speaking</b>	<b>"Patient safety is paramount to what we do every day."</b>
<b>Dennis Douda speaking</b>	Dr. Claus says being able to intervene in potentially deadly and disfiguring conditions, when few other options may be effective, has made his experiences with hyperbaric oxygen therapy the highlight of his career.
<b>Dr. Paul Claus speaking</b>	<b>"We have the respect of our patients and referring physicians. Many of the things that we do have more evidence than most medical practices, including surgery."</b>
<b>Dennis Douda speaking</b>	For the Mayo Clinic News Network, I'm Dennis Douda.

Anchor tag: Dr. Claus cautions people to be wary of hyperbaric therapy facilities that promise cures for conditions when there is no scientific evidence to support their claims, such as being able to effectively treat autism, cancer or diabetes.