MAYO CLINIC

Mayo Clinic News Network

Title: Mayo Clinic Minute: Hyperbaric solutions / Date: Dec 1, 2017

Intro: When Dave Boyett woke up after an operation to try to halt an out-of-control infection in his foot, what he saw brought him to tears – in a good way. "I looked down there and it was all bandaged up. My foot was still attached, and it was a huge [relief]. And, yeah, I started to cry right there. I was so thankful."

Boyett's surgeon had prepared him for the possibility that amputation might be necessary. But, in the weeks leading up to the surgery, his doctors had sent him to more than two dozen therapy sessions in a hyperbaric chamber.

"In its simplest form, hyperbaric therapy, or hyperbaric oxygen therapy, is breathing oxygen at a higher pressure than [our normal] atmosphere," says Dr. Paul Claus, the medical director for Mayo Clinic's Hyperbaric and Altitude Medicine program.

Because of the technology's origins, each hyperbaric therapy session is called a dive. "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," says Dr. Claus.

Today, it's used to treat many medical conditions, including diabetic wounds, gas embolisms, radiation injuries from cancer treatments and carbon monoxide poisoning. Dennis Douda explains how it works.

Video	Audio
Total running time [1:00]	/// VIDEO
Dennis Douda speaking	Mayo Clinic's two triple-lock hyperbaric chambers are big enough to hold up to 12 patients who breathe pure oxygen. They're pressurized up to three times the atmosphere at sea level. Why?
Dr. Paul Claus speaking	**"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."**
Dave Boyett speaking	**"It healed me really well – and quickly – and I was very, very pleased with it."**
Dennis Douda speaking	Dave Boyett was battling chronic, diabetes-related wounds and severe infection.
TITLE: Dr. Paul Claus Hyperbaric and Altitude Medicine Mayo Clinic	**"He was at risk of having to need a revision of that amputation and lose the lower part of his leg."**
Dennis Douda speaking	Improved blood vessel growth also carries more immune-boosting cells to fight

	infection.
Dennis Douda speaking	**"Helps the white blood cells work more efficiently in those areas that are without adequate circulation."**
Dennis Douda speaking	For the Mayo Clinic News Network, I'm Dennis Douda.

Anchor tag: There are about 2,500 multipatient hyperbaric oxygen facilities in the U.S., but only a few dozen have the critical care capacity of the program at Mayo Clinic.