



Hyperbaric Oxygen Therapy for Wound Healing

Hyperbaric oxygen therapy is a type of treatment in which patients enter a chamber and in that chamber they are kept at a higher than normal pressure and they are allowed to breathe pure oxygen. This results in a much higher than normal oxygen concentration in their blood, and that increased oxygen gets out to their tissues. Poor wound healing often results from an inadequate blood flow and inadequate oxygen delivery to the tissues, and hyperbaric oxygen can not only provide oxygen directly, but it can actually stimulate the growth of new blood vessels into the area — and in both these ways it can help wound healing.



There are many indications for hyperbaric oxygen therapy. In wound healing centers, doctors would typically see patients who have diabetic foot wounds. These wounds can often be poor in blood supply and respond to hyperbaric oxygen therapy. Also, patients who have deep-seated infections, especially infections of the bone, which can sometimes be called osteomyelitis, are seen. This is another condition that can be very helpfully treated with hyperbaric oxygen therapy. And, patients who have had radiation therapy for various types of cancer treatments benefit from this treatment. Patients who have had radiation can oftentimes develop wounds and symptoms from the radiation therapy.

McGowan Institute for Regenerative Medicine affiliated faculty member [Sandeep Kathju, MD, PhD](#), plastic surgeon at the University of Pittsburgh Medical Center Wound Healing Services in Pittsburgh, PA, says radiation can cause wounds inside and outside the body.

“They can also be very long-term,” he said.

Inside a special hyperbaric chamber, patients breathe pure oxygen for a 2-hour long session. The pure oxygen promotes the growth of new blood vessels.

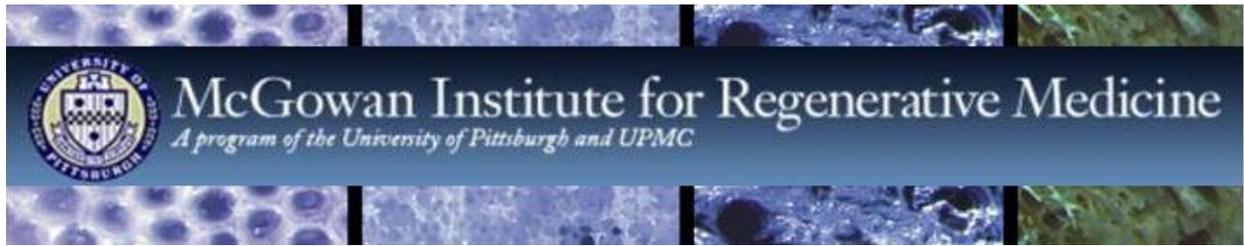
Dr. Kathju said, “Now those radiation damaged tissues are actually seeing more blood, and therefore getting a permanently higher delivery of oxygen.” That means faster healing.

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