

How can hyperbaric oxygen help cancer patients?

Hyperbaric oxygen therapy helps people who already beat cancer with recovery after radiation therapy.

On Emedsimulations website Hyperbaric Oxygen Therapy is described as a treatment which essentially involves providing the body with extra oxygen. The word 'Hyper' means 'increased' and 'Baric' refers to pressure. As we all know, Oxygen is one of the gases in the air that we breathe and is essential for life. The air that we breathe normally contains 21% oxygen.

Breathing in pure oxygen under increased pressure within a hyperbaric chamber allows extra oxygen to be forced into the blood stream and dissolved at a much faster rate than if pressure was not used. Another effect is the increased oxygen transport capacity of the blood. Under atmospheric pressure, oxygen transport is limited by the oxygen binding capacity of haemoglobin in red blood cells, which almost reaches saturation at atmospheric pressure, very little oxygen being transported by plasma. However Oxygen transport by plasma is significantly increased under HBO therapy. This extra oxygen can help where healing is retarded due to infection or limited blood supply through tissue damage.

Effects and types of chambers

Benefits of Hyperbaric Oxygen Therapy are that it facilitates the growth of new blood vessels, enabling the transport of additional blood; augments the body's natural defence mechanisms to fight infection and kill bacteria and helps reduce any swelling that may occur around an area subjected to radiotherapy.

The treatment is normally pain-free and is carried out in specially-designed chambers known as "hyperbaric chambers". There are two basic types of chamber: monoplace chambers and multiplace chambers. A monoplace hyperbaric chamber for treating one person at a time and multiplace hyperbaric chambers can treat several people at a time.

For radiotherapy after-effects

The site goes on to state that HBO therapy is increasingly being used for helping patients who have been subjected to conventional radiotherapy and are now suffering the after-effects. A major problem with radiotherapy is that, since it not only kills cancer cells but also nearby healthy cells at the same time, it can cause changes in the oxygen supply to tissues in the treated area, since less blood is supplied to the area. The result is that it becomes more difficult oxygen and essential nutrients to reach the tissues. Over a period of time these tissues can become very fragile, break down and ulcerate. Sometimes tissue can even completely die (radiation necrosis).

Studies indicate that HBO therapy can be effective in the following conditions: chronic lymphoedema in breast cancer, chronic radiation cystitis, pelvic cancer, bowel cancer, prostate cancer, osteoradionecrosis, chronic radiation proctitis and acute blood loss anaemia.

Besides that dr. Christopher Duma, neurosurgeon specialist and medical director of brain and spine surgeons in the brain tumor program at Hoag Memorial Hospital Presbyterian in Newport Beach, says that with the help of HBOT in his opinion even an aggressive brain cancer, glioblastoma, is no longer a death sentence: *“Patients start out with surgery but I believe the oxygen treatment sets up a barrier or fire line. Brain cancer is no longer a death sentence, in my opinion.”*

An interview with him was published on O. C. Register, and you can read it by following the link under references.

AHA Hyperbarics does not provide medical advice, diagnose health conditions or prescribe treatment. The contents of the AHA Hyperbarics site, such as text, graphics, photographs and other materials on the AHA Hyperbarics site are only for informational purposes.

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References:

Haas, Jane Glenn. [Oxygen chamber joins fight vs. cancer.](#) Published online Dec. 19, 2011. Orange County Register.

[Alternative Cancer Treatments – Hyperbaric Oxygen Therapy.](#) Published online on emedsimulations.