Hyperbaric Oxygen Therapy

What is hyperbaric oxygen therapy?
Hyperbaric oxygen therapy (HBO) involves spending a set amount of time in a pressurized chamber that provides 100% pure oxygen. The chamber can hold either one person, or many people at a time. The air pressure in the chamber is three times higher than normal. While in the chamber, you are breathing in pure oxygen (100% oxygen versus the 21% oxygen you normally breathe). Your blood carries this oxygen throughout your body, which aids healing.

What is HBO used for?
The Undersea and Hyperbaric Medical Society (UHMS), a team of physicians and researchers who study the use of HBO, give recommendations about its use. The UHMS has approved the use of HBO to treat 14 issues, such as non-healing wounds, certain bone or skin infections, grafts or flaps that are not healing, and radiation tissue injury.

How is HBO delivered?
The length of care varies but is often 20-40 treatments given 1-2 times per day. Either a monoplace (1 person) chamber or a multiplace (2 or more people) chamber is used. In a multiplace chamber, you wear a mask or a tent for oxygen delivery.

One treatment can last about 2 hours. In a multiplace chamber, there will likely be a staff member there to help you if needed. There will not be a person with you in a monoplace chamber. Tell the staff if you have any drains, tubes, or pumps inside or outside of your body, if you have any dressings (bandages) or if you have diabetes.

HBO should not be used when receiving bleomycin, cisplatin, or doxorubicin chemotherapies. Make sure that your care team is aware of all the medications you are taking. You will be told what you can and cannot wear during treatment. You will also be told what you are allowed to have in the chamber with you. Hyperbaric chambers have a fire risk, so these orders must be followed closely.

Why is HBO used in people with cancer?
Cancer treatment, mainly with radiation, can harm healthy tissues. It can lead to issues such as bleeding from the bladder, gut or rectum, harm to the jaw bone, teeth, and throat, non-healing wounds, tooth decay, and soft tissue damage in the chest wall. The introduction of pure oxygen into the body can help heal these tissues by:

- Helping grow new blood vessels by getting more oxygen to those area(s).
- Reducing swelling and allowing better blood flow.
- Higher oxygen levels help white blood cells to kill bacteria and stop infection.
- Helping reduce fibrosis caused by radiation (Learn more about Radiation Fibrosis Syndrome).

The most common use for HBO in people with cancer is the care and prevention of osteoradionecrosis. Radiation can damage blood vessels within the bone. This makes it hard for the bone to heal itself. This side effect occurs most often after radiation to the mouth area. Osteoradionecrosis is caused by damage to the gum tissue. The jaw bone(s) may be exposed through this damaged tissue. This can lead to pain, swelling, infection, and tooth loss. For best results, HBO should be used along with surgery to treat osteoradionecrosis.

HBO can be useful in taking care of long-term side effects of cancer treatment. If you think that HBO may be helpful to you, speak to your care team.
OncoLink is designed for educational purposes only and is not engaged in rendering medical advice or professional services. The information provided through OncoLink should not be used for diagnosing or treating a health problem or a disease. It is not a substitute for professional care. If you have or suspect you may have a health problem or have questions or concerns about the medication that you have been prescribed, you should consult your health care provider.