Hyperbaric Oxygen Therapy
For Compromised Grafts and Flaps

What is Hyperbaric Oxygen?
Hyperbaric oxygen (HBOT) is a medical treatment in which the patient breathes pure oxygen under pressure. It is administered in a chamber and is the treatment for many medical and surgical conditions. It is usually part of an overall plan of care which may involve surgery, antibiotics or other therapy, but for certain conditions, it may be the main treatment.

How does HBOT work?
During hyperbaric oxygen therapy, 100% oxygen is delivered in a closed chamber, and air pressure is increased to as much as 3 times normal. This causes a dramatic increase in oxygen taken in by the lungs which is then transferred to the blood. The blood then transports the oxygen to all parts of the body. The oxygen-rich blood helps improve healing and controls infection in certain conditions.

How does HBOT help heal my compromised skin graft or flap?
A skin graft or flap is “compromised” when the graft or flap and the patient’s wound bed may not “take” or combine, and as a result, is likely to fail to close the wound. This can happen due to an abnormal change in the blood supply of the flap and/or in the health of the patient’s wound bed that will be receiving the graft/flap.

Without a healthy blood supply, the graft or flap becomes oxygen-starved and fails. When a flap or graft is “compromised”, surgeons will first see if the problem can be corrected with surgery. If it cannot be completely corrected with surgery, HBOT may be used.

HBOT has been proven to be beneficial in this situation, by delivering more oxygen to both the graft/flare and the wound bed. HBOT assists with healing by:
- Limiting the death of healing cells at the skin graft or flap site by providing oxygen to oxygen-starved cells
- Stimulating cells that trigger new blood vessel and tissue growth
- Improving swelling (edema) by reducing leakage of the fluid in the blood into the graft or flap

What should I expect with HBOT for my compromised skin graft or flap?
- The number of hyperbaric treatments is determined by the complexity of the problem with the skin graft or flap
- The number of treatments ranges from 6 to 20 times. Initially, treatments are scheduled twice a day, and as the graft/flare improves, they may be reduced to once a day
- You will continue seeing your surgeon for monitoring of the skin graft or flap and the recommended dressing changes

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