Healing Fractures with Hyperbaric Oxygen

1. Edema, which because of the poor solubility of oxygen in water limits oxygen transport. Oxygen under hyperbaric conditions by reducing blood flow also reduces tissue hydrostatic pressure allowing better lymphatic drainage.

2. Fracture, because when a bone is broken the blood supply is damaged and oxygen transport is reduced. Healing is oxygen dependent. In addition, the rate of bone formation even in uncomplicated fractures is improved by intermittent high dosage oxygen.

3. Soft tissue damage. The rate of collagen formation and the tensile strength is doubled under hyperoxic conditions.

4. The cerebral effects may be due to fat embolism, which responds well to hyperbaric oxygen therapy.

Philip James
Wolfson Hyperbaric Medicine Unit
Ninewells Medical School
(Reprinted with Permission)