

1: Sports Med. 1996 Oct;22(4):219-27.

Hyperbaric Oxygen Chambers and the Treatment of Sports Injuries.

Staples J, Clement D.

Allan McGavin Sports Medicine Centre, Division of Sports Medicine,
University of
British Columbia, Vancouver, Canada.

Hyperbaric oxygen therapy, an established therapeutic intervention in diving medicine, is being investigated in wound management, where oxygen is an integral part of the healing process. Currently, the evidence is controversial as to whether there is a basis for using hyperbaric oxygen in normal wounds. This review explains the rationale for the use of hyperbaric oxygen therapy and reports on the initial research in the area of hyperbaric oxygen in sports-induced injury. In addition to the increased dissolved content of oxygen in the plasma, the combination of pressure and oxygen seems to promote systemic vasoconstriction and yet inhibition of vasoconstriction in the injured area, which will limit edema. The safety of hyperbaric oxygen in otherwise healthy athletes is examined. Potential contraindications to hyperbaric oxygen therapy include individuals who are febrile, suffer from upper respiratory infections, or have suffered a trauma to the chest where a pneumothorax is suspected or have a predisposition to tension pneumothorax. The initial human and animal model studies have shown promising, and in some instances significant, acceleration of healing. The potential benefits for sports injuries appear to be a blunting of initial injury, possibly by controlling the neutrophil adhesion and release of oxygen free radicals as well as an enhancement of healing processes requiring oxygen-like collagen formation phagocytosis.

PMID: 8898456 [PubMed - indexed for MEDLINE]

Related Links

Hyperbaric oxygen therapy for lower-extremity soft-tissue sports injuries. [J Am

Podiatr Med Assoc. 2003] PMID:12869599

Hyperbaric oxygen therapy for delayed onset muscle soreness and closed soft tissue injury. [Cochrane Database Syst Rev. 2005]

PMID:16235376

UHMS position statement: topical oxygen for chronic wounds. [Undersea Hyperb Med.

2005] PMID:16119307

Hyperbaric oxygen therapy in sports. [Am J Sports Med. 1998] PMID:9689364

Adjunctive hyperbaric oxygen therapy contributes healing in electrical injury: a case report of high voltage electrical injury. [Ulus Travma Acil Cerrahi Derg.

2005] PMID:15877252