

Hyperbaric oxygen effects on sports injuries

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In the last decade, competitive sports have taken on a whole new meaning, where intensity has increased together with the incidence of injuries to the athletes. Therefore, there is a strong need to develop better and faster treatments that allow the injured athlete to return to competition faster than with the normal course of rehabilitation, with a low risk of re-injury. Hyperbaric therapies are methods used to treat diseases or injuries using pressures higher than local atmospheric pressure inside a hyperbaric chamber. Within hyperbaric therapies, hyperbaric oxygen therapy (HBO) is the administration of pure oxygen (100%) at pressures greater than atmospheric pressure, i.e. more than 1 atmosphere absolute (ATA), for therapeutic reasons. The application of HBO for the treatment of sports injuries has recently been suggested in the scientific literature as a modality of therapy either as a primary or an adjunct treatment. Although results have proven to be promising in terms of using HBO as a treatment modality in sports-related injuries, these studies have been limited due to the small sample size, lack of blinding and randomization problems. HBO seems to be promising in the recovery of injuries for high-performance athletes; however, there is a need for larger samples, randomized, controlled, double-blinded clinical trials combined with studies using animal models so that its effects and mechanisms can be identified to confirm that it is a safe and effective therapy for the treatment of sports injuries