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Oxidative stress is fundamental to hyperbaric oxygen therapy

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The goal of this review is to outline advances addressing the role that reactive species of oxygen and nitrogen play in therapeutic mechanisms of hyperbaric oxygen. The review will be organized around major categories of problems or processes where controlled clinical trials have demonstrated clinical efficacy for hyperbaric oxygen therapy. Reactive species are now recognized to play a major role in cell signal transduction cascades, and the discussion will focus on how hyperbaric oxygen acts through these pathways to mediate wound healing and ameliorate postischemic and inflammatory injuries.