



# Diseases Treated With Hyperbaric Oxygen Therapy; a Literature Review

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## ABSTRACT

Hyperbaric oxygen therapy (HBO) is defined as the inhalation of 100% oxygen inside a hyperbaric chamber that is pressurized to greater than 1 atmosphere (Atm). Typical HBO regimens use 1.5 to 2.5 Atm pressure for durations of 30 to 90 minutes, repeated multiple times. The time between and the total number of repeat sessions varies widely. The effectiveness of hyperbaric oxygen therapy for treatment of some diseases such as intravascular emboli, decompression sickness, anaerobic infections, CO poisoning was confirmed. For some diseases, such as traumatic brain injuries, the effectiveness of hyperbaric oxygen therapy as described by investigators is controversial. Chinese authors have reported many articles regarding treatment of neonatal hypoxia with hyperbaric oxygen therapy, but in other points of the world, this depth of experience does not exist. Recently, some other diseases, such as purpura fulminans, and pancreatitis, have been treated by hyperbaric oxygen therapy. In conclusion, if equipment for hyperbaric oxygen therapy is available, many patients will benefit by this method of treatment.

## KEY WORDS

Hyperbaric oxygen therapy, diseases, studies.

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## INTRODUCTION

Hyperbaric oxygen therapy (HBO) is defined as the inhalation of 100% oxygen inside a hyperbaric chamber that is pressurized to greater than 1 atmosphere (Atm). Typical HBO regimens use 1.5 to 2.5atm pressure for durations of 30 to 90 minutes, repeated multiple times. The elevated pressure of oxygen in these chambers leads

to patients showing elevated arterial PO<sub>2</sub> and thus improvement of ischemic conditions. The time between and the total number of repeat sessions varies widely in studies (1).

Hemoglobin and nitric oxide independently fulfill diverse and complex physiological roles in the body; together they subtly modulate microvascular perfusion in