

# Hyperbaric Oxygen for Thermal Burns; Unknown in Many Countries

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## ABSTRACT

**Background:** Thermal burns are still among major problems with local and systemic consequences. Its morbidity and mortality bears high financial cost on health systems in each country. Hyperbaric oxygen therapy (HBOT) is a sophisticated treatment modality; 100% oxygen is prescribed at pressures greater than atmospheric pressure in special chambers. HBOT has many medical indications including thermal burns but unknown in many countries.

**Material and Methods:** A review was designed with relevant keywords up to 2016.

**Results:** In 1965, HBOT was used in thermal burns for the first time. Rats were the first animals studied for effects of HBOT on pathophysiology of burns (1970). At 2004, the first systematic review was published. Hyperoxia, vasoconstriction in pre-capillaries, prevention of ischemia in derm, reduction of plasma exudation, preserving cellular metabolism, increase of tissue oxygenation, decrease of edema and fluid loss reduction are among mechanisms described for HBOT.

**Conclusion:** Reduction of mortality, staying in hospital, number of operations, and financial cost would be the results of HBOT. Every burn care center should have HBOT chambers (especially mono-place).

**Keywords:** Oxygen, Burn, Chamber, Healing