

# Literature Briefs

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**HYPERBARIC OXYGEN** Hyperbaric oxygenation is useful in the management of three specific groups of patients: children or adults with acute carbon monoxide intoxication; children or adults with progressive clostridial myoneurosis; and critically ill infants with certain forms of acyanotic and cyanotic congenital heart disease. Extrapolation from these disease entities to other areas of medicine is not warranted. (Bernhard, W. F.: *Current Status of Hyperbaric Oxygenation in Pediatric Surgery*, *Surg. Clin. N. Amer.* 44: 1583 (Dec.) 1964.)

**HYPERBARIC OXYGENATION** Hyperbaric oxygenation affects central nervous system function and the cerebral circulation. Photographs of the optic fundus were obtained in eight normal volunteers breathing air or oxygen at 1 to 3.72 atmospheres of absolute pressure during quiet respiration and during hyperventilation. Hyperbaric oxygenation resulted in marked constriction of both arterioles and venules, and the smaller retinal vessels disappeared completely. The retinal vasoconstrictor response results directly from hyperoxia with little or no effect being due to a decrease in arterial blood carbon dioxide tension. In this respect the retinal circulation may differ from that of the brain, since hypocapnia is associated with a profound reduction in cerebral blood flow and an increase

in cerebral vascular resistance. (Saltzman, H. A., and others: *Retinal Vascular Response to Hyperbaric Oxygenation*, *J.A.M.A.* 191: 290 (Jan. 25) 1965.)

**HYPERBARIC OXYGEN** Ten patients with gas gangrene were treated with hyperbaric oxygen, antibiotics and indicated surgical drainage or debridement. Treatment consisted of 1 hour of oxygen at 3 atmospheres absolute, repeated at 12 hour intervals. All survived except 2 who died following complications related to wide surgical excision of necrotic tissue. The others were successfully managed by incisional drainage only and hyperbaric oxygen. Treatment was characterized by prompt disappearance of *Clostridium perfringens* from the wound and blood stream. (Glad, R. M., Bouhoutsos, D. C., and Douglass, F. M.: *Effect of Hyperbaric Oxygen Therapy and Changing Surgical Concepts of Gas Gangrene*, *Amer. J. Surg.* 109: 230 (Feb.) 1965.)

**PRESSOR AMINES** Comparison of the hemodynamic affects of tyramine, ephedrine and norepinephrine in normal man was carried out utilizing systemic (intravenous) and localized (brachial artery) administration of varying concentrations. Tyramine administration led to elevated blood pressure, bradycardia, unchanged cardiac output and moderate arteriolar constriction in the forearm; ephedrine to elevated blood pressure, tachycardia, increased cardiac output and slight forearm arteriolar vasodilatation; and norepinephrine to elevated blood pressure, bradycardia, unchanged cardiac output and marked arteriolar and venous constriction. The vessel responses with tyramine and ephedrine were occasionally just the opposite in some individuals at low dose levels and in subjects exhibiting an initial vasoconstrictor response. There was