

## Clinical UM Guideline

**Subject:** Hyperbaric Oxygen Therapy (Systemic/Topical)

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### Description

This document addresses the use of hyperbaric oxygen therapy (HBOT), which can be applied systemically, topically, or to one or more limbs alone. HBOT involves the use of pressurized room air, 100% oxygen, or room air enriched with a specific concentration of oxygen. The premise of HBOT is that the increased pressure results in increased oxygen levels in systemic circulation and the body's tissues with the goal of improving healing of wounds, injuries or to support oxygen transport in acutely anemic or hypoxic individuals.

### Clinical Indications

#### Medically Necessary:

Systemic hyperbaric oxygen pressurization is considered **medically necessary** in the treatment of any of the following conditions when performed in accordance with Undersea and Hyperbaric Medical Society (UHMS) guidelines:

- A. Acute peripheral arterial insufficiency; **or**
- B. Acute thermal burns: deep second degree or third degree in nature; **or**
- C. Acute traumatic ischemia; **or**
- D. Carbon monoxide poisoning; **or**
- E. Central retinal artery occlusion (CRAO); **or**
- F. Chronic non-healing wounds in the following situations:
  - 1. Diabetic lower extremity wounds, when the following criteria are met:
    - a. As a component of diabetic ulcer management (for example, careful attention to infection control, aggressive surgical debridement, evaluation and correction of vascular insufficiency, extremity offloading, improving glycemic control, and when applicable, encouraging smoking cessation); **and**
    - b. Wagner grade III or higher wound severity; **and**
    - c. Wound has not responded to 30 days of appropriate conservative treatment; **and**
    - d. For continued hyperbaric oxygen therapy, wound shows measurable signs of healing, defined as at least 20% reduction in wound surface area, when evaluated at 30 day intervals; **or**
  - 2. Arterial insufficiency ulcers in the following situations:
    - a. At least one of the following:
      - i. Persistent hypoxia despite attempts at increasing blood flow; **or**
      - ii. When wound failure continues despite maximum revascularization; **and**
    - b. For continued hyperbaric oxygen therapy, wound shows measurable signs of healing, defined as at least 20% reduction in wound surface area, when evaluated at 30 day intervals; **or**
  - 3. Pressure ulcers in the following situations:
    - a. At least one of the following:
      - i. Postoperative support of skin graft or flaps showing evidence of ischemic failure; **or**

- ii. In the field of previous irradiated area for pelvic or perineal malignancies; **or**
  - iii. When progressive necrotizing soft tissue infection or refractory osteomyelitis is present; **and**
- b. For continued hyperbaric oxygen therapy, wound shows measurable signs of healing, defined as at least 20% reduction in wound surface area, when evaluated at 30 day intervals; **or**
- 4. Venous stasis ulcers in the following situations:
  - a. When supporting skin grafting or flap reconstruction in individuals with concomitant peripheral arterial occlusive disease; **and**
  - b. hypoxia not corrected by control of disease; **and**
  - c. For continued hyperbaric oxygen therapy, wound shows measurable signs of healing, defined as at least 20% reduction in wound surface area, when evaluated at 30 day intervals; **or**
- G. Chronic refractory osteomyelitis; **or**
- H. Compartment syndrome; **or**
- I. Compromised skin graft or flaps (enhancement of healing in selected wounds); **or**
- J. Crush injuries; **or**
- K. Cyanide poisoning; **or**
- L. Decompression sickness; **or**
- M. Delayed radiation injury, including osteoradionecrosis, soft tissue radiation necrosis, and radiation cystitis; **or**
- N. Gas or air embolism; **or**
- O. Gas gangrene (for example, clostridial myositis and myonecrosis); **or**
- P. Idiopathic Sudden Sensorineural Hearing Loss (ISSHL) in individuals with a magnitude of hearing loss of at least 70 decibels, after inadequate response to glucocorticoid treatment; **or**
- Q. Intracranial abscess; **or**
- R. Necrotizing soft-tissue infections; **or**
- S. Prophylactic pre and post treatment for individuals undergoing dental surgery of a radiated jaw; **or**
- T. Severe anemia with exceptional blood loss, when transfusion is impossible or delayed.

**Not Medically Necessary:**

Topical hyperbaric oxygen is considered **not medically necessary** in all cases.

Limb specific hyperbaric oxygen pressurization is considered **not medically necessary** in all cases.

Systemic hyperbaric oxygen pressurization is considered **not medically necessary** for all other conditions not previously listed, including but not limited to the following:

- A. Osteonecrosis of the jaw when the cause is not radiation necrosis (osteoradionecrosis);
- B. Preoperative treatment for jaw osteomyelitis;
- C. Stroke
- D. Tinnitus;
- E. Traumatic brain injury;
- F. Venous stasis ulcers, pressure ulcers and non-pressure ulcers except in the subset of individuals noted above.