



HYPERBARIC OXYGEN THERAPY FOR PODIATRY

HyOx treats the following approved and covered conditions:

- **Diabetic wounds of the lower extremity (Wagner Grade III or higher)**
 - **Referral Protocol:** Refer at 30 days when the wound has not shown significant progress with conventional treatment (**1**)
 - Wound is classified as Wagner Grade III or higher (defined as penetrating deeper layers reaching tendon, bone or joint capsule with abscess, osteomyelitis or tendonitis extending to those structures)
 - Patient has failed adequate course of standard wound therapy (30 days of assessment and correction of vascular abnormalities, optimization of nutritional status and glucose control, debridement, moist wound dressing, off-loading, and treatment of infection)
- **Other chronic, non-healing wounds caused by infection, injury or disease** (chronic, non-healing wounds PO_2 of ≤ 40 mmHg common in peripheral arterial occlusive disease and diabetic lower extremity wounds)
- **Chronic refractory osteomyelitis**
 - **Referral Protocol:** When chronic osteomyelitis fails to respond to definitive surgical debridement and to heal after four to six weeks of antibiotic therapy (**2**)
- **Necrotizing soft tissue infections (necrotizing fasciitis and gas gangrene)**
 - **Referral Protocol:** Immediately, after wound culture or MRI shows bone or necrotizing soft tissue infection – refer in tandem with wound care, debridement and antibiotic therapy
- **Compromised skin grafts and flaps**
 - **Referral Protocol:** Immediately, when post- surgical or amputation site shows signs of dehiscence, necrosis, blistering, erythema, and/or infection
- **Soft tissue radionecrosis of the foot**
 - **Referral Protocol:** Immediately, upon symptom manifestation of the delayed effects of radiation injury

Benefits of Hyperbaric Oxygen Therapy

- Accelerates healing of chronic wounds by maximizing oxygen delivery through the blood's plasma to encourage growth of new blood vessels in oxygen-deprived tissue – normal steps to wound healing are impaired due to inadequate perfusion and oxygen availability
- Boosts the outcomes of diabetic foot ulcers when treated at four weeks, the marker for reassessing wound healing progress and commencing advanced wound healing modalities **(2)**
- Promotes fibroblast, collagen deposition, angiogenesis **(3)**, resistance to infection **(4)** and intracellular leukocyte bacterial killing – all oxygen sensitive responses essential to normal wound healing
- Promotes vascular endothelial growth **(5)** factor and formation of granulation tissue
- Decreases the risk of amputation in patients with ischemic, infected, Wagner Grade III or worse diabetic lower extremity wounds and foot ulcers **(6)**
- Speeds the wound healing and recovery of soft tissues and bone affected by radiation therapy's fibroatrophic effect **(7)** manifested by vascular changes characterized by obliterative endarteritis
- Helps resolve infections combined with antibiotic and surgical strategy/debridement by helping augment the transport of certain antibiotics across bacterial cell walls (antibiotic transport does not occur if oxygen tension levels are below 20 to 30 mmHg) **(8)**

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