



Hyperbaric Oxygen Therapy for Treatment of Gas Gangrene

References

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Center for Evidence-based Policy Medicaid Evidence-based Decisions Project (MED)

Oregon Health & Science University
3455 SW US Veterans Hospital Road
Mailstop SN-4N, Portland, OR 97239-2941

Phone: 503.494.2182

Fax: 503.494.3807

<http://www.ohsu.edu/ohsuedu/research/policycenter/med/index.cfm>

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The Medicaid Evidence-based Decisions (MED) Project is housed at the Center. Its mission is to create an effective collaboration among Medicaid programs and their state partners for the purpose of making high quality evidence analysis available to support benefit design and coverage decisions made by state programs. Further information about the MED project and the Center is available at www.ohsu.edu/policycenter.

Most MED Project reports are proprietary. However, in an effort to assist the state of Oregon with the transparency of their clinical guidance development, the references for this specific report are being shared publicly.

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References

- Blue Cross and Blue Shield Association. (1999). Technology Assessment: *Hyperbaric Oxygen Therapy for Wound Healing-Part II* [Report archived and no longer available.]
- CMS. (1997). *National coverage determination (NCD) for hyperbaric oxygen therapy*. Originally published 11 August 1997. Updated 19 June 2006. Washington, D.C.: Centers for Medicare and Medicaid Services. Retrieved on December 28, 2012 from <http://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=12&ncdver=3&NCAId=37&NcaName=Hyperbaric+Oxygen+Therapy+for+Hypoxic+Wounds+and+Diabetic+Wounds+of+the+Lower+Extremities&IsPopup=y&bc=AAAAAAAAEAAA&>
- De Laet C, Obyn C, Ramaekers D, Van De Sande S, Neyt M. (2008). *Hyperbaric oxygen therapy: a rapid assessment*. Brussels: Belgian Health Care Knowledge Centre (KCE), 2008.
- Eskes A, Ubbink DT, Lubbers M, Lucas C, Vermeulen H. (2010). Hyperbaric oxygen therapy for treating acute surgical and traumatic wounds. *Cochrane Database of Systematic Reviews*. Issue 10.
- Gibson MB. (1986). Hyperbaric oxygen therapy in the management of clostridium perfringens infections. *N Zealand Med J*; 99:617-20.
- Guidi ML, Proietti R, Carducci P, Magalini SI, Pelosi G. (1981). The combined use of hyperbaric oxygen, antibiotics and surgery in the treatment of gas gangrene. *Resuscitation*. 9:267-273.
- Hailey D, Jacobs P, Perry DC, Chuck A, Morrison A, Boudreau R. (2007). *Adjunctive Hyperbaric Oxygen Therapy for Diabetic Foot Ulcer: An Economic Analysis* [Technology report no 75]. Ottawa: Canadian Agency for Drugs and Technologies in Health.
- Hart GB, Lamb RC, Strauss MB. (1983). Gas gangrene. *J Trauma*. 23(11):991-1000.
- Hayes, Inc. (2008). *Hyperbaric oxygen therapy for burns, infections, and nondiabetic wounds*. Lansdale, PA: Hayes, Inc.
- Hitchcock CR, Burbick MP. (1976). Gas gangrene infections of the small intestine, colon and rectum. *Dis Colon Rectum*; 19:112-19.
- Hunt, D.L. (2010). Diabetes: Foot ulcers and amputations. *BMJ*; 8: 602.
- Jackson RW, Waddell JP. (1973). Management of clostridial myonecrosis. *Clinical Orthop Rel Res*; 96:271-76.

Medical Advisory Secretariat. (2005). Hyperbaric oxygen therapy for non-healing ulcers in diabetes mellitus: an evidence-based analysis. Ottawa: Ontario Health Technology Assessment Series.

Raman G, Kupelnick B, Chew P, Lau J. (2006). *A horizon scan: uses of hyperbaric oxygen therapy*. Agency for Healthcare Research and Quality (AHRQ); 47.

Ritchie K, Baxter S, Craig J, Macpherson K, Mandava L, McIntosh H, Wilson S. (2008). *The clinical and cost effectiveness of hyperbaric oxygen therapy (HBOT)*. Glasgow: NHS Quality Improvement Scotland (NHS QIS):282.

Rudge F.W. (1993). The role of hyperbaric oxygenation in the treatment of clostridial myonecrosis. *Military Med.* 158:80.

Schweigel JF, Shim SS. (1973). A comparison of the treatment of gas gangrene with and without hyperbaric oxygen. *Surg Gynecol Obstet*; 136:969-70.

Wang, C., Lau, J. (2001). *Hyperbaric oxygen therapy in treatment of hypoxic wounds*. Agency for Healthcare Research and Quality (AHRQ).

Wang, C.C., Schwaitzberg, S., Berliner, E., Zarin, D.A., & Lau, J. (2003). Hyperbaric oxygen for treating wounds: A systematic review of the literature. *Archives of Surgery*, 138(3), 272-279.

References for Health Evidence Review Commission Coverage Guidance
Topic: Indications for Hyperbaric Oxygen Therapy

- Bennett MH, Lehm JP, Jepson N. (2011). Hyperbaric oxygen therapy for acute coronary syndrome. *Cochrane Database of Systematic Reviews, Issue 8*. Art. No.: CD004818. DOI: 10.1002/14651858.CD004818.pub3. Retrieved from <http://summaries.cochrane.org/CD004818/hyperbaric-oxygen-may-reduce-the-risk-of-dying-the-time-to-pain-relief-and-the-chance-of-adverse-heart-events-in-people-with-heart-attack-and-unstable-angina>
- Bennett MH, Stanford RE, Turner R. (2012). Hyperbaric oxygen therapy for promoting fracture healing and treating fracture non-union. *Cochrane Database of Systematic Reviews, Issue 11*. Art. No.: CD004712. DOI: 10.1002/14651858.CD004712.pub4. Retrieved from <http://summaries.cochrane.org/CD004712/using-oxygen-at-high-pressure-in-a-compression-chamber-for-the-treatment-of-broken-bones>
- Bennett MH, Trytko B, Jonker B. (2012). Hyperbaric oxygen therapy for the adjunctive treatment of traumatic brain injury. *Cochrane Database of Systematic Reviews, Issue 12*. Art. No.: CD004609. DOI: 10.1002/14651858.CD004609.pub3. Retrieved from <http://summaries.cochrane.org/CD004609/does-hyperbaric-oxygen-therapy-improve-the-survival-and-quality-of-life-in-patients-with-traumatic-brain-injury>
- Buckley NA, Juurlink DN, Isbister G, Bennett MH, Lavonas EJ. (2011). Hyperbaric oxygen for carbon monoxide poisoning. *Cochrane Database of Systematic Reviews, Issue 4*. Art. No.: CD002041. DOI: 10.1002/14651858.CD002041.pub3. Retrieved from <http://summaries.cochrane.org/CD002041/there-is-insufficient-evidence-to-support-the-use-of-hyperbaric-oxygen-for-treatment-of-patients-with-carbon-monoxide-poisoning>
- Holland NJ, Bernstein JM, Hamilton JW. (2012). Hyperbaric oxygen therapy for Bell's palsy. *Cochrane Database of Systematic Reviews, Issue 2*. Art. No.: CD007288. DOI: 10.1002/14651858.CD007288.pub2. Retrieved from <http://summaries.cochrane.org/CD007288/high-pressure-hyperbaric-oxygen-therapy-for-bells-palsy>
- Leaf, A., Kriz, H., & King, V. (2012). *Hyperbaric oxygen therapy for treatment of gas gangrene*. Portland, OR: Center for Evidence-based Policy, Oregon Health and Science University.
- Phillips JS, Jones SEM. (2013). Hyperbaric oxygen as an adjuvant treatment for malignant otitis externa. *Cochrane Database of Systematic Reviews, Issue 5*. Art. No.: CD004617. DOI: 10.1002/14651858.CD004617.pub3. Retrieved from <http://summaries.cochrane.org/CD004617/hyperbaric-oxygen-as-an-additional-treatment-for-malignant-otitis-externa>

Washington State Health Care Authority Health Technology Assessment Program (WA HTA). (2013). *Hyperbaric oxygen therapy (HBOT) for tissue damage, including wound care and treatment of central nervous system (CNS) conditions*. Olympia: WA HTA. Retrieved from <http://www.hca.wa.gov/hta/Pages/Hyperbaric%20Oxygen%20%28HBO2%29%20Treatment%20for%20Tissue%20Damage.aspx>

Xiao Y, Wang J, Jiang S, Luo H. (2012). Hyperbaric oxygen therapy for vascular dementia. *Cochrane Database of Systematic Reviews, Issue 7*. Art. No.: CD009425. DOI: 10.1002/14651858.CD009425.pub2. Retrieved from <http://summaries.cochrane.org/CD009425/hyperbaric-oxygen-therapy-for-vascular-dementia>