

Effects of Hyperbaric Oxygen Therapy on Wound Healing

HBOT, the use of pressurized, 100% oxygen, is used as an adjunctive treatment in many conditions to improve blood and tissue oxygenation, enhance the body's natural antibacterial activity, and reduce inflammation. Many clinicians believe HBOT reduces swelling, pain, and necrosis associated with snake bites. However, there are no studies evaluating if HBOT improves the recovery of dogs after snake bite.



Photo courtesy of Zoo Knoxville

STUDY PURPOSE

This prospective, blinded study is being conducted to assess the effect of HBOT on local wound swelling, severity, and pain. A secondary objective is to describe the safety and complications of HBOT in dogs.

All dogs will receive standard care for snake bite, including fluids and pain medication. Dogs will be chosen randomly to be in one of two groups: either HBOT or serve as a control (no HBOT) and receive 2 treatments.

STUDY ELIGIBILITY

Dogs are eligible to be in the study if:

- Diagnosis of snake bite either confirmed or suspected
- Presented within 24 hours of snake bite

Exclusion Criteria:

- Treatment other than shaving wound prior to UT
- More than 24 hours since snake bite
- Receiving medications: antibiotics, steroids, NSAIDs, anti-platelet or anti-coagulant drugs, cisplatin, disulfiram, doxorubicin, mafenide acetate, opiates, or topical petroleum-based ointments
- Fever
- Pacemaker
- Known lung disease, including pneumothorax or pneumonia
- History of thoracic surgery
- Inner ear disease
- Seizure disorder

COMPENSATION

The study is generously funded by Sechrist Industries, Inc. and, for enrolled dogs, will pay for 2 HBOT/control treatments, a value of \$150. If additional treatments are recommended the client will be billed approximately \$65 per treatment. There is no additional monetary compensation for study participation.



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