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## Nonpharmacological Relaxation Technology for Office-Based Rhinologic Procedures

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### **Abstract**

**Background:** Office-based rhinologic procedures are increasingly performed to control costs and enhance patient convenience. Adequate management of pain and anxiety is essential for the technical performance of these procedures, in addition to ensuring patient comfort. Pharmacologic agents are often used to manage anxiety and pain. Nonpharmacological adjuncts may be useful for achieving these effects without oral opioids and benzodiazepines.

**Methods:** Charts of patients who underwent office-based rhinologic procedures with the NuCalm system (Solace Lifesciences, Inc., Wilmington, DE, USA) in combination with local anesthesia were reviewed. NuCalm is a proprietary system that combines cranial electrotherapy stimulation, neuroacoustic software, light-blocking lenses, and topical  $\gamma$ -aminobutyric acid. Patients rated their pain and anxiety before, during, and after the procedure.

**Results:** Twenty-five patients underwent office procedures using the NuCalm system. Preoperative anxiety (2.00) was significantly higher than postoperative anxiety (1.25) according to patient reporting on a 5-point scale ( $p = 0.005$ ). Preoperative pain (1.83) was not significantly different from intraoperative (2.54) and postoperative pain (2.04,  $p = 0.054$ ).

**Conclusions:** A variety of office-based rhinologic procedures are technically feasible and can be performed with adequate patient comfort without the use of oral drugs. Adjuncts to pharmacologic agents may enhance pain control and anxiety management and improve patient tolerance of these procedures.