# Office-Based Procedures for Nasal Airway Obstruction

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**KEYWORDS**

• Office procedures • In-office • Septoplasty • Nasal valve repair • Turbinate surgery • Septoplasty

**KEY POINTS**

- The frequency of office procedures for nasal obstruction has increased in response to patient preference and payer patterns.
- The most common in-office procedures are turbinate surgery, nasal valve repair with Latera, posterior nasal nerve cryoablation, and septoplasty
- An understanding of essential office resources and pharmacology is needed for optimal results and to minimize risk of complications.

## INTRODUCTION

Over the past several years, the treatment of common rhinologic problems with in-office surgical procedures has increased dramatically in response to patient preferences, evolving insurance patterns, and changes in coding and reimbursement. Because this is an emerging practice, there has not been a lot of evidence published about how to best perform these techniques. This article provides practical advice from experienced surgeons related to the logistics and anesthetic techniques for conducting in-office surgical treatment of nasal airway obstruction. There may be alternative methods that may be equally or more effective, and the information provided herein is to help practitioners consider the issues involved in managing these patients perioperatively. These procedures can be performed reliably with excellent clinical outcomes as long as attention is paid to mitigate the potential clinical risks.

## BASIC OFFICE SET-UP

The procedures described can easily be performed in an office setting as long as specific logistical considerations are addressed. Minimum office resources include

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1. An electric medical examination chair that allows a patient to recline in the event of a vagal episode
2. An endoscope tower, including monitor and light source and nasal/sinus operative instrumentation
   a. The specific instruments and their space requirements vary case by case.
   b. Ergonomics must be considered to allow a medical assistant or nurse to be in close proximity to the patient for monitoring and procedural assistance.

Additionally, the following equipment should be readily available in case of emergent problems:

1. A full cardiac monitor with ECG, blood pressure cuff, and pulse oximetry
2. An automated external defibrillator
3. Complete resuscitative equipment and medications, including
   A. Oxygen administered through a nasal cannula with a bag-valve mask bag present if a patient loses respiratory drive
   B. Intravenous (IV) set-up with accompanying fluids
   C. Epinephrine 1:1000 in case of anaphylaxis
   D. Naloxone for reversal of narcotics (can be given intramuscularly [IM] with autoinjector)[1]
   E. Flumazenil for reversal of benzodiazepines (requires placement of an IV for administration)[2]

Many of these procedures can be performed solely with topical and local anesthesia. Oral sedation may also be helpful particularly in cases of septoplasty or when these procedures are combined with more extensive procedures, such as office sinus surgery and/or balloon sinus dilation. If IV administered medication is needed, continual cardiopulmonary monitoring with a nurse/nurse anesthetist is required. Local/regional anesthesia techniques have several advantages over general anesthesia: preserving consciousness; reducing cardiovascular fluctuations, such as vasodilation and subsequent bleeding; and reducing respiratory depression and the stress response of surgery. This article primarily discusses the use of conscious sedation using local/topical anesthetics combined with oral sedatives and narcotics due to the excellent clinical results derived from these combinations of medications.

## LEGAL ISSUES AND LICENSURE

State licensing requirements for in-office procedural standards for anesthesia vary by state. Additionally, state requirements differ regarding orally administered narcotics and orally administered sedatives (conscious sedation) versus IV administered medication. Some states require that a physician register as providing office-based surgery whereas others do not. Moreover, notification of a malpractice carrier that in-office surgery is being performed is prudent to avoid potential issues.

The most common problems that occur during in-office procedures stem from the absence of the support infrastructure found in traditional surgical centers.[3] This is important because there are many potential safety hazards that office-based physicians are not used to considering—a review of patient medications; removal of personal items, such as cell phones or dentures; and review and monitoring of patient vital signs. One way to mitigate this risk is to treat office-based procedures similar to those performed in a surgical center. For example, a preoperative questionnaire similar to what is used in an ambulatory surgical center should be considered.