

SEPTOPLASTY (SEPTUM STRAIGHTENING) & TURBINOPLASTY (INFERIOR TURBINATE REDUCTION)



Patient Information

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Introduction to Septoplasty & Turbinoplasty

The nasal turbinates are paired bony structures (inferior, middle, and superior) that exist on each side of the lateral nasal wall in all patients. The inferior turbinates are designed as sausage-like swellings within each nasal cavity. As a result of their positioning or swelling they may interfere with nasal airflow and contribute to the sensation of nasal obstruction. They normally act to humidify and warm the air that we breathe.

The lining (mucosa) of the inferior turbinate bone shrinks and swells as part of the normal nasal cycle. In most people this rhythmic cycle goes largely unnoticed. However, in some patients swelling of the tissue may reach a threshold that causes a decrease in the nasal airflow, and hence, leads to the sensation of nasal obstruction. This lining may also become periodically swollen due to allergy or infection. In addition, the underlying bone may be large or positioned within the nasal cavity and further contribute to nasal obstructive symptoms.

The nasal septum is the natural partition that divides the nasal cavities into left and right sides. Septoplasty is a surgical procedure designed to realign the septum in the midline to improve nasal airflow and decrease nasal obstruction.

Everyone has a nasal septum. Some are deviated since birth due to birth trauma (congenital), while others develop a deviation as the result of facial or nasal trauma (acquired). No matter the cause, a deviated septum is one of many reasons why a patient may have difficulty breathing through their nose, and hence, have the sensation of nasal obstruction. Usually nasal obstruction due to a deviated septum is unilateral (one-sided) as the septum is deviated to either the left or right side. However, in some instances a patient may have a complex septal deviation that limits airflow through both nostrils.

How will I be evaluated and when are Septoplasty and/or Turbinoplasty indicated?

The decision to proceed with septoplasty and/or turbinoplasty is usually reserved for patients with nasal obstruction due to inferior turbinate hypertrophy (large inferior turbinates) or a deviated septum. However, many patients have inferior turbinate hypertrophy or a deviated septum without any sensation of nasal obstruction and thus do not require surgical correction. It is also important to distinguish that septoplasty and turbinoplasty are not sinus surgery.

In a majority of patients with nasal obstruction and inferior turbinate hypertrophy and/or septal deviation a trial of topical nasal steroids will be attempted prior to surgery. Additional testing and treatment, such as, CT scans, nasal endoscopy, medications for sinusitis, and possibly allergy testing may be required depending upon a patient's individual history and exam findings. Once it is determined that medical therapy has been ineffective at bringing significant relief of symptoms, it is appropriate to discuss septoplasty and/or turbinoplasty as an option.

What will happen in the operating room?

All septoplasty and turbino-plasty procedures are performed under general anesthesia, and thus the surgery is typically well tolerated and not uncomfortable. The surgery will begin once the anesthesiologist has administered the anesthetic medications.

The surgical plan will be discussed in the office during your pre-operative visit; however, intra-operative findings may require adjustments to the surgical plan to help maximize your results. Everything possible is done to help anticipate these adjustments in advance of your surgery. However, certain decisions can only be made at the time of surgery.

The surgery is performed using nasal instruments inserted through the nostrils without any facial incisions. The nasal endoscope, a small camera, and endoscopic instruments may also be employed. Key areas of inferior turbinate swelling are removed and/or reduced. The septum is realigned near the midline and areas of deviated cartilage and bone are removed. The surgery does not change the shape of your nose and should not routinely cause bruising around the eyes. The procedure usually takes 90 minutes.

In some patients plastic nasal stents are placed in the nasal cavity at the completion of surgery. These stents are sutured in place and should not be removed by the patient. The decision to use stents is made depending upon intra-operative findings. Nasal stents are not considered nasal packing.

On some occasions it may be necessary to place traditional nasal packing in your nose at the completion of surgery. If so, it will usually be removed at your first post-operative visit. Again, this decision is made at the time of surgery.

How do I prepare for Septoplasty and/or Turbino-plasty?

- A history and physical exam will be performed. If chronic medical conditions exist, a letter of medical clearance will be requested from your primary medical physician.
- Blood work, chest X-ray, EKG, and other tests may be required depending on your health.
- A recent CT scan of the sinuses may be obtained and reviewed.
- Do not eat or drink anything after midnight the night before surgery. If you are taking medication, please ask during your pre-operative visit if these pills may be taken the morning of surgery.
- Do not take aspirin or salicylate containing medications for at least 10-14 days prior to surgery. These medications increase the risk of bleeding.
- Do not take non-steroidal anti-inflammatory (NSAIDS) medications (i.e. Ibuprofen, Advil, Motrin, Aleve, naprosyn, etc.) for at least 7 days prior to your surgery. These medications increase the risk of bleeding. It is okay to take Tylenol (acetaminophen) as needed for headache or pain.
- If you are taking blood thinners (Aspirin, Plavix, Coumadin, Lovenox, etc.), on the recommendations of a physician, ask if they will need to be stopped in advance of your surgery. The timing of this should be discussed with your surgeon and the prescribing medical physician.
- Do not take any supplements or herbal remedies that may increase your risk of bleeding (Garlic, Vitamin E, Ginkgo, Ginger, Sal Palmetto, etc.) for at least 7 days prior to your surgery.
- Avoid alcoholic beverages 7 days prior to your surgery. Alcohol is dehydrating and increases your risk of bleeding.
- Avoid cigarette smoking. If you smoke, please do your best to quit or at least significantly limit your cigarette usage 2 to 3 weeks prior to your surgery. Tobacco smoke is known to increase the risk of anesthesia and may adversely affect post-operative healing.



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What are the possible risks and complications of Septoplasty and/or Turbinoplasty?



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- **Bleeding**
The risk of significant bleeding during septoplasty and/or turbinoplasty is very low. Significant bleeding may require termination of the procedure, nasal packing, and/or hospitalization. A blood transfusion is very rarely necessary. Minor bleeding (oozing) for a few days after the surgery is considered normal.
- **Infection**
Any surgical endeavor carries the risk of infection due to manipulation of the native tissues. If an infection develops after surgery it will be treated with appropriate antibiotics.
- **Nasal Crusting and Dryness**
As a result of reshaping the contour of the inferior turbinates and/or nasal septum your new pattern of nasal airflow may make you prone to nasal crusting and dryness. This is usually treated with short-term nasal irrigations and moisturizers, but in rare cases may be required lifelong.
- **Septal Perforation (for Septoplasty only)**
In very rare occasions a patient may develop a small hole in the repaired septum. This may lead to chronic crusting, bleeding, nasal whistling, and in some cases, the paradoxical sensation of nasal obstruction. This may require additional surgical procedures to correct or lifelong use of nasal saline and/or nasal moisturizers.
- **Anesthesia risks**
Turbinoplasty and Septoplasty are performed under general anesthesia and carry its associated risks. Adverse reactions to general anesthesia should be discussed with the anesthesiologist.
- **Change in voice**
This may be due to change in airflow through your nose after the surgery which affects the quality and character of your voice.
- **Temporary swelling or bruising around the eye**
These rare symptoms are usually temporary, but in some patients, they may be permanent.
- **Need for additional surgical or medical interventions**
Additional surgical procedures may be necessary in the future to help maximize your long-term results. Each patient's individual healing process cannot be predicted in advance, and the severity of chronic rhinosinusitis differs from patient to patient.

What will happen after my surgery?

Septoplasty and/or turbinoplasty procedures are performed on an out-patient basis. If other significant medical conditions exist additional hospitalization time may be required.

You will have some mild bloody or brownish discharge from your nose for 1 to 2 weeks after surgery. Furthermore, your nasal obstruction may get temporarily worse after surgery as the nasal cavity naturally swells after surgery. This is normal and improves over time. You will not be able to blow your nose rigorously or perform strenuous activity, heavy lifting, or bending over for 2 weeks after surgery. Consequently time off from work may be necessary. You will be given prescription pain medication and a short course of antibiotics. Most patients tolerate the surgery and post-operative recovery very well as the surgery and healing is not particularly painful.