



STANFORD UNIVERSITY SCHOOL OF MEDICINE  
DEPARTMENT OF OTOLARYNGOLOGY-HEAD & NECK SURGERY

801 Welch Road  
Stanford, CA 94305

Adult Clinic (650) 723-5281  
Clinic Fax (650) 725-6685

## **Endoscopic Sinus Surgery: A Patient's Guide** The Stanford Sinus Center

Peter H. Hwang, MD  
Jayakar Nayak, MD, PhD  
Jane Wang, RN, MSN, FNP  
(650) 723-5281  
Vanessa Carranco, Surgery Scheduler  
(650)723-5958  
Therese Medina, Surgery Scheduler  
(650)723-7135

### **Introduction:**

Chronic sinusitis is an illness characterized by prolonged infection and inflammation of the lining of the nose and the sinuses. Patients with chronic sinusitis experience a variety of symptoms, including facial pressure, nasal congestion, discolored nasal discharge, and “post-nasal drip.” A diagnosis of sinusitis should be made only after careful evaluation by your doctor. For the majority of patients with sinusitis, infections can be successfully treated with medications.

For a small percentage of patients, however, infections recur or persist even after long courses of medications. Such patients often benefit from surgery. After reviewing your medical history and imaging studies, your ear, nose, and throat specialist can determine if you are a surgical candidate.

### **1. What is Endoscopic Sinus Surgery?**

Endoscopic sinus surgery is a procedure designed to enlarge the natural drainage pathways of the sinuses to restore their function and health. In chronic sinusitis, the sinuses are unable to drain adequately due to inflammation of the narrow drainage pathways. As a result, nasal secretions can become trapped in the sinuses and become chronically infected.

The goal of surgery is to carefully remove the thin, delicate bone and mucous membranes that block the drainage pathways of the sinuses. The term “endoscopic” refers to the use of small fiber optic telescopes that allow the surgery to be performed through the nostrils, without the need for any external skin incisions. Endoscopic sinus surgery is generally performed on an outpatient basis.

## **2. What can I expect before, during, and after surgery?**

a) Before surgery: In preparation for your surgery, your physician may prescribe preoperative medications to optimize the condition of your sinuses for surgery. The medications may include antibiotics and/or oral steroids. Please be sure to start any preoperative medications on the appropriate day and adhere closely to the prescription.

In addition, you should avoid taking the following medications for at least 7 days prior to surgery: Aspirin, Ibuprofen (Motrin/Advil), Naproxen (Aleve), other non-steroidal anti-inflammatories (NSAIDS), Vitamin E (multivitamin is OK), ginkgo biloba, garlic (tablets), and ginseng. These medications can thin the blood and create excessive bleeding. Tylenol is safe and may be taken anytime up to the day of surgery. St. John's wort should also be avoided for 7 days prior to surgery because of possible interactions with anesthesia medications. If you take any blood thinners, such as Coumadin or Plavix, please discuss discontinuation of this medication with your surgeon.

If you smoke, it is critical that you stop smoking for at least three weeks prior to surgery, and at least four weeks after surgery. Smoking can contribute to scarring, poor healing, and failure of the operation. Your primary care physician can direct you to resources for smoking cessation.

Finally, it is important to inform your primary care physician or other specialists (such as your cardiologist, pulmonologist, etc.) that you are planning to have sinus surgery. Your primary care physician or other specialists can help to clear you medically for surgery. Most of the necessary pre-operative testing will be performed at Stanford on the day of your preoperative visit, but occasionally we will request old records from your primary care physician. We will make every effort to keep your primary care physician informed regarding your medical status both before and after your surgery.

b) During surgery: In most cases, you will receive general anesthesia for your surgery, which means you will be asleep for the entire procedure. However, if you have a preference for local anesthesia, please let your doctor know as this may also be an option in some cases.

After your surgery has been completed, you will spend about one hour in the recovery room, followed by an additional recovery period of 1-2 hours in the second stage recovery unit. Most patients feel well enough to go home the day of surgery. You will most likely go home without nasal packing.

c) After surgery: You can expect mild bleeding for 1-2 days after surgery and a general sense of fatigue for 1-2 weeks after surgery. In general, pain can be successfully controlled with narcotic or non-narcotic medications. For more details about postoperative care, please see the separate guide, "Postoperative Care Instructions."

You will have a series of postoperative visits that are critical for a successful outcome. At each visit your doctor will perform a procedure called nasal endoscopy to check how the sinuses are healing. An additional procedure called debridement may be necessary in order to clean blood from the sinuses and prevent early scar tissue formation. (Please note that these procedures are not included in the surgical charge and thus are billed separately.) Your visit schedule will usually consist of 3 visits over the first 6 weeks. Thereafter, your visits will be spaced a few months apart, depending on how well your sinuses are healing.

### 3. What are the risks of surgery?

As with any surgical procedure, endoscopic sinus surgery has associated risks. Although the chance of a complication occurring are very small, it is important that you understand the potential complications and ask your surgeon about any concerns you may have.

--Bleeding: Most sinus surgery involves some degree of blood loss, which is generally well tolerated by the patient. However, on occasion, significant bleeding may require termination of the procedure. Although most patients do not require nasal packing, a few patients will require a small nasal pack or tissue spacer to be removed after one week. Blood transfusion is rarely necessary and is given only in an emergency.

--Recurrence of disease: Although endoscopic sinus surgery provides significant symptomatic benefits for the vast majority of patients, surgery is not a cure for sinusitis. Therefore, you can expect to continue with your sinus medications even after successful sinus surgery, although in general your requirements for such medications should be lessened. In some instances, additional "touch-up" or revision surgery may be necessary to optimize your surgical outcome.

--Spinal fluid leak: Because the sinuses are located near the brain, there is a rare chance of creating a leak of spinal fluid (the fluid lining the brain) or injuring the brain. Should the rare complication of a spinal fluid leak occur, it may create a potential pathway for infection, which could result in meningitis. If a spinal fluid leak were to occur, it would require surgical closure and hospitalization.

--Visual problems: Visual loss has been reported after sinus surgery due to injury to the eye or optic nerve. The potential for recovery in such cases is not good. Fortunately, such a complication is extremely rare. Injury to the eye muscles may result in double vision. Persistent tearing of the eye is another possible complication. Tearing problems usually resolve on their own but occasionally require additional surgery.

--Other risks: Other uncommon risks of surgery include alteration of sense of smell or taste; persistence and/or worsening of sinus symptoms and facial pain; change in the resonance or quality of the voice; and swelling or bruising of the area around the eye.

Some patients have a crooked nasal septum ("deviated septum") that needs to be corrected at the time of surgery through a short procedure called septoplasty. This procedure is performed through a small hidden incision and involves dissolvable stitches that are hidden in the nostril area. If you require septoplasty, there are additional risks associated with this procedure. The primary risks are bleeding or infection in the area of the septum; numbness of the front teeth; the development of a hole through the septum (septal perforation); brain fluid leak; or recurrence of septal deviation. There is a very small risk that such occurrences could alter the external appearance of the nose.

#### **4. What activity restrictions should be expected during the postoperative recovery period?**

For the first week following surgery you should avoid blowing your nose. In addition, you should not bend, strain, or lift more than 20 lbs. during the first week. Light walking and regular household activities are acceptable anytime after surgery. You may resume exercise at 50% intensity after one week and at full intensity after two weeks. You should plan on taking one week off from work and ideally have a half-day planned for your first day back.

#### **Conclusion:**

We at the Stanford Sinus Center are committed to providing you with the highest level of care in a comfortable and caring environment. We want you to have as complete an understanding as possible about your sinus condition and about our recommendations for treatment. Please feel free to ask questions about any aspect of your care, and we will be happy to make sure that all of your questions have been answered.

