

ENDOSCOPIC SINUS SURGERY

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INTRODUCTION

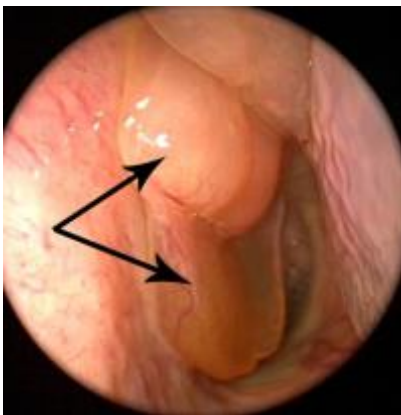
Sinus surgery has truly evolved over the years. Sinus surgery was once performed through external incisions (surgical cuts on the face and in the mouth), required extensive nasal packing (i.e. gauze or other material placed in the nose to control bleeding after surgery) , caused significant pain and discomfort, and was often followed by a long recovery period.

With recent advances in technology, including the nasal endoscope, sinus surgery is now commonly performed entirely through the nose, without face or mouth incisions. The nasal endoscope is a small, lighted metal telescope placed into the nostril. The endoscope allows the surgeon to see inside the nose and sinuses, usually with a special video camera attached to the endoscope. Today, endoscopic sinus surgery is typically done with minimal nasal packing, mild pain, and short recovery times.



WHY IS ENDOSCOPIC SINUS SURGERY PERFORMED?

The most common reason for doing endoscopic sinus surgery is “chronic rhinosinusitis”, or more commonly “chronic sinusitis”. Chronic rhinosinusitis is a general term for inflammation (swelling) of the nose and sinuses that does not improve sufficiently with medical treatment. Chronic means that the inflammation remains in the nose and sinuses and does not go away over time (usually for at least 3 months). Infection, nasal polyps (non-cancerous swelling of the nasal/sinus lining), allergies or irritants, and other things may cause this inflammation of the nose and sinuses. Often, we do not know exactly why patients have chronic rhinosinusitis or chronic sinusitis.



Less common reasons to have sinus surgery may include: recurrent infections (meaning the infections go away with medicines but return very quickly), sinus infections that spread to the eye, face or brain, nasal polyps (See Figure, black arrows), impaired sense of smell, tumors of the nasal and sinus cavities (cancerous or non-cancerous growths), leaking brain fluid into the nose, tear duct blockage, and others. Additionally, recent advances in endoscopic sinus surgery allow your sinus surgeon to reach areas of the brain and pituitary gland for neurosurgeons, or to the orbits (eye sockets) for certain ophthalmology procedures. Each individual case is different. Your sinus surgeon will determine if endoscopic sinus surgery is the best choice for your nasal/sinus problem.

WHAT ARE THE BENEFITS OF ENDOSCOPIC SINUS SURGERY?

If medical treatments have not been successful in improving your sinus symptoms, endoscopic sinus surgery may be helpful. The main goal of sinus surgery is to improve the drainage pathway of the sinuses. By widening the natural drainage pathway of the unhealthy sinuses, sinus infections should be reduced. Patients with obstruction or blockage of their sinuses due to their sinus anatomy do very well with sinus surgery. Many patients also have a problem with inflammation (swelling) of the sinus lining (mucous membrane). Patients with mucous membrane disease also usually improve with sinus surgery because creating the larger sinus opening will allow better sinus drainage and more rinses/medication to get into the sinuses and help treat the diseased lining. One of the most important benefits of surgery is the ability to deliver medications (sprays, rinses, nebulized drugs) to the lining of the sinuses after they have been opened. Therefore, sinus surgery is done in addition to, and is not a replacement for, proper medical treatment of the sinuses. It is important to note that if you are one of the patients who have diseased mucous membranes or form nasal polyps, no amount of surgery can change this fact. For many patients, surgery may not be a cure for sinusitis but is one of the many critical steps in managing sinus disease.

DOES ANYTHING NEED TO BE DONE IN PREPARATION FOR MY ENDOSCOPIC SINUS SURGERY?

Most surgeons recommend that patients avoid any medications that may lead to bleeding, such as aspirin and ibuprofen products. In addition, certain vitamins, herbal remedies, and spices including vitamin E, garlic, ginger, ginkgo, and ginseng may increase the risk of bleeding. Some patients may be asked to take antibiotics and/or steroids prior to sinus surgery. This will vary greatly from patient to patient and surgeon to surgeon, so if you have any questions about which medications you should or should not take, you must ask your surgeon.

HOW IS ENDOSCOPIC SINUS SURGERY PERFORMED?

Endoscopic sinus surgery may be done under local or general anesthesia. Local anesthesia involves numbing the nasal/sinus cavity, but the patient remains awake (or lightly sedated). General anesthesia means that the patient goes to sleep with anesthesia for the surgery. Endoscopic sinus surgery involves the use of a small telescope (nasal endoscope) that is inserted through the nostril to view your nose and sinuses. The goal of the surgery is to identify the narrow channels that connect the sinuses to the nose, enlarge these narrow openings/channels, and improve the drainage from the sinuses into the nose. Most people have four sinuses on each side of their face, for a total of eight sinuses. These are the maxillary, ethmoid, sphenoid, and frontal sinuses. The maxillary sinuses are in your cheek, the ethmoid sinuses are between your eyes, the sphenoid sinuses are almost exactly in the center of your head, and the frontal sinuses are in your forehead. It is possible that you may not have all of these sinuses due to differences from person to person, or they may have already been opened by previous surgery. Sinusitis may affect some or all of your sinuses. Your symptoms, examination in the physician's office, and CT scan will determine which sinuses need to be opened. Sometimes during sinus surgery the nasal septum, which divides the two sides of the nose, is also straightened. The turbinates, which filter and moisten air inside of the nose, may require surgery as well. Additional information about surgery of the nasal septum and turbinates is provided in other sections of this website.



Additionally, there is technology that utilizes balloons to widen the sinus opening. These tools may be used during sinus surgery as described above and can sometimes, for the right patient and sinus disease, be performed in the office.

WHAT IS THE RECOVERY AFTER ENDOSCOPIC SINUS SURGERY?

Some nasal packing may be used during your surgery, although in general, this is less common than it was in the past. Your individual surgeon will determine whether nasal packing will be used. The recovery period will vary depending on the surgery performed and the individual patient. Many people do not have much pain after sinus surgery, but every patient is different. Depending on the extent of your surgery, you may be prescribed stronger pain medicine. Generally, postoperative discomfort, congestion, and drainage should improve after the first few days, with mild symptoms sometimes lingering several weeks after the surgery. Because sinus surgery is just one step in treating your sinus disease, your surgeon may also place you on medications that can include saline rinses, nasal steroid sprays, and possibly antibiotics.

WILL ENDOSCOPIC SINUS SURGERY IMPROVE MY SYMPTOMS?

The majority of patients who have endoscopic sinus surgery do very well, with significant improvement in their symptoms.

WHAT IS "SINUPLASTY" (A.K.A BALLOON SINUPLASTY OR BALLOON DILATION)?

"Sinuplasty" refers to a procedure, or specifically a surgical device. This device is similar to balloon angioplasty, which expands the blood vessels in someone's heart to relieve blockage. In balloon sinuplasty, balloons are placed into the opening of a patient's sinuses. Expanding the balloon in the narrowed sinus openings allows the openings to become wider. Sinuplasty may also be used along with traditional endoscopic sinus surgery as well.

Like all medical treatments, the information in the popular media may not reflect reality. Although useful, balloon sinuplasty is not for everyone. In many cases standard endoscopic sinus surgery or medical therapy may be the best treatment. However, in some people balloon sinuplasty may be the best option, and may decrease recovery time. Only with a thorough evaluation, along with a CT scan, can your surgeon decide what is the best treatment for your sinuses.

WHAT ARE THE POTENTIAL COMPLICATIONS OF ENDOSCOPIC SINUS SURGERY? COMPLICATIONS OF SINUS SURGERY

- Intraorbital complications (damage to the eye or surrounding tissue): The eye is situated directly next to several of the paranasal sinuses and is separated from them by a thin layer of bone. Because of the close proximity, in rare cases, bleeding may occur into the orbit, requiring treatment at the time of the initial surgery. Visual loss and blindness have been reported but are extremely rare. Another uncommon problem is damage to the muscles that move the eye, leading to double vision, which can be temporary or permanent. In certain circumstances, there may be a change in the function of the tear ducts causing excessive tearing. Since the eye is in close proximity to the sinuses, a major orbital complication or blindness could possibly occur even without surgery for patients with severe or refractory sinus infections.
- Intracranial Complications: (see above)
- Bleeding: (see above)
- Voice changes: One of the functions of the sinuses is to affect resonance, so vocal professionals should be aware of potential changes in their voice after sinus surgery.
- Impairment of smell or taste: (see above)
- Infection: The most common reason to undergo sinus surgery is a chronic sinus infection that does not resolve with medications. The patient with sinusitis is therefore at risk of developing certain other infections in this area (abscesses, meningitis, etc.) from sinus surgery, although it is important to recognize that this is also a complication of not undergoing surgery for a refractory chronic sinus infection.
- Nasal obstruction, dryness and pain: (see above)

WHAT ARE THE ALTERNATIVES TO ENDOSCOPIC SINUS SURGERY?

Continuing medical therapy alone and avoiding surgery is always an alternative. Medical therapy is chiefly antibiotics and/or steroids along with other medications. As with any surgery, you should feel more than comfortable seeking a second opinion from another surgeon.

WHAT IS ENDOSCOPIC SKULL BASE SURGERY?

Over the course of the last ten to fifteen years, abnormalities that involve the areas of the bone at the bottom of the brain and brain itself that are next to the nose and sinuses have been removed via the nostril, without facial incisions. Using cameras and video equipment similar to those used for sinus surgery, these tumors can be removed without facial incisions. Because this technique may be significantly less painful, requires less traction on the brain and necessitates a shorter hospital stay, it is an attractive option for some patients and tumors. However, it must be emphasized that this technique is not for all patients or tumors.



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