

commonly would represent bleeding into tissues surrounding the eyeball resulting in swelling of the eyelids and discoloration (black eye). Rare occurrences of visual loss (blindness) have been reported. Double vision has been reported after sinus surgery and chronic tearing of the eye may also be noted.

Spinal Fluid Leak/ Brain Injury/ Brain Abscess

As the intracranial cavity and brain are the structures located immediately above the ethmoid cavity, operation in this region carries a risk for penetration of this bony wall and resultant leakage of fluid from around the brain. If this occurs, a pathway for infections to ascend from the sinuses into the intracranial cavity is created. This complication could extend your hospitalization and require additional surgery to correct. Brain injury and abscesses are rare complications. These are potentially life threatening complications.

Other Risks

Occasionally after surgery, air may be observed in the soft tissue of the face surrounding the sinuses if the nose has been blown. This is transient and spontaneously resolves. There may be numbness or pain in the upper front teeth or cheek area. Loss of the smell sense is a rare risk. Sometimes, secondary to possible complications, only one side is completed and allowed to heal before the other side undergoes surgery.

Failure to Cure the Problem

The most common “complication” of endoscopic sinus surgery and balloon dilation is persistent or recurrent sinus disease. In general, most patients with chronic sinus disease are cured or greatly improved after surgery. However, they may still have some degree of persistence of their sinus problems or require occasional medical treatment possibly including allergy shots. Occasionally, revision or secondary endoscopic sinus operations may be necessary.

Summary

Medical treatment is preferable to surgery in most patients with nasal and sinus problems. If medical therapy proves inadequate for resolving chronic sinus disease or if recurrent infections are problematic, then endoscopic sinus surgery and/or balloon sinuplasty may offer the greatest likelihood for resolving these problems.

In addition to needing sinus surgery, a **septoplasty** at the same time may be needed. This is a procedure where the dividing cartilage/bone in the nose middle is straightened. Risks to this surgery include a hole in the septum and/or a flattened nasal appearance. It is important to let your doctor know if you have a history of cocaine use to help avoid these complications.

Some patients also decide to have **cosmetic nose surgery (rhinoplasty)** at the same time they have sinus surgery. This is a good time to have this procedure if desired and Dr. Abram can go over any questions and risks associated with this surgery if you are interested. He is **board certified** in rhinoplasty as well as sinus surgery.



PATIENT INFORMATION

ENDOSCOPIC SINUS & BALLOON SINUPLASTY SURGERY

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Introduction

Chronic sinus disease is a common medical problem. Not all nasal signs and symptoms such as nasal congestion, recurrent headaches and postnasal discharge are related to true sinus inflammation. However, when these signs and symptoms are persistent despite aggressive medical treatment, the involvement of the sinuses must be suspected. Other symptoms that suggest sinus involvement may include facial pain or pressure, purulent nasal discharge or postnasal drainage, cough, hoarseness and decreased sense of smell.

Most patients with sinus complaints can be successfully treated with medicines which may consist of antibiotics, decongestants, nasal sprays, steroids and/or evaluation and treatment of allergies. A small percentage of patients with chronic sinusitis do not respond to medical treatment and may require surgery for successful management.

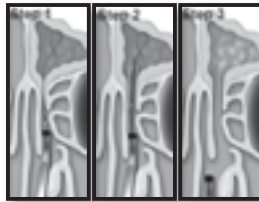
The Office Evaluation

For your initial evaluation, information detailing your past medical and sinus history including medications, allergy evaluations and sinus/nose surgical surgery is helpful. Computerized tomography (CT scan) of your sinuses is often needed for evaluation of your sinus condition. Nasal endoscopy is also essential in providing diagnostic information. Many times the endoscopic evaluation or the CT scan may reveal a problem which could not be identified by other means.

If after your office evaluation and appropriate diagnostic studies it is felt that sinus balloon dilation or functional endoscopic sinus surgery could benefit your particular condition, Dr. Abram will explain to you the specifics of this procedure.

Functional Endoscopic Balloon Sinuplasty

The latest advancement in sinus surgery is minimally invasive balloon dilation sinuplasty. This is a safe and effective new tool in the treatment of sinus disease in which a small balloon, similar to what doctors already use to open blood vessels in heart surgery, is used to open sinus passageways. By making the sinus openings bigger, the sinus cavities can drain and ventilate better. This technique can often be performed in the office with little discomfort and a quick recovery time period. This is done under a light sedation with minimal post surgical discomfort. Little, if any, time off from work or school is usually needed.



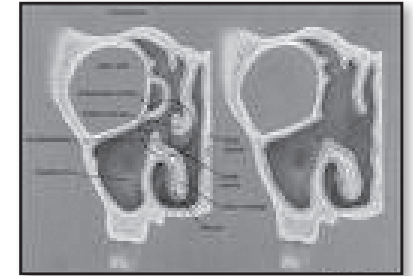
Functional Endoscopic Sinus Surgery

Functional endoscopic sinus surgery offers direct treatment toward the specific underlying cause of sinusitis. The cause is usually abnormal anatomy or swollen tissue (polyps) obstructing sinus drainage. This surgery, performed with the use of a nasal endoscope, allows for careful and accurate removal of diseased tissue in critical sinus areas in order to help ventilate and drain the sinuses and thereby speed the resolution of chronic inflammation. The advantage of endoscopic sinus surgery over conventional surgery is that it is more precise and involves less removal of normal tissue and is therefore less traumatic. This procedure is done in the operating room and

under general anesthesia. Most patients are discharged the same day but in rare cases admission for overnight observation is needed.

You can expect discomfort following surgery until healing is complete. The areas from which diseased tissue was removed must heal over with new mucous membrane which takes from 2 to 8 weeks but is variable. During this period, secretions may become lodged in the sinus cavities causing stuffiness, headache or drainage. You will be given medications to use after surgery to minimize discomfort and speed healing. After surgery, regular follow-up care in the office is required to improve healing and minimizes overall discomfort until healing is complete.

To the right is a diagram illustrating the sinus cavities "before" (left) and "after" (right) sinus surgery. **Before** - the sinus septations narrow the drainage pathways. **After** - sinus septations have been removed. The natural drainage pathways have been widened with improved aeration, and more normal drainage.



Risks and Complications

Endoscopic sinus surgery and balloon sinuplasty represents a dramatic improvement in the surgical management of sinus disease. These procedures are a more conservative method of surgical management. Consequently, the probability of complications is decreased but still can occur and the most serious ones are outlined below.

Bleeding

Bleeding may occur during surgery, requiring the cessation of the operation and placement of nasal packing. The same is true in the period immediately following surgery and packing may be necessary. Blood loss requiring blood replacement is rare.

If surgery is planned, please avoid medications that interfere with blood clotting. In general, medicines containing aspirin should be avoided 2 weeks before and after surgery. Many over the counter medications including headache powders may contain aspirin. Tylenol (acetaminophen) may be used without causing bleeding. Also, please inform your physician about any unusual bleeding or bruising history in yourself and/or family.

Anesthetic Risks

Anesthetic risks in sinus surgery are the same as for any other surgery. If you have other health issues such as heart or lung problems or there is a personal or family history of anesthetic problems, review this with your surgeon and anesthesiologist. Anesthetic risks are the same for in office balloon sinuplasty.

Loss of Vision

As the bony orbit and eye are the immediate next-door neighbors of the ethmoid sinuses, problems in this area are occasionally encountered during this procedure. This most