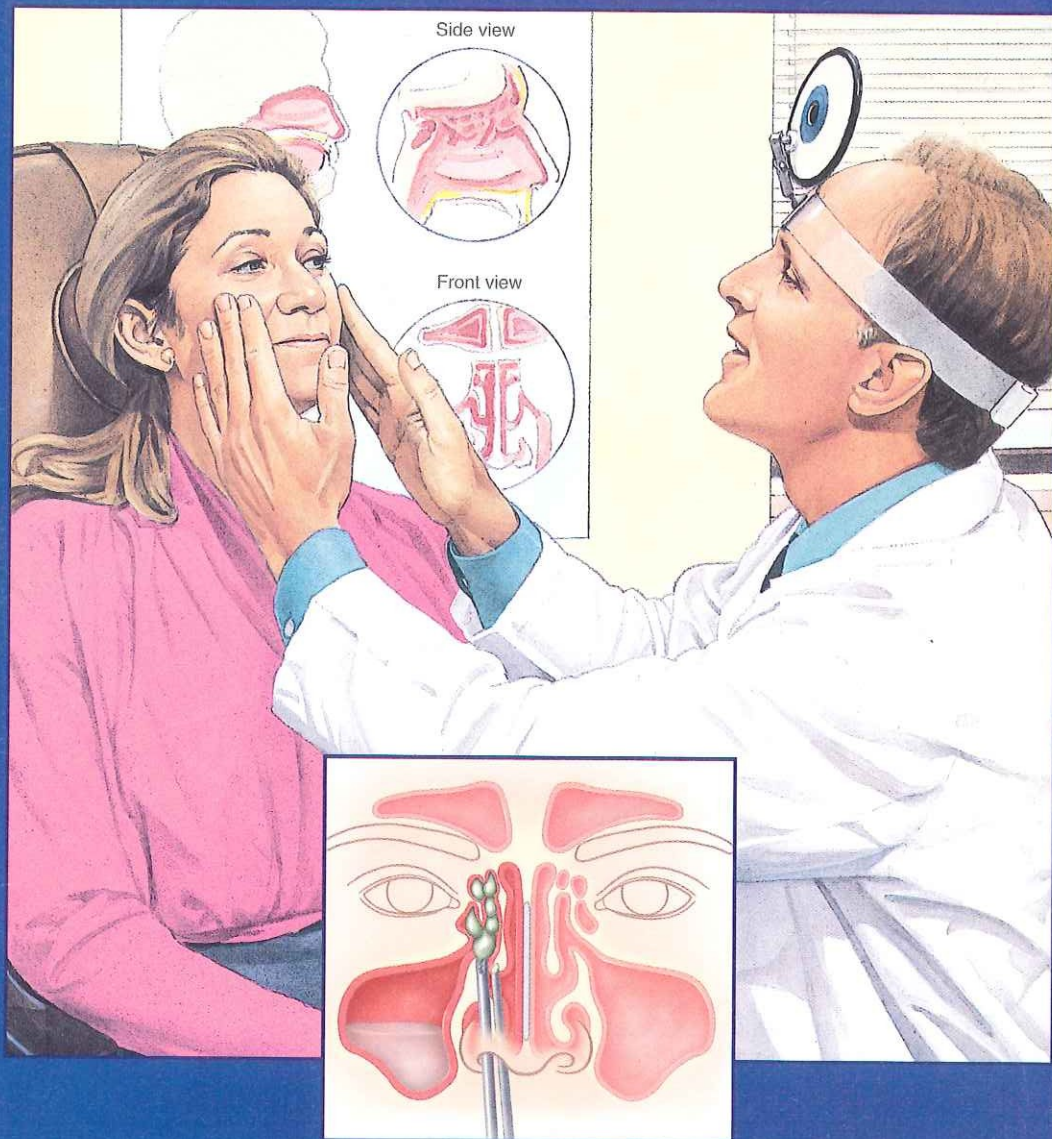


ENDOSCOPIC SINUS SURGERY



Seeing and Operating
Inside Your Sinuses and Nose

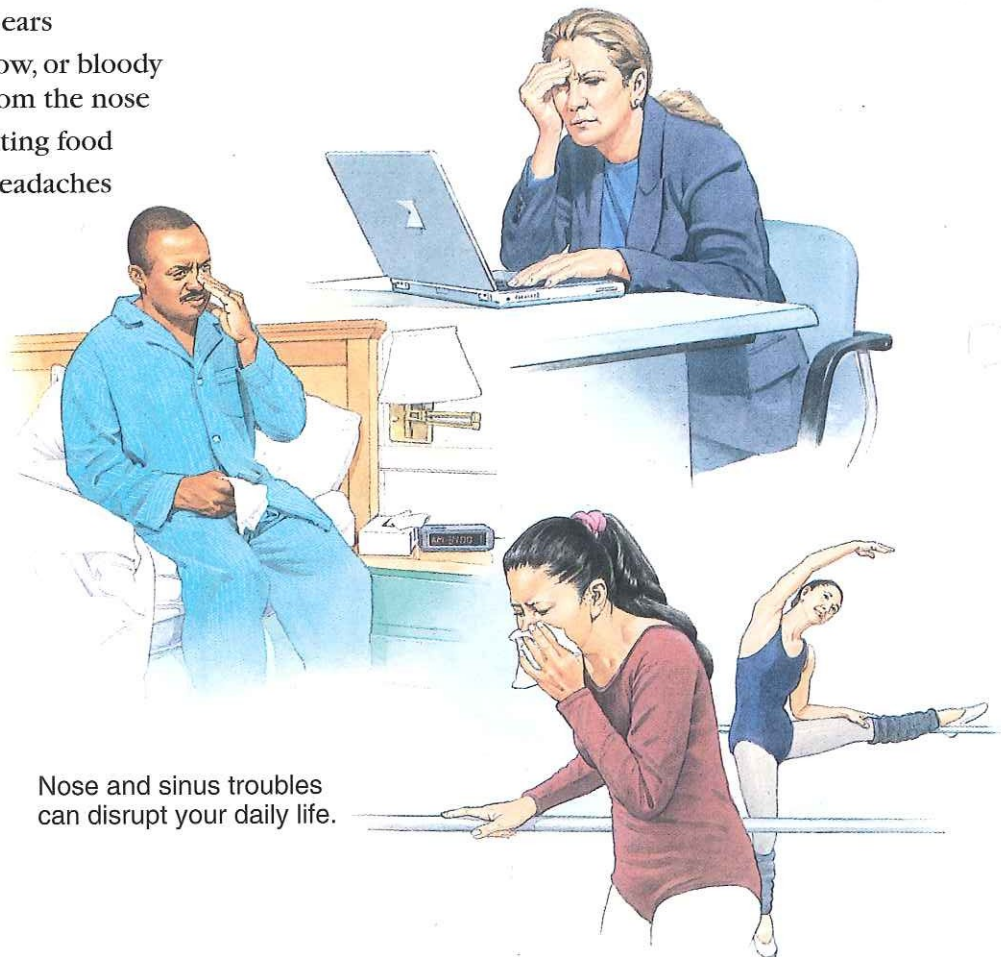
Help for Sinus Troubles

You don't often think about your sinuses until there's a problem. One day you realize you can't smell dinner cooking. Or you find you often have problems breathing through your nose. If problems like these aren't helped by medication, endoscopic surgery may offer relief. This is a technique that lets your doctor see and operate inside your nose and sinuses.

Symptoms of Sinus Problems

Sinus problems can cause uncomfortable symptoms. Your nose may run constantly. You might have trouble sleeping at night. You may even lose your sense of smell. Other symptoms can include:

- Nasal congestion
- Fullness in ears
- Green, yellow, or bloody drainage from the nose
- Trouble tasting food
- Frequent headaches
- Facial pain



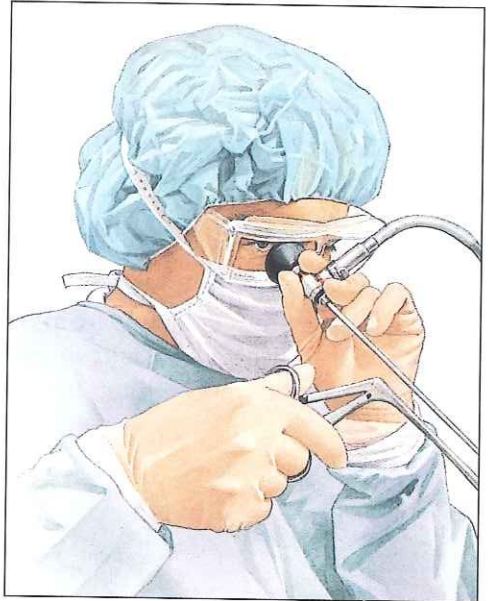
Nose and sinus troubles can disrupt your daily life.

This booklet is not intended as a substitute for professional medical care. Only your doctor can diagnose and treat a medical problem.

©2002 The StayWell Company, 1100 Grundy Lane, San Bruno, CA 94066-3030.
www.staywell.com 800-333-3032. All rights reserved. Lithographed in Canada.

Seeing Clearly with Endoscopy

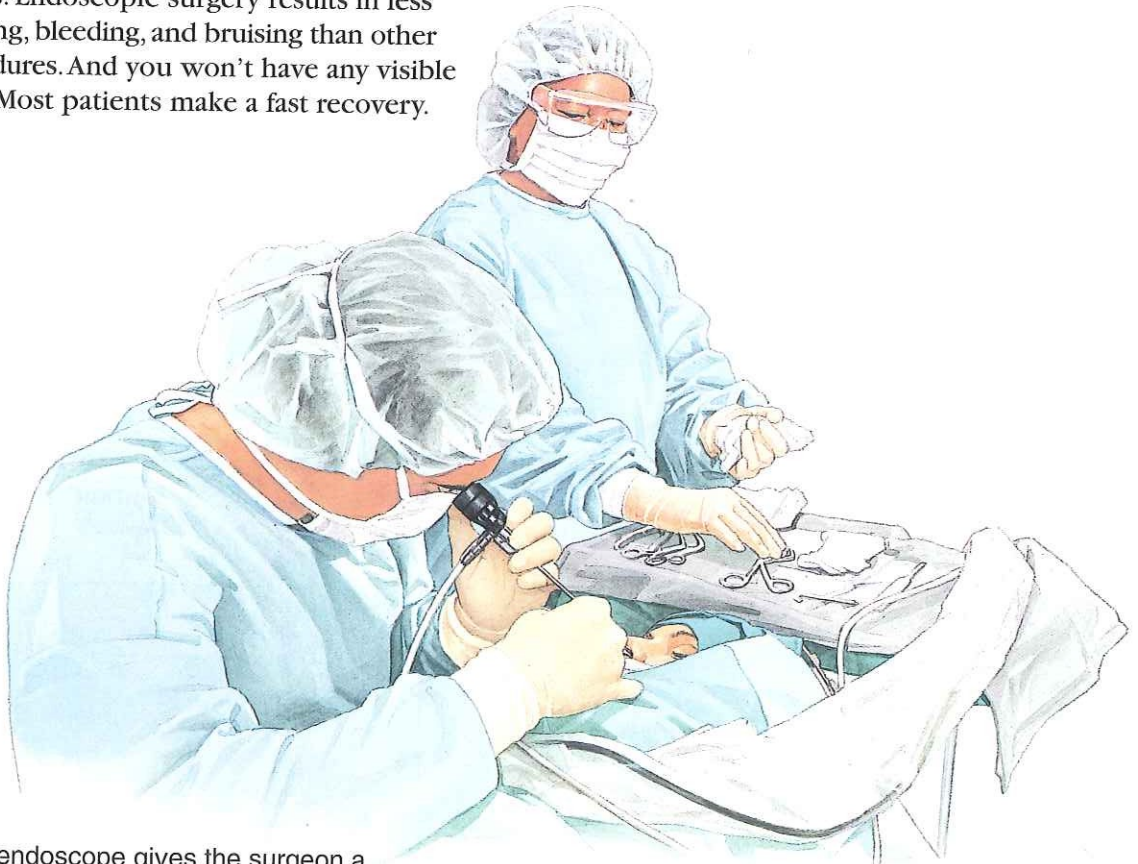
Endoscopic surgery is done with a special magnifying tool called an **endoscope**. This device uses tiny fibers of glass (**fiberoptic bundles**) to beam light inside the nose and sinuses. This gives the surgeon a clear view during the surgery. In most cases, the surgeon views the sinuses directly through the endoscope. In others, the endoscope is used to send images to a video monitor or computer screen.



To treat problems, surgical instruments are inserted next to the endoscope.

How Endoscopy Can Help You

The view through the endoscope allows surgeons to operate with great precision. This means they can focus on clearing nose and sinus blockages without harming nearby tissues. Endoscopic surgery results in less swelling, bleeding, and bruising than other procedures. And you won't have any visible scars. Most patients make a fast recovery.



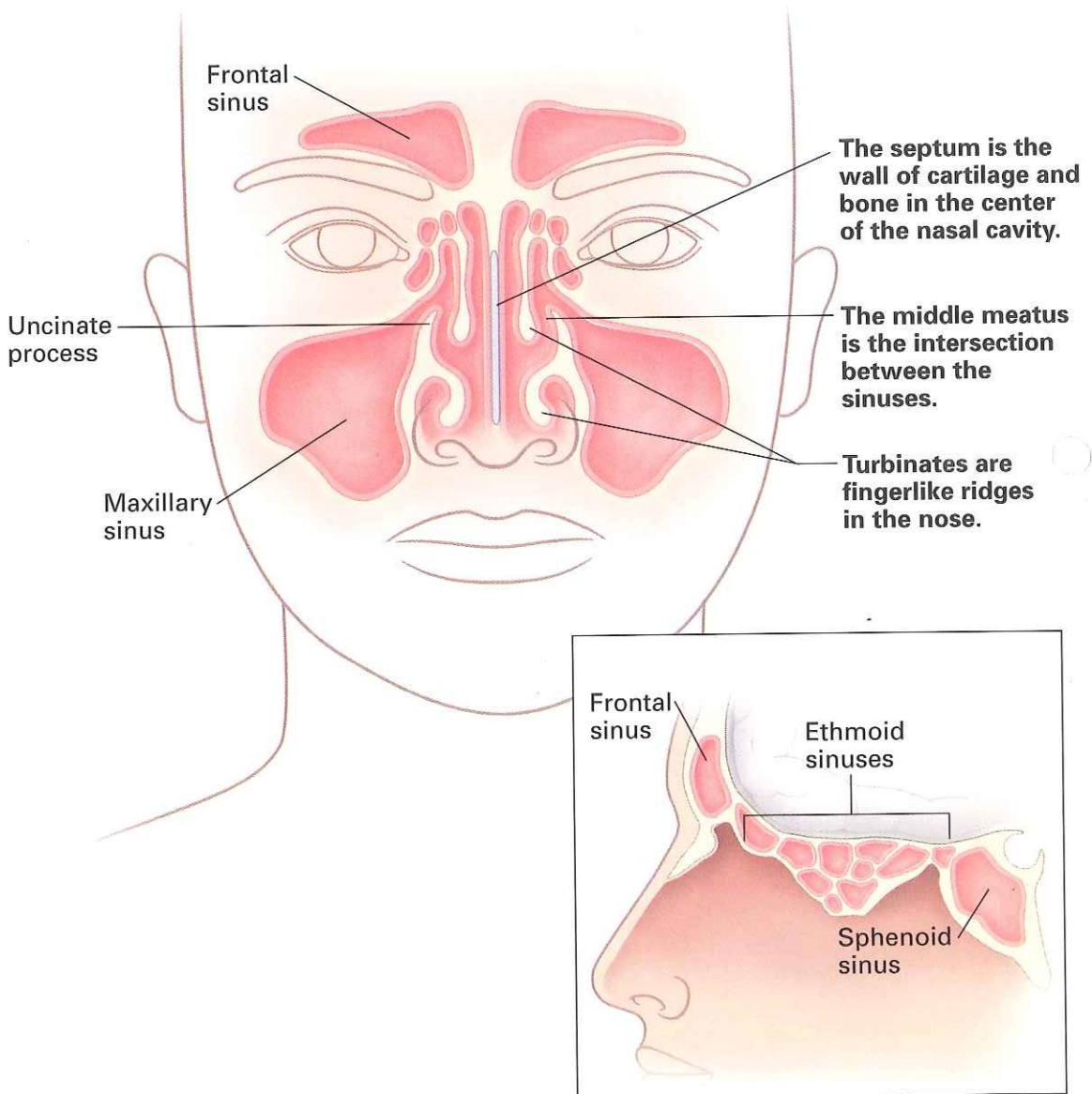
The endoscope gives the surgeon a clear, magnified view during surgery.

The Sinuses: A Drainage System

Sinuses are hollow chambers within the bones of the face and head. Four pairs of sinuses connect to the nasal cavity through small openings. The sinuses produce **mucus** which drains into the nose. If the drainage path becomes blocked, infection can result.

When Sinuses Are Healthy

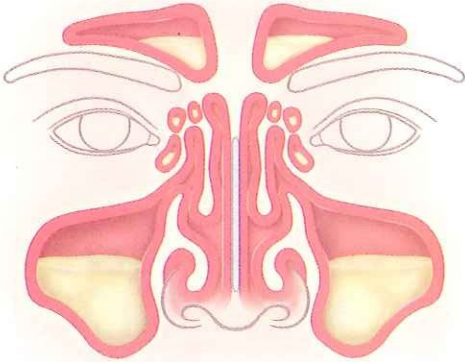
In healthy sinuses, air circulates freely through the chambers. A thin layer of mucus drains from the sinuses into the nose. Mucus moistens the nose and sinuses. It also helps trap dust and bacteria and remove them from the nose.



Side view of sinuses.

When Sinuses Are Blocked

If something blocks the passages in the nose or sinuses, mucus can't drain. Mucus-filled sinuses often become infected.

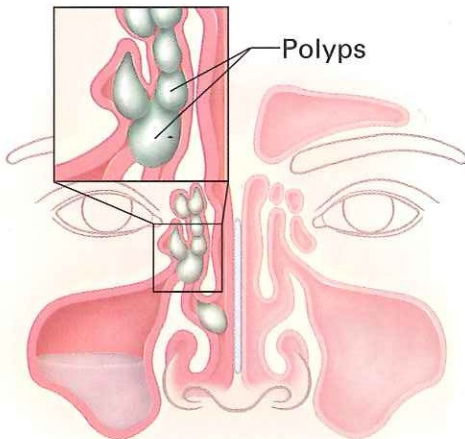


Colds and Other Infections

Colds cause the lining of the nose and sinuses to swell and make extra mucus. A buildup of mucus can lead to a more serious infection.

Allergies

Allergies irritate turbinates and other tissues. This causes swelling, which can cause a blockage. Over time, this irritation can also lead to polyps.



Polyps

Polyps (sacs of swollen tissue) may form in both the sinuses and nose. Polyps can grow large enough to clog nasal passages and block drainage.

Deviated Septum

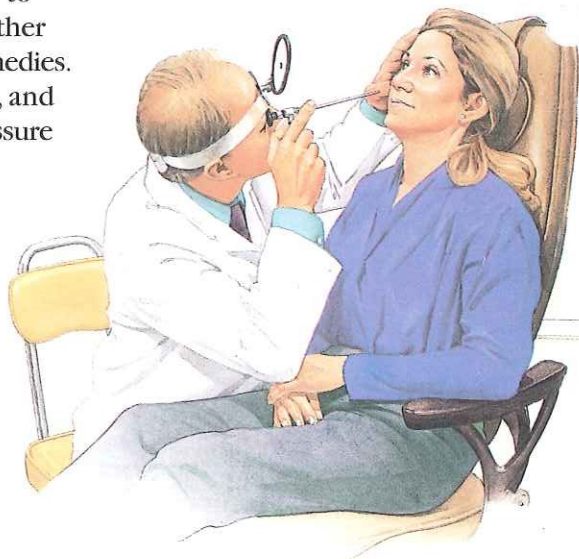
When a septum is **deviated** (crooked), it may block nasal passages. This is often the result of an injury.

Your Evaluation

To help determine the extent of your sinus problems, your doctor will evaluate you. This will include a medical history and examination. Your doctor may also order imaging tests.

Medical History and Physical Exam

Your doctor will ask about your symptoms and any past treatments you may have had. Be sure to mention any other medical problems, and whether you take medications, supplements, or herbal remedies. Your doctor will also examine your nose, ears, and throat. He or she may also check your blood pressure and do other tests.

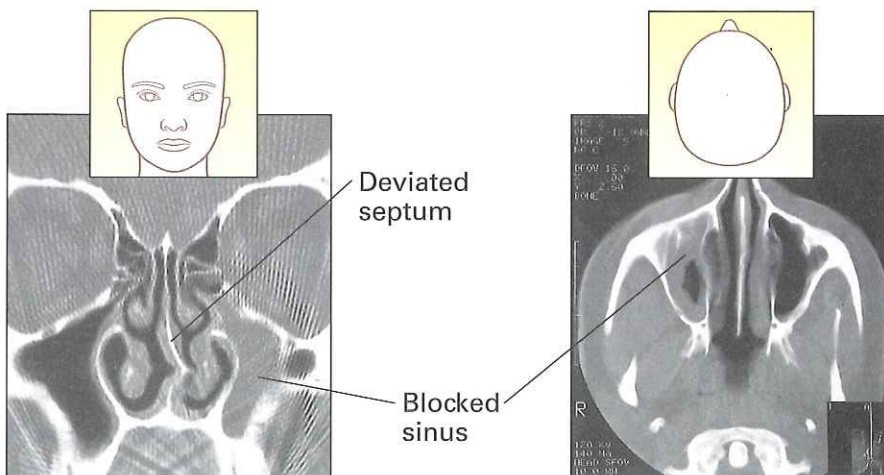


Endoscopic Exam

Endoscopic exams are done at your doctor's office. Your nose and sinuses are first treated with **anesthetic** (numbing medication) and a decongestant. This makes it easier to insert the endoscope. Your doctor then guides the endoscope within your nasal passages and checks for problems.

CT Scan

A CT scan is a special kind of x-ray. It gives a detailed view of your nose and sinuses. Scans from different angles help show the precise location of blockages. They also serve as "maps" during surgery. In some cases, you may need more than one CT scan before your surgery.



Coronal (front) view of a deviated septum and blocked sinus.

Axial (cross section) view of a blocked sinus.

Planning for Surgery

You will be asked to do some things to prepare for surgery. This may include having additional tests. Be sure to follow your healthcare provider's instructions. If you have questions, call your doctor's office.

Before Surgery

Follow your doctor's instructions to prepare for surgery, including the following:

- Don't take any medications containing aspirin or ibuprofen during the 2 weeks before surgery.
- Tell your doctor about any medications, supplements, or herbal remedies you take. Ask if you should stop taking them before surgery.
- Arrange for an adult family member or friend to give you a ride home after surgery.
- Don't drink or eat after midnight the night before your surgery.



Anesthesia

The **anesthesiologist** will talk to you before surgery. He or she will explain the type of anesthesia that will be used during surgery. **General anesthesia** puts you completely to sleep. **Local anesthesia** numbs just the surgical area. In some cases, **monitored sedation** is used. This makes you drowsy or slightly asleep but doesn't put you into a deep sleep.



Risks and Complications

Endoscopic surgery has a high rate of success, but does carry the same risks as any other surgery. Problems may include:

- Infection
- Bruising
- Excessive bleeding
- Altered sense of taste or smell
- Spinal fluid leakage (very rare)
- Injury to the eye (very rare)

If You Smoke

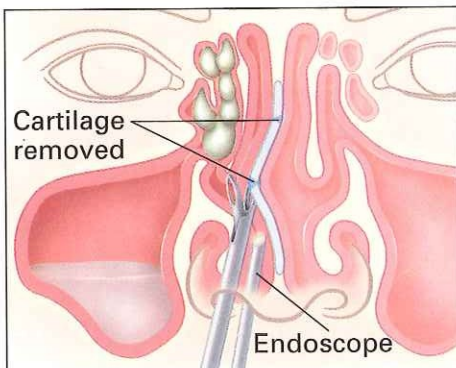
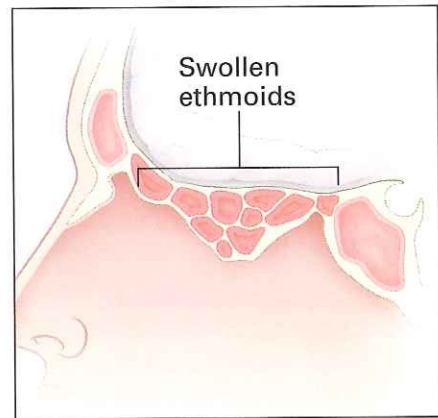
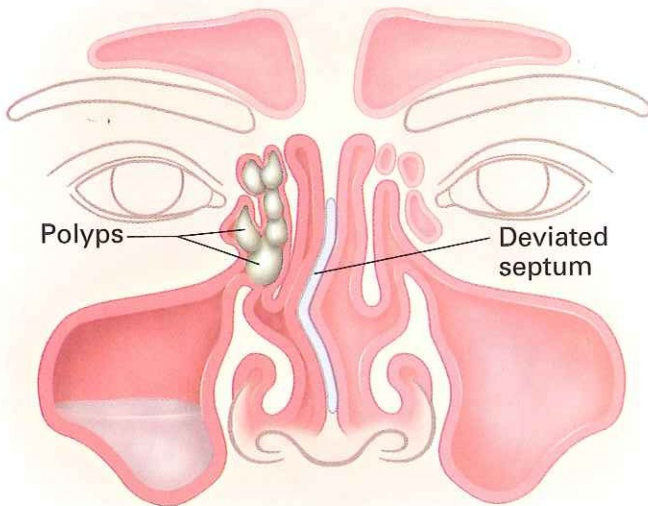
Smoking irritates your nose and sinuses. Consider quitting before surgery. Ask your doctor for help with a plan to stop smoking. And don't smoke or chew tobacco within 24 hours of your surgery.

During Surgery

During surgery, your surgeon uses the endoscope and other instruments to clear blockages. If you have local anesthesia, you'll be awake and may hear sounds or feel tugging. But you shouldn't feel any pain.

Clearing Passageways

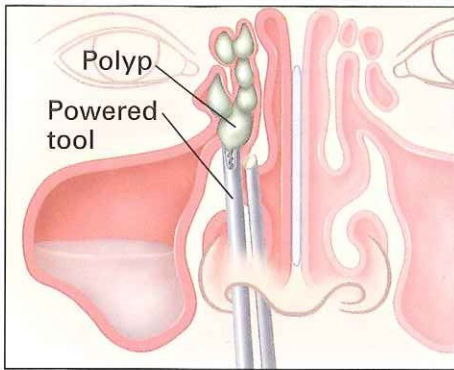
Often, more than one area of the nose and sinuses is treated. Polyps may need to be removed before the entrance to a sinus can be widened. Or your surgeon may fix a deviated septum prior to correcting other problems.



Straightening the Septum

To fix a deviated septum, your surgeon reshapes or trims the cartilage and bone that divides the nose. After surgery there is more breathing space. Enough support remains for the nose to hold its shape.

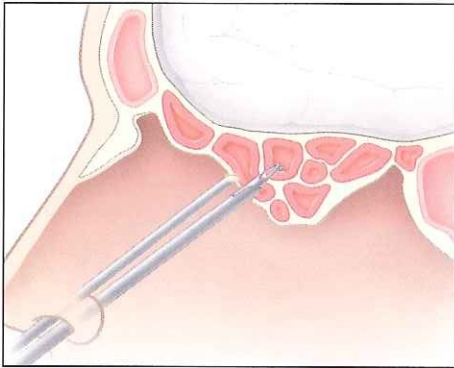
Cartilage may be removed to reshape and straighten the septum.



The powered tool is inserted next to the endoscope to remove the polyps.

Removing Polyps

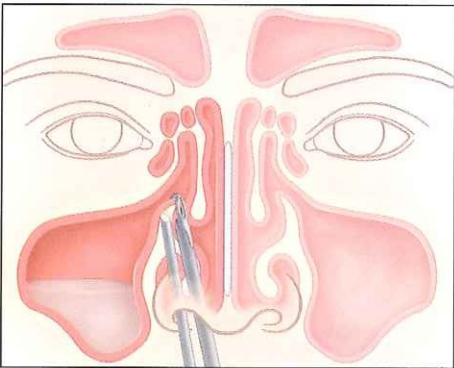
Because polyps can grow in both the nose and sinuses, removing them may involve different techniques. Many surgeons use powered instruments that help remove polyps without harming nearby tissues.



Bony partitions are removed to create a passage for mucus to drain.

Opening the Ethmoid Sinuses

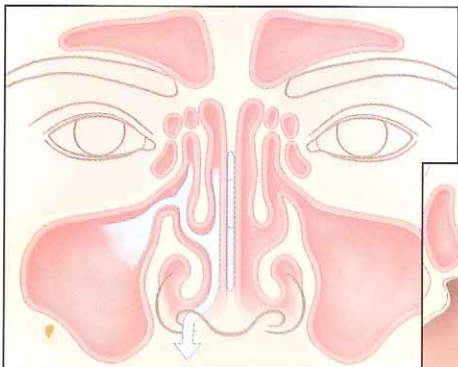
The ethmoid sinuses are made up of many small air sacs that drain into the nasal cavity. If the drainage path is blocked, your surgeon may open the thin walls of bone that separate the air sacs. This creates a passage through which mucus can drain more easily.



The unciniate process is removed to improve drainage.

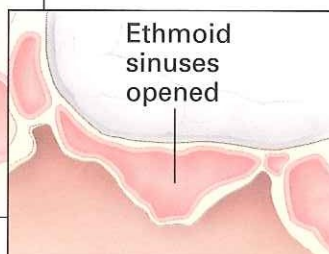
Clearing Nasal Passages

The **uncinate process** is a thin projection of bone and tissue that forms the outlet of the maxillary sinus. If the tissue becomes inflamed, your surgeon may remove the unciniate process so that mucus can drain.



After the Surgery

After blockages are removed, air circulates and mucus can drain normally.



Your Recovery

Most patients make a fast recovery. You can often leave the hospital the same day as surgery. Once you're home, follow all your doctor's instructions. Take an active role in your recovery to speed healing and prevent complications.

After Surgery

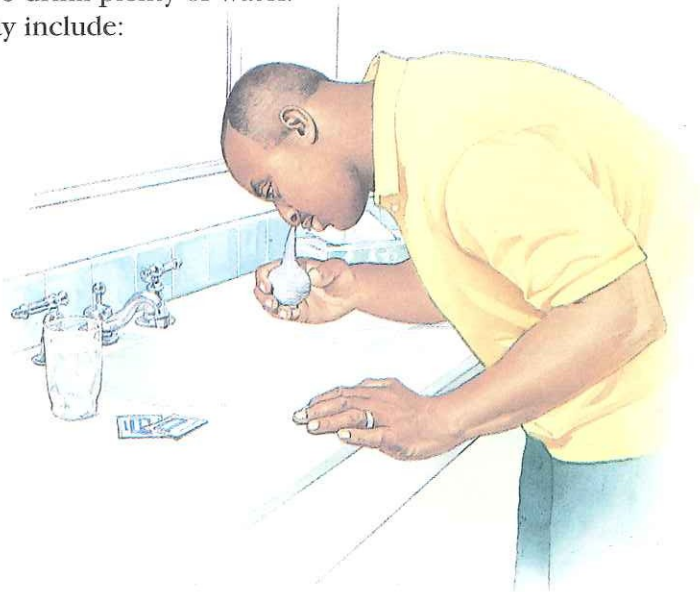
After surgery you'll be moved to a recovery room. You may feel groggy from the anesthesia and will likely have some discomfort. There will be a dressing under your nose to absorb drainage. You may also have **packing** (absorbent bandage) inside your nose. You can usually go home as soon as you're no longer feeling groggy. In certain cases, an overnight stay may be necessary.



The First Week

Your doctor will schedule an office visit a few days after surgery to check on your progress. At this visit, dried blood and mucus are removed to promote healing. Any nasal packing will be removed as well. It's normal to feel stuffiness and have pinkish or dark red drainage. Change your nasal dressing as needed, and take any prescribed medications. Also be sure to drink plenty of water. Other guidelines from your doctor may include:

- Rinsing your nose and sinuses with saltwater
- Not blowing your nose
- Avoiding strenuous exercise, straining, or lifting
- Using a humidifier to keep nasal passages moist
- Not taking aspirin or ibuprofen
- Sleeping with your upper body elevated
- Avoiding hot and spicy foods



The Next Few Weeks

As you're healing, it's normal to feel some stuffiness and have nasal crusting. Keeping your nasal passages clean and moist will help speed the healing process and prevent scarring. And as you feel better, you can start getting back to your normal activities. Continue to follow your doctor's instructions. Also, be sure to:

- Take medication as directed.
- Avoid irritating substances such as dust, chalk, and harsh chemicals.
- Use saltwater rinses or a humidifier as directed.
- Drink plenty of water.
- Avoid exposure to colds and allergic triggers.
- Talk with your doctor before swimming or air travel.



Take medications on time as prescribed by your doctor.

Ongoing Prevention

It's important to treat the underlying cause of your sinus problems. If you have allergies, talk with your doctor about treatment options. Likewise, if you're exposed to nasal irritants (such as sawdust), consider using a filter mask. And if you smoke, ask your doctor for advice about quitting or cutting down.

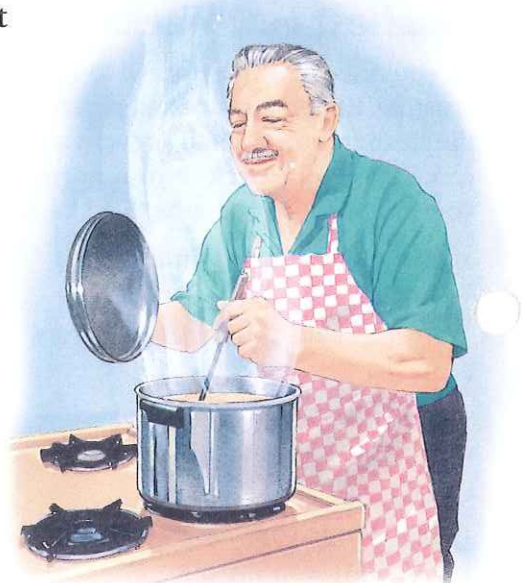
When to Call Your Doctor

Call your doctor if you notice any of the following:

- A large amount of bright red bleeding
- Fever over 101°F (38.3°C)
- Changes in vision, or swelling around the eye
- Signs of infection, such as yellow or greenish drainage
- A constant headache or increasing pain
- Drainage of a large amount of clear fluid
- Extreme tiredness, or a stiff neck

Breathing Freely Again

Nose and sinus problems don't have to disrupt your life. With the help of your doctor and endoscopic surgery, you can breathe freely again. Then it will be easier to enjoy life's simple pleasures, like the smell of a home-cooked meal.



Resources

To learn more, contact:

**American Academy of Otolaryngology–
Head and Neck Surgery**

703-836-4444

www.entnet.org

American Rhinologic Society

www.american-rhinologic.org

Consultants:

Thomas Engel, MD, Otolaryngology

Robert L. Johnson, MD, FACS, Otolaryngology

With contributions by:

H. Peter Doble II, MD, Otolaryngology-Sinus Surgery

Janice D. Janas, MD, Otolaryngology

Stephen A. Landers, MD, Otolaryngology

Zachary Rosenberg, MD, MA, FACS, Otolaryngology

Judi Walker, RN, BSN, Otolaryngology

Peter C. Weber, MD, Otolaryngology

 **KRAMES**
Health and Safety Education

a division of StayWell