

Treating Problem  
**SINUSES**

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Medication, Surgery, and Self-Care

# Clearing Up Your **SINUSES**

When your sinuses act up, you can feel down. Those seemingly harmless, hollow chambers in your head can cause lots of pain and pressure, and can make it difficult for you to breathe freely. Luckily, you and millions of other sinus sufferers can have clear sinuses again, and you can take steps to prevent future problems.

## **Pain and Pressure**

You may never think about your sinuses...until something goes wrong. Then, because of pain, pressure, and congestion, you may think of little else except your sinuses all day—and all night—long. What's the source of the problem? Usually the cause is either colds or other infections, allergies, or nasal obstructions—all of which can clog your sinuses, preventing them from draining the way they're supposed to.

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



## **Breathing Easier**

There's no need for you to suffer sinus problems in silence. Your doctor can help you get relief. Your doctor is skilled at evaluating sinus problems and, depending on their severity, will recommend one of two courses: medication or surgery. And self-care is where your participation comes into play. You also can help prevent recurrences by taking some simple precautions.

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As many as  
30 million Americans suffer  
from sinus problems.

## Do You Have Sinus Problems?

### Colds That Linger



- ? Do your colds worsen after three to four days?
- ? Do you have long-lasting nasal drainage?
- ? Is the drainage yellow or green in color?

### Recurring Allergies



- ? Does your body react to substances such as pollen?
- ? Do your symptoms come and go with the seasons?
- ? Do your sinuses feel better in different climates?

### A Nasal Obstruction



- ? Do you breathe mainly through your mouth?
- ? Is only one side of your nose congested?
- ? Do you have a crooked or injured nose?



### The more boxes you checked...

...the more likely it is that you  
have a sinus problem. Continue read-  
ing to learn what you and your doctor  
can do to treat and prevent sinus problems.

# Your SINUSES: Chambers of Air

Your sinuses are empty chambers between the bones in your head. Filled with air, they resonate, or vibrate, aiding speech. Just as your mouth produces lubricating saliva, healthy, clear sinuses constantly produce and drain mucus, without your even knowing it. A sinus problem develops when one or more underlying problems—such as a cold or allergy—prevent your sinuses from draining properly.

Four pairs of sinuses in your head produce mucus that drains through openings into your nose and into the back of your throat, where it's swallowed. The mucus draining from your sinuses helps keep your nose free of dust and bacteria.

**Frontal sinus**

**Ethmoid sinus**

**Sphenoid sinus**

**Maxillary sinus**

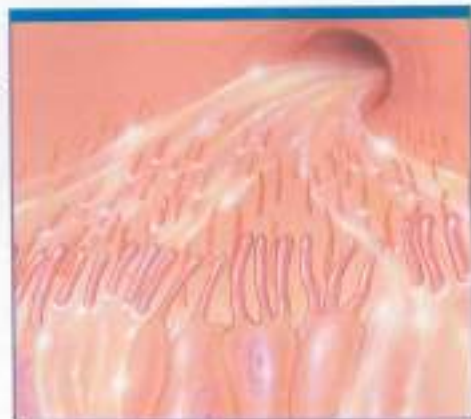
**The middle meatus** is a tiny opening where most of your sinuses drain.

**Turbinates** are curved ridges in your nose.

**The septum** is a thin "wall" that separates the air passages in your nose.

## Free-Flowing Sinuses

Your sinuses can drain freely when they're free of swelling and thickened mucus, and when the middle meatus is clear and open. Tiny, brushlike **cilia** easily sweep the thin, watery mucus through your sinuses and middle meatus, and into the back of your throat.





Interference with the natural drainage of mucus—caused by colds, allergies, or obstructions—may lead to **sinusitis** (sinus inflammation and infection). You can have either **acute sinusitis** (an immediate sinus attack) or **chronic sinusitis** (more long-term sinus problems).

## Colds and Other Infections



A cold or flu may cause your sinus and nasal linings to swell. Sinus openings can become blocked, causing mucus to back up. This stagnant mucus then becomes a perfect place for bacteria to grow. Thick, yellow, or discolored mucus is one sign of this infection.

## Allergic Reactions



Sensitivity to certain substances causes the release of histamine, which makes your sinus and nasal linings swell. Long-term swelling clogs your sinuses and prevents the cilia from sweeping away mucus. Usually your symptoms are persistent but less severe than with colds.

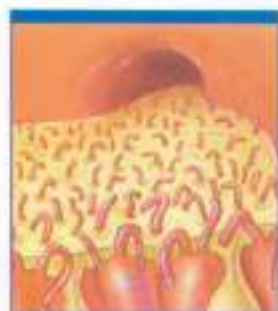
## Obstructions



A **polyp** is a sac of swollen tissue, often the result of an allergy or infection. It may block the middle meatus and even grow large enough to block your nose.



A **deviated septum** is a crooked partition in your nose. Often the result of injury, a deviated septum sometimes blocks your middle meatus.



## Stagnant Sinuses

**Acute sinusitis** comes on suddenly, often right after an upper respiratory infection like a cold. The cilia become paralyzed by infection, which allows mucus to build up.

**Chronic sinusitis** is ongoing swelling of the sinus lining, the result of allergies or chronic infections. The cilia can become permanently damaged, and the lining thick and scarred.



# THE SINUSITIS CHECKLIST



*What is an otolaryngologist? This is a head and neck surgeon who specializes in the evaluation and treatment of ear, nose, and throat problems (also called an ENT specialist). Your otolaryngologist thoroughly evaluates and treats your sinus problem, using special techniques and equipment.*

## Medical History

The goal of a medical history is to pinpoint your symptoms and their cause and to determine which types of treatment have worked well for you in the past. Your doctor may ask you questions about any signs of infection, such as chronic and yellow or greenish drainage or a decreased sense of smell. Signs of allergies include sneezing and red or itchy eyes or nose. Breathing through your mouth or nose on one side only may indicate a nasal obstruction.

## Physical Exam

An exam helps assess your ability to breathe through your nose. Your doctor may examine your ears and throat, then your nose, looking for a deviated septum, polyps, or signs of infection. Your doctor may use a tiny telescope (**endoscope**) to see around corners and into sinus openings.



**An endoscope** can check for blocked sinus openings.



**A CT scan** can reveal problems such as sinusitis.

## Diagnostic Tests

You may have one or more tests to confirm your diagnosis. A **CT scan**, often done before surgery, is a special type of image that gives a clear cross-sectional view of the middle meatus and sinus linings. **X-rays** confirm or rule out problems such as pooling of mucus. You also may have **allergy tests** to identify your specific allergies. A mucus sample (**culture**) may be taken from your nose to determine the type of infection.

## Your Treatment Plan

Your type of treatment depends largely on your underlying problem and whether you have acute or chronic sinusitis. If acute, your treatment is likely geared toward controlling the cold or allergy with medication. If chronic, your doctor may prescribe medication or surgery.



## Your Medical **EVALUATION**

Before effective treatment can begin, your doctor needs to conduct a thorough evaluation. This helps your doctor decide whether your sinuses are really the problem and, if so, helps uncover the cause—whether colds, allergies, or obstructions. Your otolaryngologist is a doctor who specializes in this type of medical evaluation, which may include a medical history, a physical exam, and diagnostic tests such as x-rays.



# Treating **ACUTE** Sinusitis

Since acute sinusitis is often painful, you may feel as though you need extreme measures to get well. Fortunately, acute sinusitis can often be managed with prescribed medication and self-care. Medication helps combat the underlying cold or allergy, so your sinuses can recover. Self-care can keep sinuses moist and make you feel more comfortable. Remember to follow your doctor's instructions closely which can make a big difference in getting your sinus problem under control.

## Medication

### For Colds and Infection

Your goal is to eliminate infection so your sinuses can clear out mucus.

**Antibiotics** help kill bacteria. Be sure to finish the course of treatment (usually longer for severe sinusitis) to prevent infection from returning.

**Decongestants** decrease swelling, so your sinuses can clear up. Use decongestant sprays for short periods, and only under the direction of your doctor. Long-term use can cause recurrent ("rebound") swelling of your sinus lining.



## Self-Care



### Drink Fluids

Drinking extra fluids—a glass every hour or two—makes your mucus thinner, allowing it to drain from your sinuses more easily. A humidifier helps in much the same way. Fluids can also offset the drying effects of certain drugs.







### For Allergies

Your goal with allergies is to combat swelling. **Antihistamines** stop the histamine reaction, reducing swelling. **Anti-inflammatory sprays** also reduce swelling. **Cromolyn**, used before an allergy attack, can block the release of histamine. When used carefully and according to your doctor's instructions, allergy medications may provide welcome relief.



**Follow up with your doctor.** Pay attention to your doctor's instructions about follow-up visits. If you're on antibiotics, and not feeling better by the end of the treatment course, your doctor may change your antibiotics, order further tests, or physically drain (irrigate) your sinuses.

### Use Saltwater Rinses

Rinses also help keep your sinuses and nose moist. Mix a teaspoon of salt in eight ounces of fresh, warm water. Use a bulb syringe to gently squirt the water into your nose a few times a day. You can also buy ready-made saline nasal sprays.



### Apply Hot or Cold Packs

Applying heat to the area surrounding your sinuses may make you feel more comfortable. Use a hot water bottle or a hand towel dipped in hot water. Some people also find ice packs effective for relieving pain.

**Call your doctor if** ■ you have an allergic reaction, such as a rash, or a side effect, such as an upset stomach or diarrhea, from any medication. ■ you're not feeling better in four to five days. ■ you feel better, but your symptoms don't go away completely.

# Treating **CHRONIC** Sinusitis

Even if you've already been on sinus medication, your doctor may try again to manage your problem medically before going ahead with surgery. If medication isn't completely effective, your doctor may recommend one of two types of surgery, depending on the cause of your sinus problem and which sinuses are involved.

## Medication

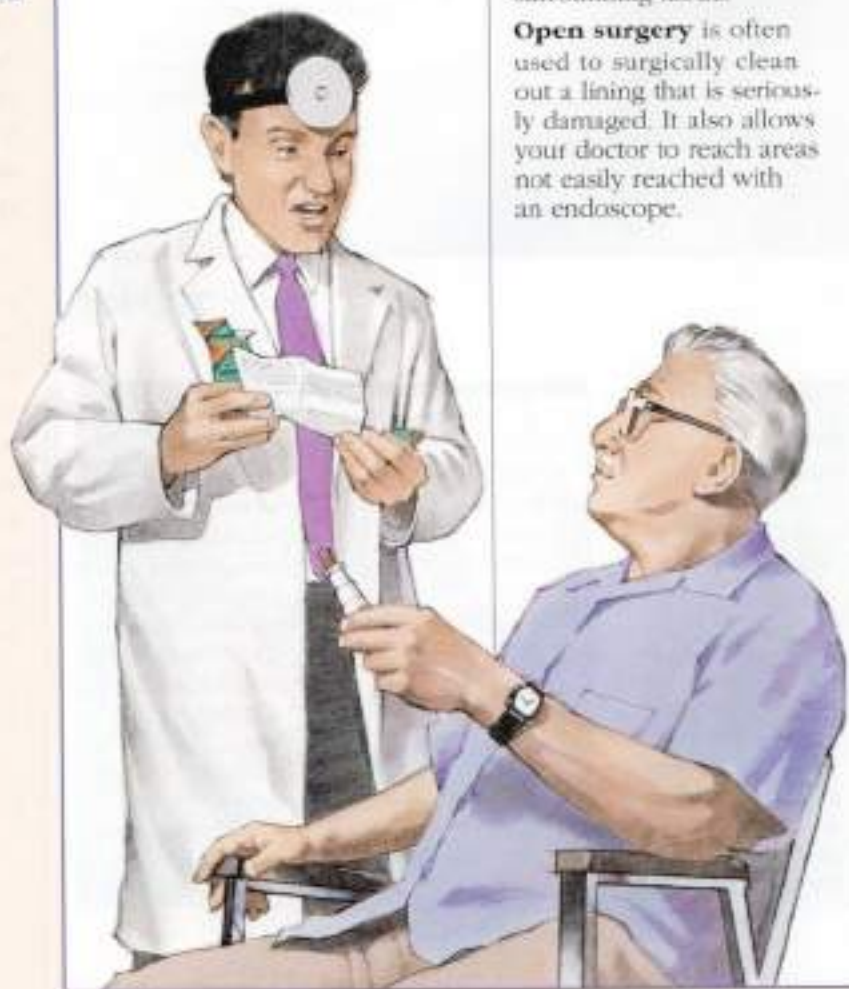
If your medication wasn't fully effective in the past, your doctor may try a new or longer course of medication. Allergy injections may help desensitize you to particular substances; or you may need to stay on an antibiotic for a longer period. If your symptoms recur, call your doctor, who may have you come in for a visit. If you don't get better, further tests such as a CT scan may help evaluate the extent of your problem.

## Surgery

Either endoscopic or open surgery can improve drainage and relieve your symptoms. Both techniques can be used for the procedures at right.

**Endoscopic surgery** is typically used to clear blockages and obstructions, allowing your sinuses to heal on their own. This type of surgery allows your doctor to see around corners and into sinus openings, and it can be done with little damage to surrounding tissue.

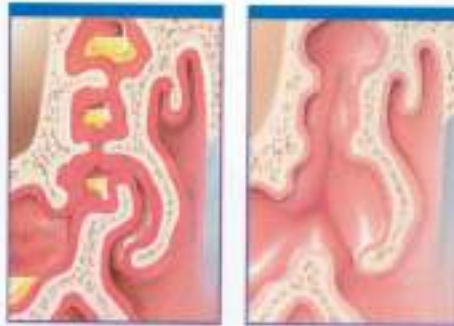
**Open surgery** is often used to surgically clean out a lining that is seriously damaged. It also allows your doctor to reach areas not easily reached with an endoscope.





### Clearing Blockages

Sinus openings blocked by swelling and infection prevent proper drainage.



Your doctor clears areas where your sinuses are blocked. Once the blockage is removed, your cilia can sweep out mucus, restoring normal drainage.

### Removing a Polyp

A polyp blocking a sinus opening—often the middle meatus—prevents proper drainage into your nose.



Removing the obstruction clears the sinus opening. Once the obstruction is removed, your sinuses can drain again.

### Cleaning out a Sinus Lining

If a sinus lining is badly infected, it may become thick and scarred and the cilia may stop working altogether, inhibiting drainage.



Your doctor may remove your sinus lining and create a new opening for drainage. The sinus lining grows back over time.

## Risks and Possible Complications

As with any surgery, you run a slight risk of infection and bleeding. With open surgery, your risks also may include scarring and numbness in your teeth. Your doctor will discuss any additional risks, which differ depending on the type and location of your surgery.

## Your Surgical **EXPERIENCE**

Your experience—before, during, and after surgery—depends a great deal on whether you're having open surgery or endoscopic surgery, and whether you're released the same day of surgery or the next. You may have different types of anesthesia, too. If you're under general anesthesia, you won't be aware of the surgery as it occurs. If you're under local anesthesia, you'll feel some "tugging" sensations, which shouldn't be painful.



### A Pre-Op Checklist

Here are a few things you can do before surgery to help things go more smoothly.

- ✓ Buy a bulb syringe for the saltwater rinses you'll do after surgery.
- ✓ Arrange for a ride home after the procedure.
- ✓ Eliminate aspirin 2 weeks beforehand.
- ✓ Be prepared to have lab tests 48 hours before surgery.
- ✓ Don't drink or eat after midnight, the day before surgery.
- ✓ Tell your doctor about any medications you're taking and ask whether you should take any the morning of surgery.





### During Surgery

Expect the procedure to last from one to three hours. During surgery, your doctor will either work with an endoscope inserted through your nose, or make an incision through your skin or under your gums.



### After Surgery

During your one to two hours in a recovery area, you may have ice on your face to reduce swelling and packing in your nose to absorb bloody drainage. You'll be allowed to go home when you're no longer too groggy from the anesthesia and you have no unusual nausea or bleeding.



*Follow up with your doctor a couple of days after surgery to check your progress and remove packing from your nose. You may need more frequent visits after endoscopy, including a brief office procedure to clear out old blood and mucus. This helps promote faster healing. Consult with your doctor about additional long-term follow-up.*

### Home Recovery

Taking a few precautions can help you prevent complications and feel better soon. Your doctor may ask you to stay at home for about a week, avoiding strenuous activities such as bending and exercising. Anti-inflammatory sprays may be prescribed to reduce swelling, along with ice for 10 to 15 minutes at a time, for one to two days. An ice pack or bag of frozen peas works best. Ask your doctor how soon to start saltwater rinses, and when you can blow your nose again. You also may be given pain medication and antibiotics to prevent infection.



- Call your doctor if**
- you're bleeding excessively.
  - you have signs of infection, such as fever, yellow or greenish drainage, unrelieved headache, or increased pain.

## PROVEN EXPERIENCE



*Air travel can be difficult when you're prone to sinus problems. Airplane air dries out your sinuses and the elevation changes pressure, which can cause pain. Talk to your doctor about specific recommendations for flying. To keep your sinuses moist when flying, use a spray bottle of saltwater and drink plenty of fluids. You may also want to try using a decongestant beforehand.*

### Maximize Moisture

Keeping your sinuses moist makes your mucus thinner, allowing your sinuses to drain better. This, in turn, helps prevent infection.

- ✓ Use a humidifier, regularly cleaning out any mold or mildew in the reservoir.
- ✓ Drink several glasses of water a day.
- ✓ Avoid drying substances such as alcohol and coffee.
- ✓ Try to avoid smoke, which dries out sinus linings.
- ✓ If you've had surgery and get a cold, use saltwater rinses until the cold ends.





# Self-Care Pointers for **PREVENTION**



## **Avoid Allergens**

First, find out what substances you're allergic to. Then you can take steps to minimize exposure to allergens or irritants in the air such as dust, pollution, and pollen.

- ✓ Wear a mask when you clean, or consider hiring a housecleaner to help minimize your exposure to dust.
- ✓ Sit in the nonsmoking sections of restaurants.
- ✓ Avoid the outdoors during peak pollution hours such as rush hour.
- ✓ Keep an air conditioner on during allergy season and clean its filter regularly.



## **Prevent Colds**

Do what you can to avoid exposure to colds and flu and, whenever possible, take more time to rest when you feel something "coming on."

- ✓ Wash your hands frequently during cold and flu season.
- ✓ As much as possible, stay away from infected people.
- ✓ Follow these standbys for beating the "bugs": eat balanced meals, exercise regularly, and get plenty of sleep.

Being sick isn't any fun, so most people avoid it at all costs. But, for you, it's even more important to prevent colds, flu, and allergies, since they can lead more easily to sinusitis. Do your best to prevent sinusitis by preventing these underlying problems. Steer clear of colds and other infections or **allergens** (substances that cause allergic reactions), and keep your sinuses as moist as possible.

## A BREATH Of Fresh Air

When you've experienced sinus problems, there's nothing quite as refreshing as being able to breathe deeply and freely again. You can keep your sinuses healthy by taking some preventive steps. Fortunately, if sinus problems do recur, your doctor can recommend the most effective course of treatment for you.

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**Consultant:**

Thomas Engel, MD, Otolaryngology

**With contributions by:**

J. Brian Dellami, MD, Otolaryngology

John H. Basson, PhD, MD, Otolaryngology

