



# Patient Information

## Clearing the Air on Sinusitis

**M**ost people get the common cold at one time or another and experience such symptoms as stuffy nose, coughing, and headache. The virus that causes the cold also can bring about irritation and swelling of the cavities around the nasal passage, or *sinuses* (**si**-nes-ehz). An infection and swelling of the sinuses is called *sinusitis* (si-nyuh-**site**-us). This condition also is known as *rhinosinusitis* (ri-no-si-nyuh-**site**-us) because *rhinitis* (**ri**-**nite**-us), or tenderness and swelling of the nasal mucous membrane, usually occurs before or with sinusitis.

There are four pairs of sinus cavities around the nose: frontal, which are in the eyebrow area; *maxillary* (**mak**-suh-lehr-ee), which are inside each cheekbone; *ethmoid* (**eth**-moyd), which are behind the bridge of the nose and between the eyes; and *sphenoid* (**sfee**-noyd), which are behind the ethmoids in the upper region of the nose and behind the eyes. Each sinus has an opening into the nose. When the sinuses are healthy, air is free to move in and out of them. When they are blocked by mucus, though, the trapped air can cause severe pain or pressure and provide a place for infection to flourish.

Sinusitis that lasts only a few weeks—as is usually the case when a cold is the cause—is called acute sinusitis. Sinusitis that lasts longer than eight weeks or recurs frequently is known as chronic sinusitis. Chronic sinusitis often is linked to other health problems, such as asthma or allergies. While sinusitis can be very painful and disruptive, it's rarely a sign of serious disease and there are plenty of treatments that can help manage the symptoms.

### How do I know if I'm at risk?

Sinusitis is more likely to occur in people who: have allergies, asthma, abnormalities or growths in the nasal passage, or certain other medical conditions (including cystic fibrosis); develop a respiratory tract infection; sustain trauma to the face; or are exposed regularly to pollutants. In addition, as people grow older, changes in the shape of the nose and other age-related conditions may increase the risk of sinusitis.

### What are the warning signs?

The signs and symptoms of sinusitis include thick yellow or green mucus discharge from the nose and down the throat; stuffy nose; pain, pressure, tenderness, or swelling around the eyes, cheeks, nose, or forehead; aching in the upper jaw or teeth; reduced senses of smell and taste; coughing; earache; sore throat; bad breath; fatigue; irritability; and nausea. While the symptoms of acute and chronic sinusitis are similar, they last longer and cause more fatigue in chronic cases.

If your symptoms are accompanied by a fever higher than 100°F, if they worsen or last longer than seven days, or if you've had sinusitis a few times and don't respond to treatment, see your doctor. If you have a swollen forehead, confusion, double vision, shortness of breath, stiff neck, or severe pain around the eyes or head, seek immediate medical attention.

### What tests do I need?

Usually a physical examination (that includes your nasal tissues) and a discussion of your symptoms are enough for your doctor to diagnose sinusitis. In the case

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of chronic sinusitis that isn't responsive to treatment, computerized images of your sinuses may be taken.

Another way to diagnose more severe sinusitis is through nasal *endoscopy* (en-dah-ska-pee). During this procedure, a probe called an *endoscope* (en-duh-sko-pe) is attached to a thin tube and inserted into your nose to allow a doctor to inspect your sinuses. Based on what this test shows, other tests may be needed, including blood or sweat tests to check for conditions associated with sinusitis; cultures of fluid from your nose and sinuses to identify the source of infection; an allergy test; or a biopsy, in which a small amount of tissue is removed from the linings of your nose and sinuses and analyzed.

### How can I avoid the problem?

To reduce your risk of developing sinusitis, avoid contact with people who have colds, wash your hands frequently with soap and water, and work with your doctor to manage your allergies or asthma. Avoid exposure to cigarette smoke and polluted air, and, if your doctor recommends it, use a clean air humidifier to moisturize dry air. It's also best to avoid diving or spending long periods swimming in chlorinated water. Regularly rinsing out your nasal passages with warm water using a squeeze bottle or a small bowl called a neti pot may be helpful.

### How is it treated?

The pain and congestion of most cases of sinusitis can be treated with such at-home remedies as resting, drinking plenty of fluids, applying warm compresses to your face, breathing in steam, and sleeping with your head elevated.

Over-the-counter or prescription medications also are available. Decongestant liquids, pills, or nasal sprays may be helpful,

but when taken for more than a few days, these medications can worsen the problem. Aspirin, *acetaminophen* (uh-seet-uh-min-uh-fuhn), or *nonsteroidal anti-inflammatory* (non-stuh-royd-al an-tie-in-flam-uh-tor-ee) drugs can relieve the pain associated with sinusitis. Some people are allergic to aspirin, however, and taking it can cause sinusitis. For these people, aspirin desensitization treatment may be an option. *Corticosteroid* (kort-ih-koh-stihr-oyd) pills, nasal sprays, or injections are mostly available by prescription and can treat the tenderness and swelling associated with sinusitis. Corticosteroids can have serious unwanted effects, however, particularly when taken over a long period of time. Talk with your doctor about the risks and benefits of any of these medications.

When sinusitis is caused by a bacterial infection, your doctor may prescribe antibiotics. If a virus (such as the one that causes the common cold) is the cause, however, antibiotics won't be helpful. When allergies are linked to sinusitis, allergy shots may reduce your body's reaction to certain allergens. If other treatments don't resolve your sinusitis, surgery to enlarge the openings that drain the sinuses may be an option. Most types of sinus surgery are not very invasive and are performed using an endoscope.

To learn more, visit the sinusitis page of the National Institute of Allergy and Infectious Disease (<http://www3.niaid.nih.gov/topics/sinusitis>). ●

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