

Chronic Sinusitis

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 Ear, Nose and Throat

Each year more than 31 million cases of sinusitis are reported in the United States. Sinus disease is so common nearly everyone has experienced it at some one time. Sinusitis, or the inflammation of the sinuses, can be acute with symptoms lasting up to one month, or chronic with recurring symptoms lasting six weeks or longer.

To better understand sinusitis, it is helpful to understand the normal functions of the nose and sinuses. The nose conditions inhaled air and cleans it of tiny particles. It also supplies water and heat to the air. The sinuses supply resonance to the voice, help condition inhaled air by supplying already warmed and humidified air, and protect the brain from trauma.

There are four pairs of sinus cavities that drain into the nose. These are located near the bridge of the nose, cheek bones and eyebrows. The lining of the nose and sinuses normally produces a protective layer of mucus that traps bacteria and inhaled particles. Sinusitis most often occurs when this lining becomes inflamed, swells and blocks one or more of the openings that allow the sinuses to drain. When the mucus can't drain properly, it accumulates in the sinuses and allows bacteria to multiply and cause infection.

Several conditions may cause sinus inflammation including colds, the flu, allergies, or irritants such as pollution and cigarette smoke. The lining of the sinuses reacts to this inflammation by producing excess amounts of mucus.

Besides sinus inflammation, an anatomical problem such as a deviated septum or nasal polyps may block the sinus openings. The septum is the divider between the two nostrils; when it is deviated, it isn't straight and in severe cases may touch the wall of one of the nostrils. Nasal polyps are growths of soft tissue in the nose and sinuses that may also cause blockage.

By the time patients seek attention for sinusitis, it has often progressed to the point where it interferes with their work or recreation. Many times a person doesn't seek help until after they he or she found out that over-the-counter medicine couldn't control sinusitis. As a result, other body parts such as the ears, eyes, lungs or brain, may have been affected.

The signs and symptoms of sinusitis, both acute and chronic, are well known to most patients. Acute sinusitis is usually accompanied by a fever and more facial pain near the bridge of the nose and the eyes. Sometimes the pain can be felt in the cheeks and teeth.

The pain may increase if there is an allergy attack or a flare-up of a second infection. On the other hand, chronic sinusitis is not typically accompanied by a fever unless, again,



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an acute infection or allergy attack occurs. Both acute and chronic sinusitis share other symptoms including nasal stuffiness, congestion, postnasal drip, decreased sense of smell and taste, yellow-green nasal drainage and nausea.

Post nasal drip from infection is often accompanied by bad breath, a sore throat and ear blockage. Coughing frequently increases at night and early in the morning. Patients also note a feeling of chest tightness. Diagnosis is sometimes difficult because many of these symptoms are also seen with other problems: headaches can have many causes, as can nasal

stuffiness, nasal drainage and coughing.

In chronic sinusitis, symptoms are slightly different and last longer. Diagnosis of acute sinusitis is relatively easy compared to diagnosing chronic sinusitis. To make diagnosis, the physician completes a medical history, a physical exam and evaluates test results. Within the past 20 years, great advances have been made in the ability to examine the nose and sinuses with endoscopes (a thin, metal tube that allows the physician to see inside the nose and sinus cavities). Similarly, using CT scans to image the sinuses and nose has revolutionized those understanding of nasal function in healthy patients and those with sinusitis. Sinusitis is traditionally confirmed through x-rays, though these may not show full extent of inflammation.

Treatment

The main treatment for sinusitis is antibiotics. Secondary treatments with decongestants, nasal steroids and saline irrigation are also beneficial.

Antibiotics are the first line of defense to treat sinusitis since they are effective in relieving symptoms and treating the infection. However, there are some bacteria that are resistant to all available antibiotics. In addition, if duration of treatment is not sufficient to kill all the bacteria, they may mutate and become resistant to that antibiotic. In this case another type of antibiotic will have to be tried. This also occurs when patients do not take the full prescribed amount of antibiotics once they begin to feel better. This is the most common problem of recurring sinusitis.

Both topical and oral decongestants are commonly used in treating sinusitis. They reduce nasal congestion by shrinking the turbinates — the structures within the nose that moisten and warm the air. Oral decongestants begin to decrease nasal stuffiness within about 30 minutes and last for up to six hours, unless specially formulated to last longer.

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Topical decongestants — nasal sprays such as Afrin, Sinex and Dristan — have a greater decongestant effect than oral agents and do not have the hypertensive side effects associated with oral decongestants. Nasal sprays shrink the mucus membranes in the nose, decreasing nasal resistance and improving drainage, making it easier to breathe. One side effect of these medications is that they decrease the blood flow to the nasal area and slow the effect of nasal cilia. Cilia are small, finger-like structures that help to sweep particles out of the nose. Long-term usage of these sprays may cause “rebound decongestion” in which stuffiness is worse after the spray wears off than it was before using the spray. Also, long-term usage can destroy the lining of the nose. These negative effects start to occur after one to two weeks of twice-daily usage.

Some initial studies have shown positive results in treating sinusitis as well as nasal polyps with a combination of antibiotics and topical nasal steroids. Another treatment, nasal saline irrigation, involves cleaning the nasal cavities by spraying and flooding them with a mild saline solution. Removing trapped nasal secretions and bacteria improves the cleaning and drainage of the sinuses. Methods for administering saline include the following: commercial sprays such as the over-the-counter Ocean Spray. Make your own “Ocean Spray” by mixing 1/4 teaspoon salt, 1/4 teaspoon baking soda and 8 oz. water. Administer the solution with a bulb syringe, holding your head horizontally. Also available is Water-Pik Lavage with Saline — this product does the best job of irrigating the sinuses and nasal passages.

Surgical Treatment

A CT scan is performed on patients being considered for sinus surgery. This procedure provides the surgeon with a picture showing the location of the sinus cavities relative to the nose and facial bones.

Current sinus surgery addresses the pathways of sinus drainage. By opening these narrow passages, the sinuses become aerated and drain more easily. This allows the mucus lining to repair itself and deters the reoccurrence of further sinus infections. Performed under general anesthesia, this procedure is done through the nostrils using an endoscope, without any incision or sutures. Typically, this surgery is performed on an outpatient basis, with weekly follow-up visits to the physician’s office to monitor healing. It takes approximately four to eight weeks for the lining of the nose and sinuses to regenerate itself.

Numerous studies show that about 85 percent of people feel better after sinus surgery; ten percent are unchanged and about five percent feel worse. The best improvement is seen in relation to reducing nasal stuffiness, with 90 percent of patients noting improvement. Approximately 85 percent note relief of facial pain and

fewer recurrent sinus infections; 80 percent note decreased postnasal drip after surgery.

Although sinus surgery is very successful in relieving symptoms associated with sinusitis, many patients will suffer relapses and need medicines. Others will need to stay on medications because of underlying problems causing sinusitis such as allergies and/or nasal polyps. Minor complications after surgery also occur about four to seven percent of the time and include mainly minor nose bleeding, black and blue eyes, temporary double vision, and injury to the tear duct occurring more rarely. Follow-up treatment after surgery may include daily saline irrigation, topical and oral decongestants for relief of symptoms, preventative antibiotics, and on-going treatment for allergies.

In addition to medical and surgical treatments of sinusitis, there are several things patients can do to help prevent sinusitis from occurring. Since viral upper respiratory infections often lead to sinusitis, the following can help prevent these infections:

- Get the influenza vaccine
- Do not touch your nose or eyes with unwashed hands
- Use a hot humidifier
- Drink hot liquids such as tea with lemon or hot chicken soup, since these help improve the ability of the nose to clear out unwanted substances with the nasal mucus.
- Patients can also reduce nasal obstruction by elevating the head of their bed to 45° using pillows or by placing blocks under the feet of the bed. Studies have shown that vigorous physical exercise will improve nasal function in up to 75 percent of healthy patients or those with allergies by reducing nasal resistance and congestion. This effect lasts for up to 30 to 60 minutes.

For more information call Advanced HealthLine at (262) 512-2880 or toll-free 1-888-709-2080 outside metro Milwaukee, or log on at www.ah.com.

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