

Chronic Sinusitis

The sinuses are hollow air pockets (cavities, spaces) in the bones of the face and head that probably exist to cushion the brain during trauma. There are four paired sinus cavities in the head. These spaces are connected by narrow channels. The four spaces are named for the bones they are near: ethmoidal, sphenoidal, frontal and maxillary. The sinuses are lined with a thin layer of tissue that normally makes a small amount of mucus to keep the sinuses healthy and lubricated. This drainage works as a filtration system, keeping the nose clean and free of bacteria. Rhinosinusitis occurs when the lining of the sinuses gets infected or irritated, become swollen, and create extra mucus. The swollen lining may also interfere with drainage of mucus.

Chronic sinusitis refers to a condition that lasts at least 12 weeks, despite attempts to treat it, and causes at least two of the following symptoms:

- Nasal congestion
- Mucus discharge from the nose or mucus that drips down the back of the throat
- Facial pain, pressure, or "fullness"
- A decreased sense of smell

Common signs and symptoms of chronic sinusitis include:

Nasal inflammation, Thick, discolored discharge from the nose (runny nose), Drainage down the back of the throat (postnasal drainage), Blocked or stuffy nose causing difficulty breathing through your nose; Pain, tenderness and swelling around your eyes, cheeks, nose or forehead; Reduced sense of smell and taste, Ear pain, Headache, Aching in your upper jaw and teeth, Cough or throat clearing, Sore throat, bad breath, Fatigue

Chronic sinusitis can be caused by several factors. These include:

- Blocked airways from asthma or allergies or from conditions such as cystic fibrosis.
- Infections, which can be bacterial, viral or rarely fungal.
- Exposure to tobacco smoke or airborne irritants (e.g., environmental toxins, such as formaldehyde).
- Abnormal nose structures, such as a deviated septum (actually a rare cause of chronic sinusitis) or nasal polyps.
- Immune system disorders – e.g., antibody deficiency (hypogammaglobulinemia).

Diagnosis

Chronic rhinosinusitis is likely if a person has had two or more of the symptoms listed above for a period of at least three months. In addition, there should be evidence of sinus disease that can be seen on a sinus CT scan or with a procedure called sinus endoscopy. A sinus CT scan is a procedure that takes about 15 minutes and involves a series of radiographs of the head and face. The radiographs give a detailed picture of the sinus linings and any mucus or polyps within the sinus spaces. A CT scan could also be used to look for structural issues. Structural problems usually include a deviated nasal septum, bony spurs or nasal polyps. Sinus endoscopy is an office procedure performed by an ENT specialist in which a clinician uses a thin tube attached to a camera to see inside the sinuses.

Treatment

Unfortunately, chronic sinusitis cannot be cured in most cases, but the symptoms can be managed so that they are not so burdensome. People with chronic sinusitis usually need life-long treatment to keep the symptoms in check. Several treatment options are available, but not all treatments are appropriate for all people. Health care providers usually recommend starting with aggressive treatment to get symptoms and inflammation under control and then changing to a less aggressive approach over time.

Potential treatments for chronic rhinosinusitis include:

Lifestyle modifications - People with chronic sinusitis who smoke cigarettes should stop. People who have environmental allergies should maximize avoidance strategies.

Daily nasal saline washing - Most people with chronic sinusitis find that washing their nasal passages daily with saline (salt water) helps reduce symptoms. Washing the nose before applying medications also clears away mucus and allows nasal medications to be absorbed better. A variety of devices, including squeeze bottles and Neti pots may be used to perform nasal irrigation. These are available without a prescription.

Steroid nasal sprays - Because all forms of chronic rhinosinusitis involve some degree of inflammation most people will need medications to reduce inflammation. Sprays do not reach deep into the sinus cavities, but they reduce swelling in the nasal passages and open the areas through which the sinuses drain.

Steroid pills – Are very effective anti-inflammatory drugs. They also decrease mucus production and help shrink nasal polyps. Oral steroids get into the circulation and deliver higher doses of drug compared with nasal sprays. This can result in better treatment of the inflammation and more dramatic improvement in symptoms. However, oral steroids can be associated with a variety of unwanted side effects and their use should be minimized.

Antibiotics - Although chronic sinusitis is often caused by inflammation rather than infection, sinus infections can develop and aggravate symptoms. As a result, you may need to take antibiotics. It is sometimes recommended to take a long course of antibiotics, lasting several weeks, to fully treat a sinus infection in a person with chronic sinusitis.

Surgery - Although health care providers usually attempt to get the symptoms of chronic sinusitis under control with medication first, some people need surgery to reopen the sinus passages and remove trapped mucus or polyps. Situations in which surgery is helpful include the following:

- When chronic rhinosinusitis symptoms do not improve enough with the medical treatments mentioned above and there is evidence of persistent sinus disease on sinus CT scan, such as complete blockage of one or more sinuses.
- When nasal polyps are present that do not sufficiently shrink with medical treatment.
- When there is severe deviation of the septum or other sinus anatomic problems causing nasal blockage or difficulty with sinus drainage.

Though surgery can be very useful in the treatment of chronic sinusitis by itself it is rarely enough to control symptoms long-term. The factors that caused the sinus linings to become irritated and swollen and produce extra mucus in the first place must still be addressed.

Can you prevent chronic sinusitis?

You may be able to prevent infections and chronic sinusitis if you:

- Treat the underlying conditions behind chronic sinusitis, like asthma and allergies.
- Avoid allergens (and irritants) such as animal dander, dust, pollen, smoke and mold that may trigger swelling in the sinuses.
- Quit smoking if you do smoke and avoid any secondhand smoke.

- Wash your hands thoroughly with soap and water.
- Rinse your nasal passages with saline solution
- Eat healthy foods, stay hydrated and exercise regularly to stay healthy overall.
- Use a humidifier to keep nasal tissues moist. Be sure to keep the humidifier clean and free of mold with regular, thorough cleaning.

See a doctor immediately if you have the following signs or symptoms, which could indicate a serious infection:

- Fever
- Swelling or redness around your eyes
- Severe headache
- Forehead swelling
- Confusion
- Double vision or other vision changes
- Stiff neck