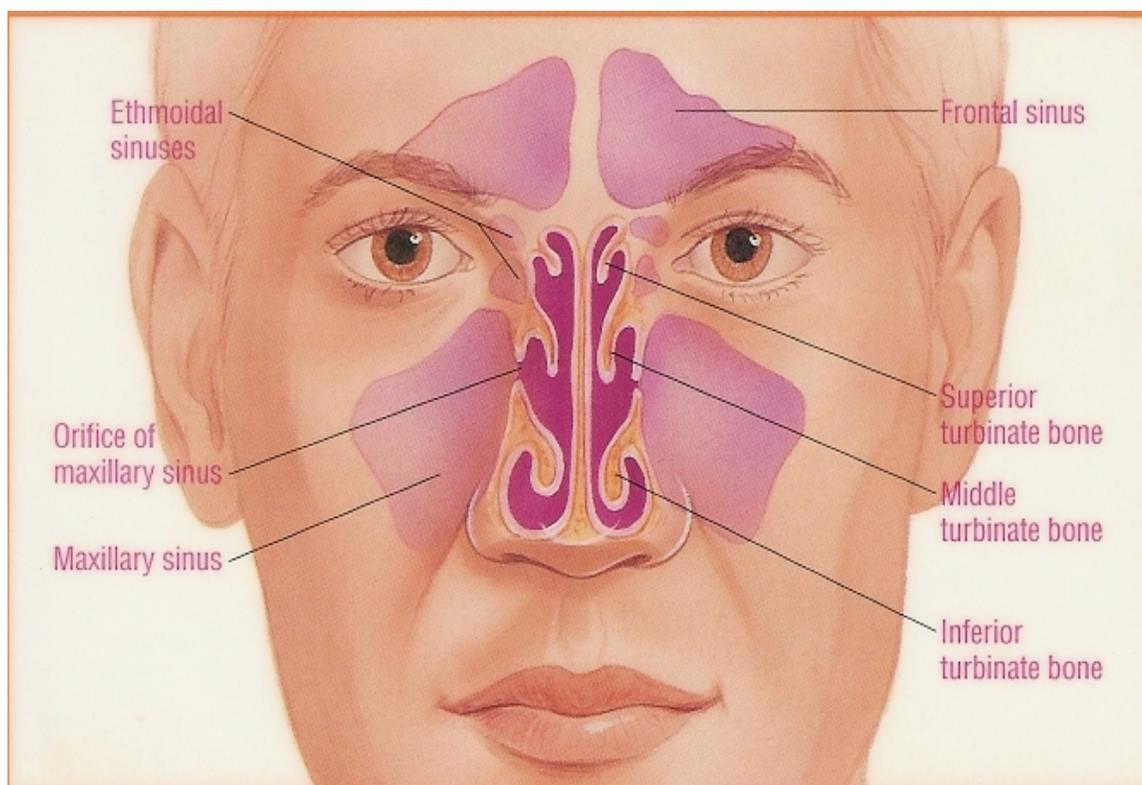


Sinusitis

Sinuses are hollow air spaces. There are four pairs of cavities or spaces known as paranasal sinuses. These cavities located within the skull or bones of the head surrounding the nose, include the frontal sinuses over the eyes in the brow area; the maxillary sinuses inside each cheek bone; the ethmoids just behind the bridge of the nose and between the eyes; and behind them, the sphenoids in the upper region of the nose and behind the eyes. Each sinus has an opening into the nose for the free exchange of air and mucous, and each is joined with the nasal passages by a continuous lining. Sinusitis is defined as inflammation of one or more of the paranasal sinuses.

Anatomy of the Sinuses



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Sinusitis (cont'd)

Symptoms of Sinusitis may be one or more of the following:

- Headache
- Pain and pressure in the face
- Prolonged discolored mucous from the nose or down the back of the throat
- Stuffy nose
- Productive cough
- Fever
- Tooth pain
- Reduced sense of taste or smell
- Cough
- Asthma flare

Acute bacterial sinusitis in adults most often presents with > 7 days of symptoms of purulent drainage, nasal congestion, postnasal drip, facial or dental pain/pressure, and cough, especially at night.

Children with acute sinusitis often have cough, runny nose, and nasal congestion.

Acute bacterial sinusitis is defined to be less than 4 weeks duration. Chronic sinusitis refers to inflammation of the sinuses with symptoms lasting longer than 12 weeks.

Chronic sinusitis is associated with allergic rhinitis in 36% - 60% of children and 40% - 80% of adults. An allergy evaluation should be done so that environmental control measures or other interventions, appropriate for allergic and non-allergic diseases can be started.

Most cases of acute sinusitis are preceded by virus-induced "colds". The nose reacts to the invasion by viruses by producing increased mucous, increased congestion and swelling of the nasal passages. When this swelling involves the mucous membranes of the sinuses, air and mucous are trapped behind the narrowed openings of the sinuses. If the mucous is unable to drain, the bacteria can multiply and cause an acute infection.

Condition associated with, or predisposing to sinusitis:

- Rhinitis (allergic and non-allergic)
- Viral "colds"
- Asthma
- Anatomic obstructions – nasal polyps, septal deviations, enlarged adenoids, foreign body, cleft palate, dental infection
- GERD
- Systemic diseases (uncommon):
 - Immune deficiency
 - Ciliary dyskinesia
 - Cystic Fibrosis
- Aspirin Sensitivity

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Sinusitis (cont'd)

Radiologic Studies:

If there are persistent symptoms with incomplete response to initial management, CT Scans are sometimes obtained to establish a definitive diagnosis and to assess for anatomic abnormalities that may predispose to sinusitis.

Prevention:

Humidifying the air in your home especially if heated by a dry forced-air system. Central humidifiers should be set to 30-40% relative humidity.

Avoid cigarette smoke and other air pollutants, especially if allergic. Inflammation caused by allergies can predispose a person to strong reactions to irritants.

Chlorinated pools may irritate the lining of the nose and sinuses. Divers may have increased congestion when water is forced into the sinuses from the nose.

Use of nasal decongestants before air travel may prevent blockage of the sinuses or the eustachian tubes in the ears.

Treatment:

For acute sinusitis, a 10 – 14 day treatment course is typically prescribed.

Chronic sinusitis is usually treated with antibiotic for 3 weeks or longer.

The goal is to improve drainage of the nasal passages, eliminate the source of the inflammation and relieve the pain.

Oral decongestants and short term (3 – 5 days) use of topical nasal decongestant sprays may reduce congestion.

Saline sprays or irrigations can help liquefy secretions.

High dose guaifenesin is used to thin the mucous and promote drainage.

Nasal steroids and nasal antihistamines reduce the congestion, swelling and inflammation of sinusitis.

Oral steroids may be prescribed for a few days to relieve pressure, reduce inflammation and decrease pain. Because they have potential significant side effects, they are prescribed only when other medicines are ineffective.

When sinusitis is difficult to treat, referral to an ear, nose and throat (ENT) specialist may be necessary.

Surgical intervention should be considered if sinusitis does not respond to medical intervention.

Fundoscopic endoscopic sinus surgery (FESS) is often aimed at removal of diseased ethmoidal tissue (important in the development of frontal and maxillary sinusitis) to improve ventilation and drainage of larger sinuses. The natural openings from the sinuses are enlarged to allow drainage.

Surgical removal of polyps may improve drainage and repair of a deviated septum often provides relief from sinus problems.