

SINUSITIS AND ENDOSCOPIC SINUS SURGERY

Where are the sinuses?

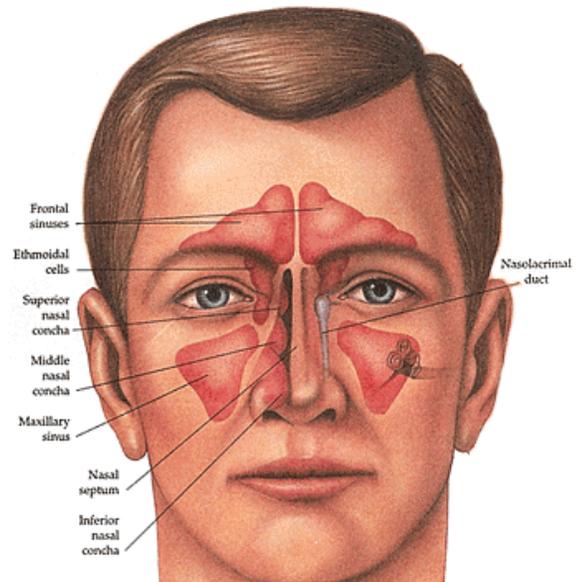
The sinuses are air filled cavities located in the bones of the face. The sinuses are divided into 4 groups based on their location. They are the maxillary, ethmoid, frontal and sphenoid sinuses.

What is sinusitis?

Sinusitis is a condition in which your child suffers from inflammation or infection of one or more of the sinuses.

Depending on the age of your child, this may occur in the pair of sinuses located between the eyes (ethmoid) and/or the pair behind the cheekbones (maxillary), as both of these sinuses are present at birth.

As children get older, they develop a pair of frontal sinuses (in the forehead) and a pair of sphenoid sinuses (behind the nose), which can also become affected.



What are the symptoms of sinusitis?

Sinusitis has symptoms of runny nose, stuffy nose, fever, headache, cough (especially at nighttime), post nasal drip (which can cause frequent throat clearing), bad breath, facial swelling and changes in your child's behavior. Many times it is difficult to tell the difference between a cold and a sinus infection.

A cold has many of the same symptoms but will usually get worse around the 3rd or 4th day and be improving by a week to ten days. A sinus infection is usually worsening instead of improving at a week to ten days.

What causes sinusitis?

Sinusitis is caused by an infection within the sinus cavities. Anything which causes blockage of the natural drainage openings of the sinuses can lead to infection. This means colds, flu, allergy or bacterial infection may be responsible. Blockage may also occur from polyps, which may be caused by allergies or chronic infection.

Once blockage of the natural drainage passageways has occurred, mucus builds up behind the blockage. This may lead to inflammation and, eventually, infection of trapped mucus, otherwise known as acute sinusitis.

Are there any other types of sinusitis?

Another type of sinusitis is known as chronic sinusitis. Most children have acute sinusitis which resolves on antibiotics after 3 weeks. However, your child may suffer from symptoms which last for 2-3 months or more; this is known as chronic sinusitis. In children with chronic sinusitis, the symptoms are usually less severe, but last longer than acute sinusitis. Chronic sinusitis may be aggravated by underlying allergies or long standing illness.

How is sinusitis diagnosed?

Your doctor will diagnose sinusitis based mostly on the history you give of your child's symptoms. You probably will be asked if your child has nasal congestion (stuffy nose) or a runny nose, a cough, post-nasal drip, bad breath, headache, swelling around the eyes, or behavior changes.

Sinusitis is also diagnosed by how long the symptoms last. If the child has a simple cold or flu, symptoms will usually last from 7 to 10 days. If the symptoms described previously persist beyond ten days, sinusitis is likely to have occurred and your child should be evaluated by a physician.

What might my doctor do during an evaluation?

After noting your child's symptoms, the next step is an examination of the patient's ear, nose and throat. Occasionally special nasal endoscopes will be used to see farther into the nose. In addition, your doctor might order radiological tests to completely evaluate the sinuses. These may include plain x-rays of the sinuses or a computed tomography (CAT) scan, which will give your doctor the most accurate information on your child's sinuses.

How will the doctor treat acute sinusitis?

As the first line of treatment, your doctor will probably give your child an antibiotic for several weeks to clear the sinus infection. Nasal decongestants or nasal sprays may also be prescribed. If your child has acute sinusitis, symptoms should improve within the first few days. After the first week of treatment, your child will often seem much better; however, you should continue the antibiotic therapy as described by your doctor for the full course of therapy. Otherwise, the infection may return.

If your child has a sinusitis which seems to be linked to an allergic condition, your doctor may decide to involve an allergy specialist so that the underlying allergy can be treated.

How might the doctor treat chronic sinusitis?

If your child has had several acute sinus infections in the past several years or has long standing chronic sinusitis which does not seem to go away completely with antibiotics, your doctor may recommend surgical treatment of the sinuses. The surgical treatment depends on the individual patient but can range from culturing the sinuses, to adenoidectomy to Functional Endoscopic Sinus Surgery (FESS).

Are there any complications resulting from sinusitis?

In addition to development of chronic sinusitis, serious complications of sinusitis include orbital cellulitis (an infection in the tissues around the eye), osteomyelitis (an infection of the bones of the sinuses), meningitis (infection in the fluid surrounding the brain and spinal cord), or brain abscess. Thankfully, especially with treatment, these complications are rare.

What is functional endoscopic sinus surgery (FESS)?

Functional endoscopic sinus surgery (FESS) is a surgical technique used to help open the sinus drainage pathways and remove mucus from the sinuses, which helps to eliminate or decrease the number of infections in the future. Because this technique opens the natural sinus openings, FESS has been shown to produce better results than procedures used in the past.

When is sinus surgery necessary?

If your child has had 6 episodes of acute sinusitis in the past year or has long-standing chronic sinusitis which does not go away completely with antibiotics, sinus surgery may be recommended.

What is involved with FESS?

Before endoscopic sinus surgery, a computed tomography (CAT) scan will be performed to see how your child's sinuses are formed and how big they are. It is important to have the CAT scan taken while your child is on antibiotics so that we can see how effective the medicine has been in clearing up the sinus infection. If the CAT scan is taken, sedation use is rare. However, your child may need to receive mild through an IV in order to have the CAT scan taken.

These pictures can be used to show the amount of infection in the sinuses, as well as help your doctor know exactly what kind of surgery your child will need.

The surgery is performed using small telescopes which are placed through the nose allowing the doctor to open the natural drainage pathways of your child's sinuses under direct vision. This allows for drainage of mucus from the sinuses and helps prevent future infections. The CAT scan is also used to provide 'image guidance' in the operating room, a new computer-guided technique that helps to improve surgical accuracy and surgical results.

FESS is performed under general anesthesia. This procedure does not require an overnight stay in the hospital, and the length of surgery depends on the amount of disease and blockage in the sinuses. Surgery usually lasts between 1-2 hours.

Follow-up in the office is weekly for the first several weeks to keep crusting at a minimum and ensure the area is healing properly. If in-office cleaning is not well tolerated, your child may be scheduled to return to the operating room 2-3 weeks after surgery to clean out any crusting to make sure the area is healing properly.

Is endoscopic sinus surgery dangerous?

Endoscopic sinus surgery as described above involves operating on your child's sinuses through the nose using small telescopes. As the sinuses are located near the eyes and directly under the brain, there is always a risk that damage may occur to those areas. However, because the surgery is performed under direct vision, with image guidance, and with experienced surgeons, these complications are very rare. These risks and possible complications will be described for you prior to your child's surgery.

