Sinusitis

What are sinuses?
The sinuses are cavities, or air-filled pockets, that are near the nasal passage. There are four different types of sinuses:

- **ethmoid sinus** - located inside the face, around the area of the bridge of the nose. This sinus is present at birth, and continues to grow.
- **maxillary sinus** - located inside the face, around the area of the cheeks. This sinus is also present at birth, and continues to grow.
- **frontal sinus** - located inside the face, in the area of the forehead. This sinus does not develop until around seven years of age.
- **sphenoid sinus** - located deep in the face, behind the nose. This sinus does not develop until adolescence.

The inside of the sinuses is similar to the inside of the nose.

What is sinusitis?
Sinusitis is an infection of the sinuses near the nose. These infections usually occur after a cold or after an allergic inflammation. There are three types of sinusitis:

- **acute** - this type of infection occurs quickly and gets better with the appropriate treatment.
- **subacute** - this type of infection does not get better with treatment initially, and lasts less than three months.
- **chronic** - this type of infection happens with repeated acute infections or with previous infections that were inadequately treated. These symptoms last longer than three months.

What causes sinusitis?
Sometimes, a sinus infection happens after an upper respiratory infection (URI) or common cold. The URI causes inflammation of the nasal passages that can lead to obstruction of the opening of the paranasal sinuses, which can lead to infection in the sinuses. Allergic disease can also lead to sinusitis because of the swelling of the nasal tissue and increased production of mucus. There are other possible conditions that can block the normal flow of secretions out of the sinuses and can lead to sinusitis. These may include:

- abnormalities in the structure of the nose
- enlarged adenoids
- diving and swimming
- infections from a tooth
- trauma to the nose
- foreign objects that are stuck in the nose

After the blockage of the flow of secretions from the sinuses, bacteria will sometimes begin to grow. This leads to a sinus infection, or sinusitis. The most common bacteria that cause sinusitis are:

- Streptococcus pneumonia
- Haemophilus influenza
What are the symptoms of sinusitis?
The symptoms of sinusitis vary for each person, and depend greatly on the age of the individual. The following are the most common symptoms of sinusitis. However, each individual may experience symptoms differently. Symptoms may include:

**younger children:**
- runny nose that lasts longer than seven to ten days. The discharge is usually thick green or yellow, but can also be clear.
- nighttime cough
- occasional daytime cough
- swelling around the eyes
- children usually do not complain of headaches if less than five years of age

**older children and adults:**
- runny nose or cold symptoms that last longer than seven to ten days
- complaints of drip in the throat from the nose
- headaches
- facial discomfort
- bad breath
- cough
- fever
- sore throat
- swelling around the eye, worse in the morning

The symptoms of sinusitis may resemble other conditions or medical problems. Consult a physician for diagnosis.

How is sinusitis diagnosed?
Usually, your physician can diagnosis sinusitis based on your symptoms and physical examination. Sometimes, additional tests are performed to confirm the diagnosis. These may include:

- **cultures from the nose**
- **x-rays** - diagnostic test which uses invisible electromagnetic energy beams to produce images of internal tissues, bones, and organs onto film. (X-rays are not typically used, but may help assist in the diagnosis.)
- **sinus x-rays**
- **computed tomography (CT or CAT scan)** - a diagnostic imaging procedure that uses a combination of x-rays and computer technology to produce cross-sectional images (often called slices), both horizontally and vertically, of the body. A CT scan shows detailed images of any part of the body, including the bones, muscles, fat, and organs. CT scans are more detailed than general x-rays.
- **cultures from the sinus fluid**
- **blood tests**

Treatment for sinusitis:
Specific treatment will be determined by your physician based on:

- your age, health, and medical history
- extent of the disease
- your tolerance for specific medications, procedures, or therapies
• expectations for the course of the disease
• your opinion or preference

Treatment of sinusitis may include the following:

• antibiotics, as determined by your physician. Antibiotics are usually given for 10 - 14 days, and sometimes even longer.
• acetaminophen for pain or discomfort
• nasal drops

Decongestants and antihistamines do not seem to help the symptoms of sinusitis.