ENT Specialists Of North Florida

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Sinusitis

What is sinusitis? The sinuses are air-filled spaces within the bones of your head/face. The sinuses have a special type of lining (mucosa) containing tiny hair-like structures (cilia) which move mucus toward the sinus openings to allow for healthy drainage. All of the sinuses open/drain into the nose, just like rooms have openings into a hallway. Sinusitis occurs when the lining of the nose and sinuses becomes inflamed (swollen) interrupting the natural sinus drainage pathways. This can lead to bacterial infection which in turn causes more inflammation. There are usually multiple factors contributing to development of sinusitis including your body's immune system reacting to things that you are allergic to in the environment, irritants such as tobacco smoke or acid reflux, anatomic obstruction such as a deviated septum or concha bullosa, and bacterial infection.

What are the symptoms? Possible symptoms include nasal congestion/obstruction, colored drainage, facial pressure, decreased sense of smell or foul smell, bad breath, cough, fever, ear pressure, dental pain, and fatigue. Sinus disease can cause headache. However, many people with headaches who have been told that it was "sinus headache" are actually suffering from migraine or other form of headache.

Acute vs Chronic sinusitis: Acute sinusitis is defined by symptoms lasting 4 weeks or less. This may resolve on its own or respond completely to medical treatments such as oral antibiotics, steroids, decongestants, and saline rinses. It is common for many people to get an acute sinus infection after a cold or a period when their allergy symptoms flare up. Once it is treated, the sinus lining returns to a healthy state, symptoms resolve, and no further ongoing treatment is required.

Chronic sinusitis is a different problem which is much more difficult to treat. This is long lasting (over 12 weeks) inflammation due to a combination of stubborn bacterial infection (biofilm) as well as the body's immune response against the bacteria and environmental allergens. Chronic inflammation can lead to growth of inflammatory tissue called nasal polyps which cause further obstruction. We have different forms of treatment to help control chronic sinusitis but it is helpful to think of this the same way we think of other chronic conditions such as diabetes or asthma. This condition requires **long-term, chronic treatment**.

FIRST AND FOREMOST, if you smoke, STOP SMOKING. Smoking and exposure to second-hand smoke can cause or worsen sinusitis and the function of the nose

Surgery on your sinuses will be much less effective long term if you smoke.

Stopping your treatments (on your own, or because you feel well) can lead to return of symptoms and disease.

Surgery is sometimes a part of the treatment strategy, but does NOT replace medical therapy. You will NOT have a good result with surgery alone in the vast majority of cases. You need to be on long-term medical therapy to decrease inflammation and to reduce the chances that you will need surgery or repeated surgeries. We cannot remove or replace all of the diseased lining of your sinuses. The goal of surgery is to widely open the sinus drainage pathways, fix anatomic obstruction, remove polyp tissue and pus or fungal debris. Once the sinuses are open, topical rinses will have better access to reach the lining on the inside. We can then add medications such as steroid or antibiotics to the rinse to help decrease inflammation and reduce the amount of oral/systemic antibiotics and steroids that you have to take (as these oral medications have many side effects with repeated courses). For the patient with chronic sinus disease, rinsing the sinuses is like brushing your teeth. It needs to become part of the daily routine.

I like the analogy of thinking of the inflamed sinus lining like a garden with weeds. We can go in the garden and pull all the weeds we can see and create better drainage/irrigation pathways for the garden (surgery) but afterward we still need to use fertilizers and weed sprays and water/maintain the garden to keep it healthy. If at any point we do nothing, the weeds will come back and overgrow the garden.

Medical therapy is the mainstay, workhorse of treatment for chronic rhinosinusitis.

We divide our treatment strategies into:

1) Maintenance - to stay on and prevent you from getting worse

2) Rescue, Intermittent treatments for when you are having an exacerbation or worsening

3) Backup treatments that are used only if we are failing or in certain conditions

These 3 categories are discussed in more detail below:

1) Maintenance therapy typically consists of some or all of the following:

A) Antihistamine like **Zyrtec** (cetirizine), Allegra (fexofenadine), or Claritin (loratidine). (not with decongestant, or D)

B) Leukotriene modifier like **Singulair**

C) **Sinus/Nasal irrigations** for those people who have had sinus surgery before, usually saline (salt water) based, and with a **steroid** (like budesonide or mometasone) and/or an antibiotic (like gentamicin, mupirocin, bactroban, ceftazidime, tobramycin, clindamycin, levaquin, etc) mixed into it. These irrigations help removed debris and allergens, and the medications help decrease inflammation of the lining of the sinuses as well as reducing the amount of bacteria that live on the lining of the sinuses.

Sometimes, if you have not had surgery before, we use just a steroid nasal spray instead of an irrigation because the sinuses have not been opened before. Examples of this are Flonase (fluticasone), Nasonex (mometasone), Rhinocort

2) Rescue therapy consists of:

A) Steroids (by mouth, systemic steroids that are absorbed and circulate throughout the body). Examples include prednisone or medrol. They typically are given as a pack or taper. These are effective medication, but the more often and the longer they are used, they can cause serious side effects. Using them for less than 3 weeks at a time is generally safe. Caution with these medications if you have glaucoma, cataracts, bleeding stomach ulcers, thin bones (osteoporosis, osteopenia), or diabetes. We always recommend taking all your steroid pills for that given day AT THE SAME TIME, IN THE MORNING, AFTER A FULL BREAKFAST.

B) Antibiotics by mouth. These also help reduce the bacteria and inflammation in the nose and sinuses. We try to give you the appropriate antibiotics based on the results of cultures taken from your nose and sinuses so that we know exactly which bacteria we are trying to kill. If we can't get a culture or the culture does not grow, we will choose antibiotics based on your previous cultures, or the most common types of bacteria that grow in your particular situation. **We always recommend taking a probiotic** (**yogurt, acidophilus, lactobacillus, culturelle, florasto**r, etc) while on antibiotics to minimize the risk of diarrhea.

3) Backup Therapy consists of

A) Treatment of acid reflux, which can be silent (not causing obvious Symptoms). Patients with nasal obstruction and sleep apnea have high risk of having silent reflux. We know that acid can reach the back of the nose because research has found pepsin in the ears of children with fluid in their ears. Pepsin is only made in the stomach. Having an acid burn to the back of the nose or sinuses even just once per week while you are asleep can damage the lining of the nose and sinuses.

B) Allergy testing and immunotherapy.

C) Immune system testing to see if there is an underlying problem with your immune system

D) Dupixent, Nucala, Xolair shots: these are antibiody treatments usually reserved for patients with severe chronic sinusitis especially with polyps and asthma not responding to other medical and surgical treaments. These are very expensive treatments but may be covered in severe cases.