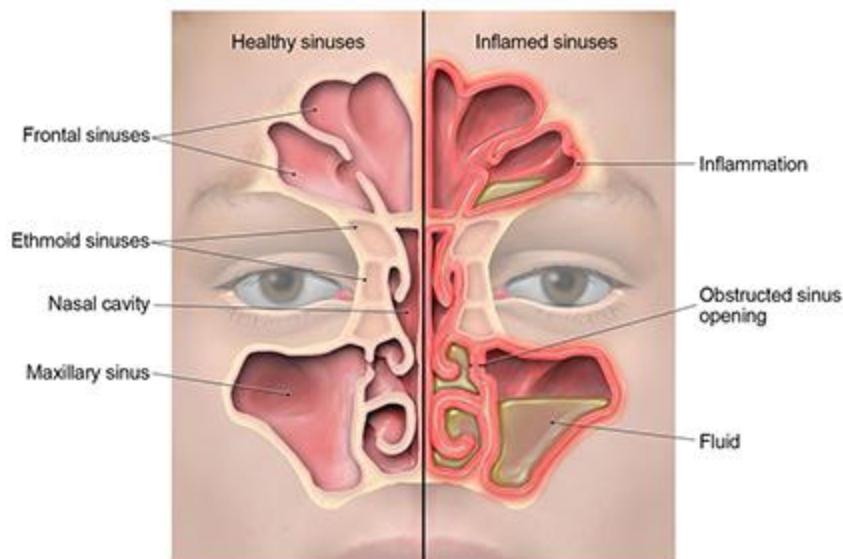


## Sinusitis Patient Instructions

### What are sinus infections?

- Sinus infections are mainly due to obstructed sinus outflow tracts as opposed to an abundance of bacteria
- The most common reason for obstructed sinuses is swelling in the lining of the nose/sinuses from causes like viral upper respiratory infections or allergies, but less common causes like anatomic abnormalities or intrinsic sinus inflammation may contribute
- The facial pain/pressure that results is due to mucus build up that cannot flow out properly
- Bacteria that are normally present in the sinuses tend to proliferate in this setting of abundant mucus. There are also theories that films of bacteria (biofilms) that do not resolve with standard antibiotic courses may play a role
- Acute sinusitis is defined as facial pain/pressure (or reduced sense of smell) AND either nasal congestion or nasal discharge that lasts for less than 4 weeks
- Chronic sinusitis is defined as having 2 of the following symptoms – facial pain/pressure, nasal congestion, reduced sense of smell/taste or nasal discharge – that lasts for more than 12 weeks, and



is associated with abnormalities seen on physical exam or a CT scan associated with chronic sinus disease

- Acute recurrent sinusitis is defined as four or more episodes per year of acute sinusitis
- Acute exacerbation of chronic sinusitis is defined as a sudden worsening of symptoms with a return to baseline after treatment

### How to treat acute sinusitis:

- The most important treatment for acute sinusitis is time. With time, the precipitating disease (most likely a viral URI) will resolve, allowing the lining of the nose and sinuses to normalize, and for the mucus to flow out of the sinuses
- There are, however, several treatments that can help reduce symptom severity and duration. These options are listed here descending strength of recommendation order:

- Intra-nasal steroids: Intra-nasal steroids like Flonase, Nasonex or Nasacort have the strongest scientific support to be used for acute sinusitis. They can help reduce facial pain/congestion severity, and have a very favorable side effect profile
- Nasal saline irrigations: Saltwater irrigations improve to clear mucus that is trapped in the sinuses
- Steroids: Oral steroids can help reduce facial pain/congestion severity, but they can cause side effects like irritability, increased appetite and elevated blood sugar. A course of prednisone or methylprednisolone may be prescribed for about 5-10 days
- Antibiotics: Antibiotics have been shown to reduce symptom duration by about 1 day on average. Antibiotics of choice include Amoxicillin, Augmentin (Amoxicillin + Clavulanate), Doxycycline, Ciprofloxacin or levofloxacin for about 7-10 days. Each of these medications has their own side effect profile.
- Oral decongestants: Medications like Sudafed or Phenylephrine have not been demonstrated to reliably improve acute sinusitis symptoms
- Anti-histamines: Allergy medications like Allegra, Zyrtec and Claritin have not been demonstrated to reliably improve acute sinusitis symptoms
- Acute sinusitis is treated with a combination of these above options, along with supportive care like Tylenol, ibuprofen and time

#### **How to treat chronic sinusitis:**

- Chronic sinusitis can be treated with both medications and procedural interventions
- Medical treatments for chronic sinusitis include:
  - Intra-nasal steroids (Flonase, Nasonex, Nasocort, etc.) 1-2 times daily
  - Saline irrigations (NeilMed Sinus Rinse, Neti Pot, Navage etc.) daily
  - Oral antibiotics
  - Oral steroids
- Unlike acute sinusitis, symptoms from chronic sinusitis tend not to resolve with time, and procedures may be required to widen the sinus openings to improve mucus clearance
- If we think you are suffering from chronic sinusitis, we usually will treat you with the below regimen:
  - Daily nasal steroids (eg Flonase Sensimist), 2 sprays, each side, daily
  - Daily use of NeilMed Sinus Rinse, Neti Pot, Navage or other saline irrigation (do not use immediately after nasal steroid spray to avoid washing the medicine away before it can take effect)
  - 5-7 days of an oral antibiotic
  - 5-8 days of an oral steroid (usually a Medrol Dose Pak or course of Prednisone)
- Once the courses of antibiotics and steroids are complete, we often obtain a post-treatment CT sinus scan to further evaluate the status of your sinuses
- If there is evidence of chronic sinus disease on the CT scan that was not resolved with the nasal steroids, irrigations, antibiotics and steroids, and you are still suffering from symptoms of chronic sinusitis, then we usually recommend a procedure to widen your sinus openings
- Procedures for widening the sinus openings include in-office balloon sinuplasty and endoscopic sinus surgery under general anesthesia
- Which procedure we recommend is dependent on both your symptoms and what we see on your post-treatment CT scan