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## Sinusitis

### What Are Sinuses?

The skull is made of bone, which contains a few air-containing chambers. The chambers relating to the nose are called paranasal sinuses. The chambers relating to the ear are the mastoid cells and the middle ear. The sinuses are paired chambers, most of them located in proximity to the eyes. Above the eyes are the frontal sinuses, below the eyes are the maxillary sinuses; between the eyes are the ethmoid sinuses. Yet a fourth pair of sinuses located very far back behind the ethmoid and above the soft palate are the sphenoid sinuses.

### What Do Sinuses Do?

For sure, healthy sinuses contain air and, therefore, they make the skull lighter, probably 50% lighter, making it easier to carry our heads around. Sinuses also play a role in how the voice sounds, particularly in singing, commonly referred to as resonance. Sinuses also produce secretions which drain through very small openings (smaller than the pupil of the eye) called ostia. Together, the nose and sinuses produce one to 1 1/2 quarts of secretions every 24 hours. The secretions are essential, along with other nasal functions, to the role of the nose and sinuses as air-handling pre-chambers for the lungs. Finally, and unfortunately, sinuses, as with any part of the human body, sometimes get sick, i.e. infected.

### Why Do Sinuses Get Sick?

When sinuses get sick, it is called sinusitis. The most common cause for sinusitis is anything that causes some degree of blockage of the openings from the sinuses into the nose. Once the blockage occurs, and if it persists, the sinus secretions back up into the sinuses, and infection is sure to follow. In the case of a "cold" or viral infection, the blockage usually resolves in a matter of days with or without treatment. However, if the cold does not resolve in five to seven days and/or if any one of many bacteria discovers the moist, warm, dark and nourishing secretions pooling within the sinuses, the "cold" may persist for days, weeks or months. Bacteria may also cause infection by acting alone and may also resolve spontaneously. Either way, if either scenario persists, medical therapy is usually required.

### Are There Other Causes Of Sinusitis?

Yes, in addition to viral and bacterial causes of sinusitis, allergic reactions to airborne allergens such as house dust mite, ragweed, pollen, and animal dander, etc. may cause enough swelling to block sinus passages and set the stage for a bacterial infection. Other airborne causes include mold or fungi and a multiplicity of airborne irritants that can also cause enough swelling that sinuses gets sick. There are also anatomic reasons relating to nasal and sinus development, both of which began in utero, and are completed in early adult life.

## What Is The Treatment For Sinusitis?

Since nasal congestion is, in most instances, the starting point for a sinus infection, sometimes simply relieving the congestion with an over-the-counter nasal spray with or without a nasal irrigation or rinse, will improve breathing, and sleeping, but the sinuses may not be as responsive because the sprays may not reach the sinus openings to decongest them and allow the sinuses to drain. Further the over-the-counter spray can only be used for a few days. Oral decongestant medications, both over the counter and prescription, can help open both nasal and in some instances, sinus passages.

## What About Antibiotics?

Persistent difficulty that does not respond to simple decongesting, may then require antibiotics, the mainstay of treatment for persistent sinusitis. The choice of antibiotic is made by a qualified medical care provider, in most instances a primary care physician or physician extender. In most instances, antibiotics can be expected to be quite effective in relieving routine sinus infections. However, in some instances the antibiotics only provide short term, not long-term relief and must be repeated. If that cycle repeats itself over a period of months or years, the primary care provider may well suggest consultation with a specialist in the area of nasal and sinus care. There are both part-time and full-time nasal and sinus care providers. The Setliff Sinus Institute is staffed with full-time nasal and sinus care personnel.

## What About Surgery?

When medical and other nonsurgical options had been exhausted and, in most instances, the patient has also become frustrated with repeated experiences of temporary relief, surgical intervention may be considered. Unfortunately, there is no standard of care for nasal and sinus surgery. What that means is that the surgery can be either highly invasive or minimally invasive, both being acceptable under current practice. The goal in either case is to provide an easy drainage from the sinuses into the nose and reduce the potential for future sinus obstruction.

## What About After Surgery?

For many years, sinus surgery was quite highly invasive and required days or weeks for recovery. The Setliff Sinus Institute is proud to have been the first to introduce minimally invasive surgical techniques some twenty years ago and has continued, with an experience of some 10,000 operative cases to refine and improve both precision and outcomes. In our hands, surgical patients are on no restrictions the day after the procedure.

## What About Balloons And Sinus Surgery?

The most recent development in the surgical treatment of sinusitis has been the advent of balloon therapy, in which a balloon is placed across the sinus opening and inflated, thereby making the opening larger, but with no guarantee that it will remain larger. There are providers who use balloons routinely, i.e. in every case, and others, such as the providers at Setliff Sinus Institute, who use balloons only in special situations with a clear indication other than the fact that the sinus opening is small. There is not compelling evidence to support the routine use of balloons in either the outpatient or operating room setting.