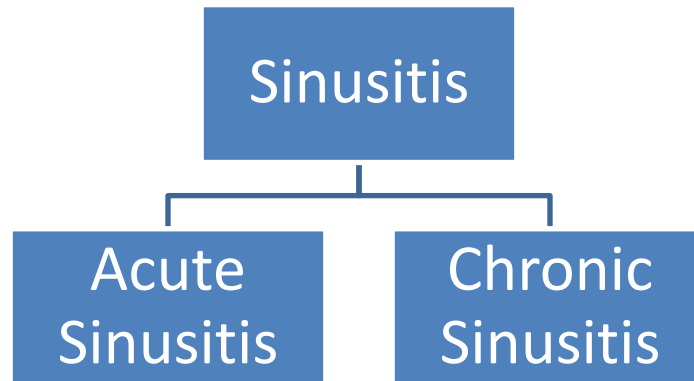
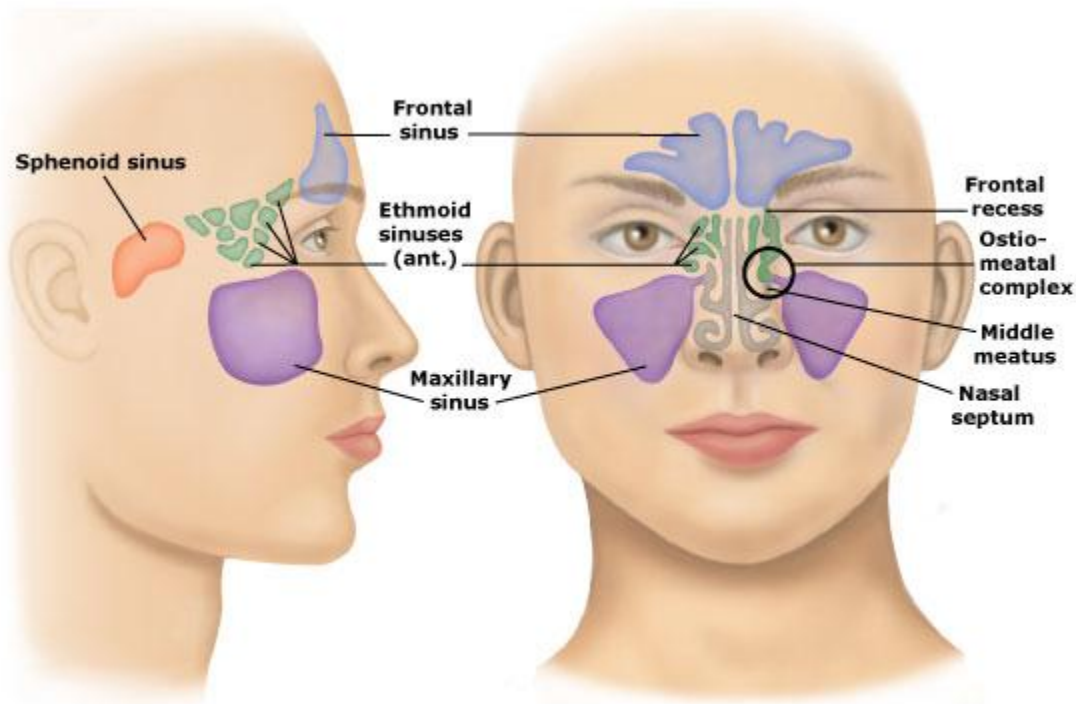


Sinusitis



- Sinusitis is the inflammation of the inner lining of the paranasal sinuses due to infection or non-infectious causes such as allergies or environmental pollutants.
- If the inflammation lasts more than 12 weeks, it is known as chronic sinusitis.

Anatomy of the Paranasal Sinuses



- Paranasal sinuses are air-filled spaces within the facial bones.
- There are 4 paired paranasal sinuses, namely maxillary sinuses, frontal sinuses, ethmoidal sinuses and sphenoidal sinuses.

- The sinuses are normally sterile and lined with mucous membranes and hair-like structures called cilia.
- The mucous membranes produce mucus that trap foreign agents such as viruses and bacteria.
- The cilia will sweep the mucus out through an opening (ostium) into the nasal cavity and then out through the nostrils or down the back of the throat into the stomach.

Acute sinusitis

How does it happen?

It is due to the interplay of 3 factors.

- The sinus drainage pathways may be obstructed due to swollen mucous membranes in the sinuses, nasal polyps or foreign bodies.
- The cilia are not working properly, commonly due to bacterial toxins.
- The mucus produced in the sinuses are too thick and too much, also commonly due to infection.

Consequently, the retained and stagnant mucus in the paranasal sinuses become easily infected, causing acute sinusitis.

What are the symptoms?

Common symptoms include:

- Facial pain
- Headache
- Redness of the nose, cheeks and eyelids
- Blocked nose
- Postnasal discharge
- Persistent coughing
- Reduced ability to smell
- Fever

Do I need any further tests?

X-rays and blood tests are normally not required in uncomplicated cases unless specified by your treating doctor.

How am I treated?

Symptomatic treatment:

- Humidification/vaporizer
- Warm compresses over painful areas
- Drink adequate amounts of water
- Stop smoking
- Eat a balanced diet
- Medicine for pain, cough, runny nose and fever

Antibiotics:

- Antibiotics are indicated for bacterial infection of the paranasal sinuses only and do not improve the outcome for non-bacterial infections.
- Antibiotics are typically taken for 5-10 days.
- Only a doctor is trained to be able to differentiate between a bacterial and non-bacterial infection.

Chronic Sinusitis

If sinusitis symptoms last for more than 12 weeks (3 months), you may be having chronic sinusitis.

How does it happen?

Most cases are due to untreated acute sinusitis or failure to respond to treatment. Factors contributing to chronic sinusitis include:

- Persistent infection
- Superbugs
- Recurrent allergies
- Fungi
- Deficient immune system
- Tumours and other structural abnormalities

What are the symptoms?

- Blocked nose
- Runny nose
- Postnasal discharge
- Facial fullness and discomfort
- Sore throat
- Very bad breath
- Prolonged fever
- Visual disturbances

Do I need further tests?

You would usually need to be further investigated by imaging and other tests, including:

- CT scan
- MRI
- Sinus culture
- Endoscopic biopsy
- Skin testing for allergens
- Immunodeficiency screening

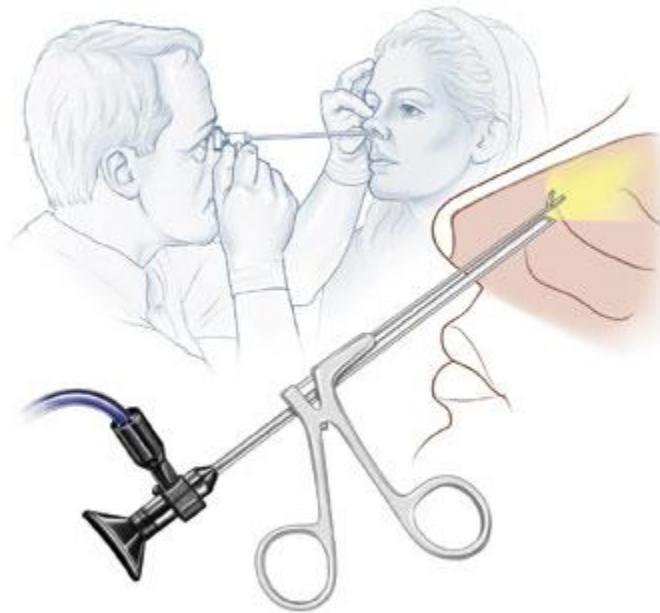
How am I treated?

Cases are usually best referred to and treated at the ENT department due to the relative complexity of the problem.

Medical treatment:

- Topical decongestants
- Topical steroids
- Antibiotics
- Nasal saline
- Mucolytics

Surgery:



- Functional Endoscopic Sinus Surgery (FESS) may be needed to restore the mucociliary clearance system and reestablish sinus ventilation