



ACUTE SINUSITIS

- Acute sinusitis is a clinical diagnosis and is defined as a rhinosinusitis that has persisted for between 7 and 28 days, with the presence of two or more major sinus symptoms or at least one major and two minor sinus symptoms. [5](#)
- Major symptoms: facial pain/pressure, facial congestion/fullness, nasal obstruction/blockage, nasal discharge, hyposmia/anosmia, purulence in the nasal cavity on examination and fever. [5](#)
- Minor symptoms: headache, halitosis, fatigue, dental pain, cough and ear pain/pressure/fullness. [5](#)
- Symptoms in children are more non-specific with cough and nasal discharge being the most common presentations. Facial pain and headache are not usually present. [6](#)

- Streptococcus pneumoniae, Haemophilus influenzae and Moraxella catarrhalis account for around the majority of acute bacterial sinusitis in adult and paediatric populations. [6,7](#)
- Mixed microorganisms cultured from intranasal swabs do not usually correlate with the pathologic source. [6,7](#)
- Specialist ENT referral is warranted in the following situations: [6,8](#)
 - Suspected complications
 - No response to 2nd line antibiotic therapy
 - Recurrent disease (>3 acute episodes per year)
- Use of plain radiography for diagnosis of inflammatory sinus disease is not recommended. [1-4,9,21,22](#)

COMPUTED TOMOGRAPHY

- Coronal CT is not a routine investigation in the diagnosis of acute bacterial sinusitis and is indicated only for non-responsive or recurrent acute sinusitis, pre-surgical planning and for evaluating suspected complications. [1-4,6,8](#)
- Coronal plane optimally displays: [9,10](#)
 - The ostiomeatal unit and relationship of the brain and roof of the ethmoid sinus.
 - The relationship of the orbits to the paranasal sinuses.
- For patients requiring sinus imaging evaluation, consensus in North America and Europe currently recommends CT in preference to plain film radiography which are insensitive and non-specific. [1-4](#)
- There have been no studies comparing CT to sinus puncture and aspiration
- CT has low specificity for diagnosis of acute sinusitis, thus clinical correlation is essential. [11](#)
- Features of acute sinusitis on CT include: mucosal thickening, presence of air/fluid levels, enhancing pockets with non-enhanced central zone (pus) and complete sinus opacification. [12,13](#)
- For anatomical evaluation including pre-surgical planning, a non-contrast scan is adequate.
- If complications are suspected, then the scan is usually performed before and after administration of contrast.
- Multidetector CT enables fast scan times, and may reduce the need for sedation in young children.
- Low-dose CT protocols can effectively reduce the radiation dose without significantly affecting diagnostic quality [14,15](#)

MAGNETIC RESONANCE IMAGING

- For intracranial complications of acute sinusitis, MRI is more accurate than CT and is considered by some to be the initial diagnostic modality of choice. [16,17](#)
- MRI and MR Venography (MRV) are more sensitive than CT for the diagnosis of cavernous sinus thrombosis. [18,19](#)
- Limitations: expensive, not available at all centres, long scan times. [20](#)

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Website

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