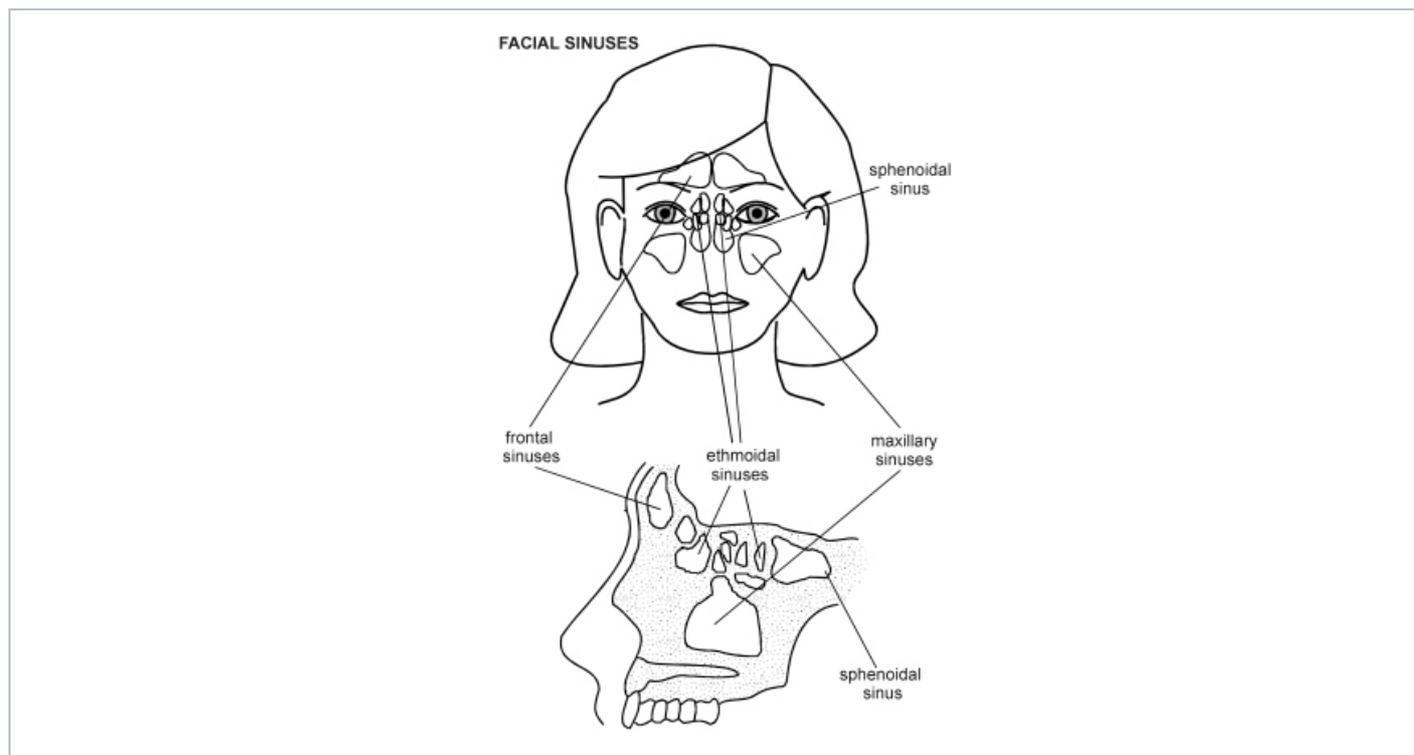


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Acute Sinusitis

Acute sinusitis is a sinus infection which usually goes away on its own without treatment. There are various treatments that may help to ease symptoms. Antibiotic medicines are only sometimes needed. Complications are uncommon but include persistent (chronic) sinusitis and the infection spreading to nearby structures.

What are sinuses?



The sinuses are small, air-filled spaces inside the cheekbones and forehead. They make some mucus which drains into the nose through small channels.

What is sinusitis?

Sinusitis means inflammation of a sinus. Most bouts of sinusitis are caused by an infection. The cheekbone (maxillary) sinuses are the most commonly affected.

Acute sinusitis means that the infection develops quickly (over a few days) and lasts a short time. Many cases of acute sinusitis last a week or so but it is not unusual for it to last 2-3 weeks (that is, longer than most colds). Sometimes it lasts longer. Sinusitis is said to be acute if it lasts from 4-30 days and subacute if it lasts 4-12 weeks. A mild bout of acute sinusitis is common and many people will have some degree of sinusitis with a cold. However, severe acute sinusitis is uncommon. Most people only ever have one or two bouts of acute sinusitis in their lives. However, some people have repeated (recurring) bouts of acute sinusitis.

Chronic sinusitis means that a sinusitis becomes persistent and lasts for longer than 12 weeks. Chronic sinusitis is uncommon. [See separate leaflet called Chronic Sinusitis for more details.](#)

The rest of this leaflet is about acute sinusitis.

Clinical Editor's Note

Nov 2017 - Dr Hayley Willacy recommends reading the recently published NICE Guideline - see Further reading below. They provide clear advice on managing people with sinusitis in different situations. People presenting with symptoms for around 10 days or fewer **should not be offered an antibiotic prescription**. They suggest the clinician give advice about the usual course of acute sinusitis (2 to 3 weeks); an antibiotic not being needed; managing symptoms, including fever, with self-care, and seeking medical help if symptoms worsen rapidly or significantly, do not improve after three weeks, or they become systemically very unwell.

When the person has been unwell for around 10 days or more, with no improvement, the clinician can consider prescribing a high-dose nasal steroid for 14 days for adults and children aged 12 years and over. Alternatively they may provide a back-up antibiotic prescription, taking account of evidence that antibiotics make little difference to how long symptoms last, or the proportion of people with improved symptoms; withholding antibiotics is unlikely to lead to complications; antibiotics may cause possible adverse effects, particularly diarrhoea and nausea. Also inform them of factors that might make a bacterial cause more likely.

How do you get acute sinusitis?

After a cold or the flu

In most people, acute sinusitis develops after a **cold** or **flu-like illness**. Colds and flu are caused by germs called viruses which may spread to the sinuses. The infection usually remains viral before clearing, causing a viral sinus infection. In a small number of cases, germs called bacteria add on to an infection that started with a virus. This can cause a bacterial sinus infection which can make the infection worse and last longer.

Spread from a dental infection

In some cases, infection spreads to a cheekbone (maxillary) sinus from an infected tooth.

Other risk factors for sinus infection

In some people, one or more factors are present that may cause the sinuses to be more prone to infection. These include:

- Nasal allergy (allergic rhinitis). The allergy may cause swelling of the tissues on the inside lining of the nose and block the sinus drainage channels. This makes the sinuses more susceptible to infection. See separate leaflets that discuss allergic rhinitis, called **Hay Fever** and **Persistent Rhinitis**, for more details.
- Other causes of a blockage to the sinus drainage channels, such as:
 - Growths (**nasal polyps**).
 - Objects pushed into the nose (especially in children, such as peas or plastic beads).
 - Facial injury or surgery.
 - Certain congenital abnormalities in children. ('Congenital' means they are present from birth).
- **Asthma**.
- **Cystic fibrosis**.
- A poor immune system - for example, people with **HIV**, people on **chemotherapy**, etc.
- Inflammatory disorders such as **Wegener's granulomatosis** or **sarcoidosis**.
- **Pregnancy**, which makes you more prone to nasal inflammation (rhinitis).
- Rare tumours of the nose.
- Previous injuries to the nose or cheeks.
- Medical procedures such as ventilation or the insertion of a tube through the nose into the stomach (nasogastric tube).
- **Smoking**.

What are the symptoms of acute sinusitis?

Symptoms that commonly occur include:

- **Pain and tenderness** over the infected sinus. The pain is often throbbing and worse when you bend your head forward. Chewing may be painful.
- **Nasal symptoms**. You may have either:
 - **A blocked nose**. Both sides of your nose usually feel blocked. Your sense of smell may also go for a while.
 - **A runny nose**. If the discharge is green/yellow, it is more likely that you have a germ (bacterial) infection in your sinuses. The green/yellow colour is due to infected mucus and pus. A runny nose may dry up if the sinus drainage channels become blocked with thick mucus. If this happens, pain and tenderness over the infected sinus may become worse.
- **A high temperature (fever)**. This may develop and you may feel generally unwell.

Other symptoms that may occur include:

- Headache
- Bad breath
- Toothache
- Cough
- A feeling of pressure or fullness in the ears
- Tiredness

In children, symptoms may include:

- Irritability
- Ear discomfort
- Snoring
- Mouth breathing
- Feeding difficulty
- Nasal speech

How is acute sinusitis diagnosed?

Your doctor can usually diagnose acute sinusitis from listening to your typical symptoms. They may also check to see if you have a temperature or if you have tenderness over your sinuses. They may examine your nose, as often the lining of the nose is swollen in acute sinusitis. Investigations are not usually needed to diagnose acute sinusitis. Occasionally, blood tests, X-rays or scans are advised if the diagnosis is not clear.

What are the treatments for sinusitis?

Are antibiotics needed?

Not usually. Most cases of acute sinusitis are due to infection with a germ called a virus. Like with colds, the immune system usually clears the virus and symptoms generally go within a couple of weeks. Antibiotics do not kill viruses. Also, even if the infection is caused by germs called bacteria, the immune system will usually clear it away. So, for most people with acute sinusitis, antibiotics are not needed. Antibiotics can also cause side-effects. Side-effects can include diarrhoea, a feeling of sickness (nausea), being sick (vomiting), skin rashes and fungal infection (thrush). However, antibiotics are sometimes useful. Your doctor is not likely to prescribe an antibiotic for a mild bout of acute sinusitis. But a course of antibiotics may be prescribed in some cases - for example:

- If your symptoms are severe or if you are very unwell.
- If you have another illness such as cystic fibrosis, heart problems or a weakened immune system.
- If your symptoms are not settling within seven days, or are worsening.

Treatment to relieve symptoms

Some treatments may help to relieve symptoms whilst waiting for your immune system to clear the infection. These include the following:

- **Painkillers** such as **paracetamol** or **ibuprofen** will usually ease any pain. They will also help to bring down any high temperature (fever) that you may have. Sometimes **stronger painkillers** such as **codeine** are needed for a short time.
- **Decongestant nasal sprays or drops** are sometimes used. You can buy these from pharmacies. They may briefly relieve a blocked nose. However, they are not thought to shorten the duration of acute sinusitis. You should not use a decongestant spray or drops for more than 5-7 days at a time. If they are used for longer than this, they may cause a worse rebound congestion in the nose.
- **Keeping hydrated** can be helpful, so have plenty of drinks.
- **Warm face packs** held over the sinuses may help to ease pain.
- **Saline nasal drops** may help to relieve congestion and blockage in the nose.

Steam inhalation is a traditional remedy but is now not usually advised. This is because there is little evidence that it helps. Also, there have been some reports of people burning themselves trying to breathe in steam from a kettle. However, some people say that their nose feels clearer for a short while after a hot shower.

Note: see a doctor if symptoms become severe or do not ease within a week. (However, as mentioned, it is common to take 2-3 weeks for symptoms to go completely.) The sort of symptoms you should tell a doctor about include:

- Severe pain and/or swelling at the front of your head.
- Swelling around the eye.
- Swelling of the face.
- Bloodstained discharge coming from the nose.

You should also see a doctor if you have recurring bouts of sinusitis, as this may indicate an underlying problem.

Are there any complications from acute sinusitis?

Chronic sinusitis can sometimes develop from an acute sinusitis. This is the most common complication. Chronic sinusitis causes similar symptoms to acute sinusitis but lasts longer.

Other complications are rare. However, they can be serious. For example, infection may spread from a sinus to around an eye, into bones, into the blood, or into the brain. These severe complications are estimated to occur in about 1 in 10,000 cases of acute sinusitis. They are more common with infection of the frontal sinus. Children are more prone than adults are to complications. Swelling or redness of an eyelid or cheek in a child with sinusitis should be reported to a doctor urgently.

Further reading & references

- **Sinusitis (acute): antimicrobial prescribing**; NICE Guidelines (October 2017)
- **Sinusitis**; NICE CKS, October 2013 (UK access only)
- **Falagas ME, Giannopoulou KP, Vardakas KZ, et al**; Comparison of antibiotics with placebo for treatment of acute sinusitis: a meta-analysis of randomised controlled trials. *Lancet Infect Dis.* 2008 Sep;8(9):543-52.
- **Hwang PH**; A51-year-old woman with acute onset of facial pressure, rhinorrhea, and tooth JAMA. 2009 May 6;301(17):1798-807. Epub 2009 Mar 31.

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