

Sore throat

BY

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- Any part of the respiratory mucosa of the throat can give rise to symptoms of throat pain.
- This includes the pharynx (pharyngitis) and tonsils (tonsillitis), yet clinical distinction between pharyngitis and tonsillitis is unclear and the term sore throat is commonly used.
- Pain can range from scratchiness to severe pain.
- Sore throats are often associated with the common cold.

Prevalence and epidemiology

- Sore throats are extremely common.
- UK figures show that a GP with a list size of 2000 patients will see about 120 people each year with a throat infection.
- However, four to six times as many people will visit the pharmacy and self treat.
- On average an adult will experience two to three sore throats each year.

Aetiology

- Viral infection accounts for between 70 and 90% of all sore throat cases.
- Remaining cases are nearly all bacterial; the most common cause being Group A beta-haemolytic Streptococcus (also known as Streptococcus pyogenes).

differential diagnosis

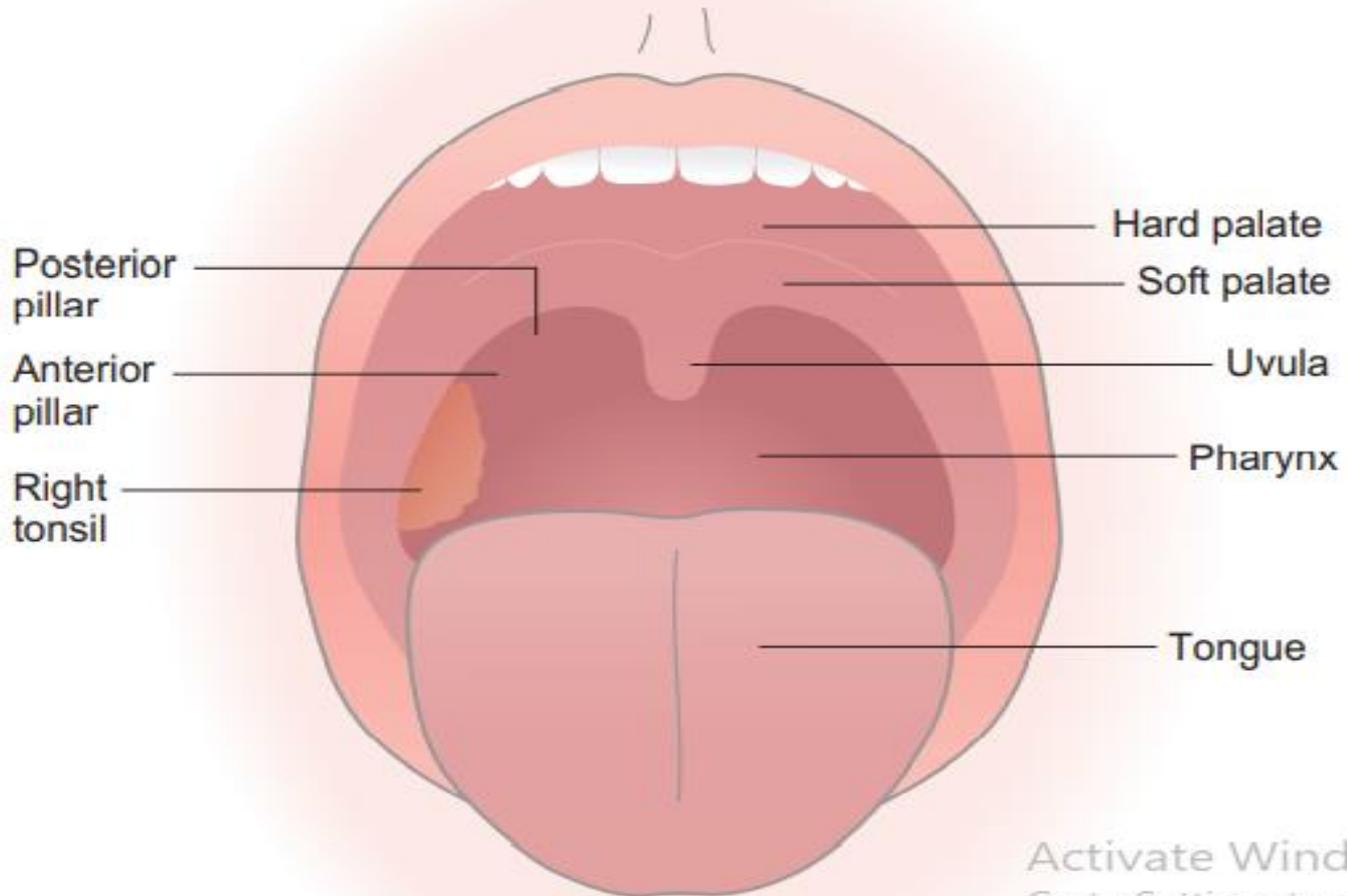
- The overwhelming majority of cases will be acute and self-limiting URTI, whether viral or bacterial in origin.
- Clinically, differentiation between viral and bacterial infection is extremely difficult.

Physical examination

- After questioning, the pharmacist should inspect the mouth and cervical glands (located just below the angle of the jaw)
- Using a good light source (e.g. pen torch) ask the patient to say 'ah'; this should allow you to see the pharynx well. When examining the mouth pay particular attention to the fauces and tonsils. Are they red and swollen?
- Is there any exudate present? Is there any sign of ulceration?



vision of sore throat.mp4



Causes of sore throat in community pharmacy

- Most likely Viral infection
- Likely Streptococcal infection
- Unlikely Glandular fever, trauma
- Very unlikely Carcinoma, medicines

Specific questions to ask the patient:

Sore throat

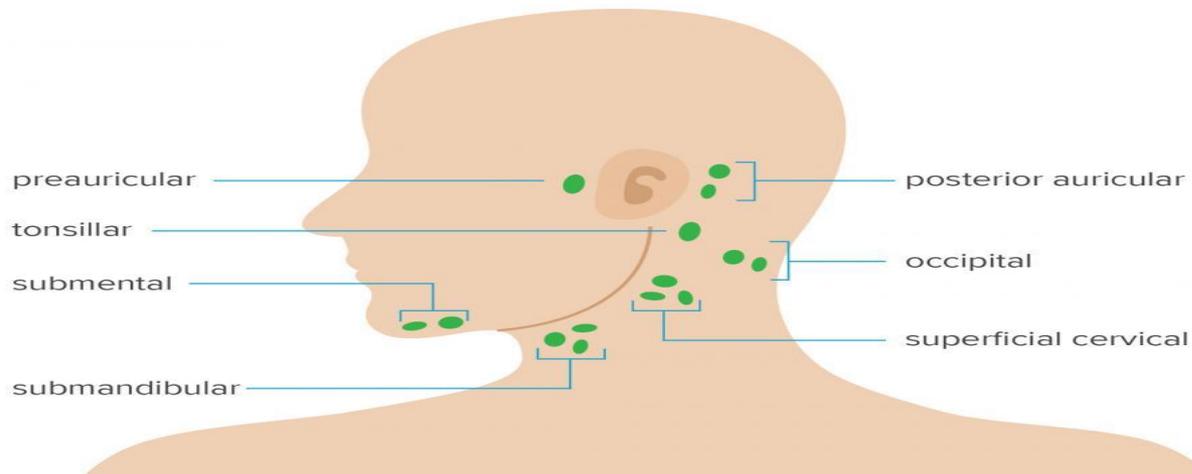
1. Age of the patient
 - Although viruses are the commonest cause of sore throat there are epidemiological variance with age:
 - Under 3 years old Streptococcus is uncommon
 - Streptococcal infections are more prevalent in people under the age of 30, particularly those of school age (5 to 10 years) and young adults (15–25 years old)
 - Viral causes are the commonest cause of sore throat in adults Glandular fever is most prevalent in adolescents

2. Tender cervical glands

- On examination, patients suffering from glandular fever and streptococcal sore throat often have markedly swollen glands.
- This is less so in viral sore throat

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3. Tonsillar exudate present

- Marked tonsillar exudate is more suggestive of a bacterial cause than a viral cause

4. Ulceration

- Herpetiform and herpes simplex ulcers can also cause soreness in the mouth especially in the posterior part of the mouth.



Conditions to eliminate

- Likely cause Streptococcal sore throat
- Patients who present with pharyngeal or tonsillar exudates, swollen anterior cervical glands, high grade fever (over 39.4°C; 101°F) and absence of cough are more likely to have a bacterial infection.
- However, even if the patient exhibits all these four 'classic' symptoms up to 40% will not have bacterial infection.

- the routine use of throat swabs performed by GPs are not recommended as asymptomatic carriage of Streptococcus affects up to 40% of people making it impossible to differentiate between infection and carriage.
- The National Institute of Health and Clinical Excellence recommend a 10 day course of penicillin or erythromycin (where an allergy to penicillin exists) if the
- patient has a history of rheumatic fever, increased risk from acute infection, unilateral peritonsillitis and marked systemic upset.

Centor score

Modified Centor Criteria (Mclsaac)	Score
Fever	1
Tonsillar Exudate	1
Absent Cough	1
Anterior Cervical LAD	1
Age 3-14 years	1
Age 15-44 years	0
Age >44 years	-1

Modified Centor Criteria Score	GAS Infection Risk (%)	AAP/IDSA	CDC/ACP/AAFP
0	1-2.5	No test/treatment	No test/treatment
1	5-10	No test/treatment	No test/treatment
2	11-17	Rapid antigen test	Rapid antigen test
3	28-35	Rapid antigen test	Test or treat empirically
≥4	51-53	Rapid antigen test	Test or treat empirically

2. Glandular fever

- (infectious mononucleosis) Glandular fever is caused by the Epstein–Barr virus and is often called the kissing disease because transmission primarily occurs from saliva.
- It has a peak incidence in adolescents and young adults.



- The signs and symptoms of glandular fever can be difficult to distinguish from sore throat because it is characterised by pharyngitis (occasionally with exudates), fever, cervical lymphadenopathy and fatigue.
- Most people recover in two to four weeks.
- Treated with paracetamol or ibuprofen and can use hydrocortisone or dexamethasone.
- treat bacterial secondary infections of the throat such as with streptococcus with ampicillin or amoxicillin

3. Trauma-related sore throat

- Occasionally patients develop a sore throat from direct irritation of the pharynx.
- This can be due to substances such as cigarette smoke, a lodged foreign body or from acid reflux.

4. Medicine induced sore throat

- A rare complication associated with certain medication is agranulocytosis, which can manifest as a sore throat.
- The patient will also probably present with signs of infection including fever and chills.
- Medicines known to cause this adverse event are Captopril- Carbimazole -Cytotoxics
Neuroleptics, e.g. clozapine- Penicillamine
Sulfasalazine- Sulphur-containing antibiotics

5. Laryngeal and tonsillar carcinoma

- Both these cancers have a strong link with smoking and excessive alcohol intake, and are more common in men than women.
- Sore throat and dysphagia are the common presenting symptoms.
- In addition, patients with tonsillar cancer often develop referred ear pain.
- Any person, regardless of age, that presents with dysphagia should be referred.

Treatment

- The majority of sore throats are viral in origin and selflimiting.
- Medication therefore aims to relieve symptoms and discomfort whilst the infection runs its course.
- Lozenge and spray formulations incorporating antibacterial and anaesthetics provide the mainstay of treatment
- In addition systemic analgesics and antipyretics will help reduce the pain associated with sore throat.

1. Local anaesthetics

- Lidocaine and benzocaine are included in a number of marketed products.
- All local anaesthetics have a short duration of action and frequent dosing is required to maintain the anaesthetic effect whether formulated as a lozenge or spray.
- They appear to be free from any drug interactions, have minimal side effects and can be given to most patients, including pregnant and breastfeeding women.

- A small number of patients may experience a hypersensitivity reaction with either ingredient although it appears to be more common with benzocaine.
- Most products do contain a sugar base but the amount of sugar is too small to substantially affect blood glucose control and therefore can be recommended to diabetic patients.

- Lidocaine Lidocaine is available as a spray (0.05%) and Dequaspray (2.0%).
- Lidocaine is licensed only for adults and is best taken on a when needed basis.
- As both proprietary products have differing strengths of lidocaine the dosing schedules differ – for spray (0.05%) the dose is three to five sprays between six and 10 times a day
- and for Dequaspray (2.0%). the dose is three sprays every 3 hours when needed up to a maximum of six times per day

- Benzocaine Unlike lidocaine, benzocaine can be given to children both in lozenge and spray formulations.
- Lozenges are available and can be given from aged 3 and over every 3 hours when needed, maximum six in 24 hours);
- adults can take up to eight (10 mg) in 24 hours every 2–3 hours when needed
- Additionally, children over the age of 6 can also use a spray formulation (0.71%) or Spray (1.5%)), for which the dose is one spray every 2 to 3 hours.

2. Antibacterial and antifungal agents

- Antibacterial agents include chlorhexidine, tyrothricin, dequalinium chloride and benzalkonium chloride.
- The use of antibacterial and antifungal agents should not be routinely recommended since the vast majority of sore throats are caused by viral infections for which they have no action against.
- As adverse effects are rare and stimulation of saliva from sucking the lozenge may confer symptomatic relief.

3. Anti-inflammatories (benzydamine and flurbiprofen)

- Benzydamine is available as a spray or mouthwash trials involving benzydamine as a gargle resulted in significantly greater relief of pain compared to placebo.
- Anti-inflammatories (benzydamine and flurbiprofen) have the advantage over local anaesthetics in that they do not generally anaesthetise the entire mouth.

- Benzydamine The rinse should be used by adults and children over the age of 12 every 1.5 to 3 hours when required.
- It has no drug interactions of note,
- The manufacturers advise that the product should be stored in the box away from direct sunlight, however, the stability of the product is not known to be affected by sunlight.
- The dosing for the spray is the same as the rinse but unlike the rinse it can be used in children. For those under the age of six the dose is based on mg/kg dosing, for those aged 6 to 12 they should use four puffs and adults four to eight puffs.

- Flurbiprofen lozenges (8.75 mg flurbiprofen) can only be given to adults and children over the age of 12 years.
- The dose is one lozenge to be sucked every 3 to 6 hours with a maximum of five lozenges in 24 hours.
- They are contraindicated in patients with peptic ulceration and those patients allergic to flurbiprofen, and must be used with caution in pregnant and breastfeeding women.

4. Analgesics

- for example paracetamol, aspirin and ibuprofen, is effective in reducing the pain associated with sore throat.
- Flurbiprofen lozenges have also been shown to be more effective than placebo in reducing pain associated with sore throat.