Sore throat

To understand why a sore throat happens, it is useful to know a little about the upper respiratory tract, which is comprised of the nose and nasal passages, the sinuses, the pharynx and the larynx.

The sinuses are air-filled cavities found in the bones of the face, around the nose and eyes. Like the nasal passages, the sinuses are lined with mucosa, which moistens air that is breathed in, and fine hairs that help to remove potentially harmful substances. There are four sets of sinuses, named for the bones of the skulls in which they sit: frontal (just above each eye), maxillary (behind the cheekbones near the jaw), sphenoid (each side of the forehead at the temples) and the ethmoid (around the nasal cavity).

The nose is probably most strongly associated with the act of smelling, but it is also hugely important for breathing. Hairs on the inside of the nasal passages filter out particles, and air becomes moist and warm as it travels further into the respiratory tract. Irritation of the nasal mucosa is the main reason why sneezing and a runny nose occurs – they are the body’s way of protecting itself.

The pharynx has three sections:
- The nasopharynx comprises the upper portion and contains the adenoids as well as being the space into which the Eustachian tubes open from the ears.
- The oropharynx lies behind the mouth and contains the epiglottis, a flap of tissue that prevents food going into the trachea and air into the oesophagus.
- The laryngopharynx is the lowest section and marks the point at which the oesophagus and trachea go their separate ways.

The pharynx also contains the tonsils, which are basically lymph glands that help to fight infection.

The larynx marks the division between the upper and lower respiratory tracts; the latter is made up of the trachea (windpipe), bronchi, bronchioles and lungs. The larynx contains the vocal cords, which produce sounds, and is another safety check for the body in terms of making sure food and air are diverted in the correct direction.

OBJECTIVES

After studying this module, assistants will:
- Understand how and why a sore throat occurs
- Recognise the symptoms that might warrant referral
- Know the treatment options available, including self help measures.

This module is suitable for all members of the pharmacy team who wish to increase their knowledge of common conditions, treatment options and communication skills. This module has been endorsed with the NPA’s Training Seal as suitable for use by pharmacy teams as part of their ongoing learning. This module can also form part of your Team Tuesday training.
Understanding the problem

Sore throat

A sore throat is often the result of a viral infection, in which case the sufferer may also complain of other cold-type symptoms such as a fever, headache, runny nose, aching muscles and tiredness. The patient may also have noticed that they have swollen glands or inflamed tonsils and may find swallowing painful. Common culprits include the rhinovirus, coronavirus and parainfluenza viruses, which cause colds, but the influenza, adenovirus, herpes simplex and Epstein-Barr viruses are also sometimes responsible. 

Bacterial infections are a more unusual reason for a sore throat, with Streptococcus being the main microorganism at play.

Sore throat can have a non-infectious cause, but this is rare. Sometimes the reason is obvious – for example, a condition such as hayfever, irritation from smoke or a feeding tube, or the result of chemo- or radiotherapy. However, in other patients, the cause is much more obscure – for example, if they unknowingly have a condition such as leukaemia or aplastic anaemia. Medication may also be at play: certain drugs can cause serious blood disorders (e.g. neutropenia and agranulocytosis), or cause a problem called Stevens Johnson syndrome, which presents with a high fever, aching muscles and a rash in the mouth and on the body. Patients on any of these drugs, which include the thyroid medicine carbimazole, the antipsychotic clozapine and the arthritis agent sulfasalazine, should be fully aware of the potential for such issues and know to seek urgent medical help if they experience any symptoms, including a sore throat.

When to refer

Get your pharmacist involved if a customer reports any of the following:

- A high temperature (above 38ºC or 100.4ºF) that does not respond to medication such as paracetamol
- Very severe pain
- Breathing problems
- Difficulty swallowing that means dehydration is a very real possibility
- A muffled voice
- A high pitched noise when breathing (this is known as stridor)
- Drooling
- A sore throat that has not improved after a week.

Certain patient groups should also always be referred because they are more at risk of complications:

- Anyone with HIV, AIDS, leukaemia, or aplastic anaemia
- Individuals with a spleen that does not work properly or has been removed
- Any patient on chemotherapy, immunosuppressants (most commonly because of an organ transplant) or on a medicine that can cause blood disorders (e.g. neutropenia and agranulocytosis).
**DID YOU KNOW?**

In around a third of cases, no cause for sore throats can be found.

**Treatment options**

Most sore throats, while uncomfortable, are short-lived. Much like any minor condition, there is much that sufferers can do themselves to relieve their symptoms. And there are a few OTC products available that can also help.

**Self care tips**

Suggest the following tips to help ease a sore throat:

- Drink plenty of fluids as this will keep the throat lubricated and prevent dehydration if the body temperature is raised
- Gargle regularly with salt dissolved in warm water, or soluble aspirin, to help reduce swelling and ease pain
- Suck ice cubes, lollies or hard sweets to encourage saliva production and keep the throat moist
- Avoid smoking and smoky environments
- Avoid very hot food and drink as these can cause irritation.

**OTC products**

1. **Simple painkillers** such as paracetamol or ibuprofen can help ease discomfort and reduce a fever.
2. **Local analgesics** – for example, flurbiprofen lozenges (e.g. Strefen Lozenges) and benzylamine gargle can help to ease a sore throat.
3. **Aspirin** dissolved in water and used as a gargle is also popular, but can cause side effects such as stomach irritation, and is not recommended under many different circumstances so check with the pharmacist if anyone asks about this.
4. **Pastilles and lozenges** usually contain soothing ingredients like lemon and honey to relieve irritation and stop the throat feeling dry. Example: Strepsils Honey and Lemon.
5. **Antiseptic lozenges** containing ingredients such as benzalkonium, dichlorobenzyl, hexylresorcinol and tyrothricin help to fight any bacteria that may be present. Examples: Beechams Sore Throat Lozenges, Tyrozets.
6. **Local anaesthetics** such as benzocaine in the form of lozenges and throat sprays can help to ease pain and difficulty swallowing. They should not be used for more than five days. Examples: Merocaine, Ultra Chloraseptic Anaesthetic Throat Spray. A local anaesthetic can also be combined with an analgesic to fight infection and help numb the pain at the same time. Example: Covonia Throat Spray.

**Important**

Antibiotics are often hailed as the solution for a sore throat, but given that the vast majority of cases are caused by viral infections, this is rarely the case. They do have a place in the management of individuals who are at increased risk of developing a severe infection, such as those on immunosuppressant medication, or people who suffer recurrent infections that are believed to be caused by Streptococcus bacteria. In some situations, a “delayed prescription” may be provided, whereby an individual is advised to wait a few days and only get the antibiotics dispensed if their symptoms worsen or do not improve. This approach has been shown to reduce unnecessary antibiotic use – and therefore help prevent resistance – while providing similar benefits to an immediate supply of the drug.

**SIGNPOSTING**

For more information, you can:

- Use your Counter Intelligence Plus training guide
- Visit NHS Choices: www.nhs.uk/conditions/sore-throat
- Look at information provided by the charity ENT UK: www.entuk.org/ent_patients/throat_conditions/sore_throat
Questions

1) In which part of the upper respiratory tract do the tonsils reside?
   a) The nose
   b) The sinuses
   c) The pharynx
   d) The larynx

2) Which statement is FALSE?
   a) Parainfluenza virus is a common cause of sore throat
   b) Most sore throats are caused by Streptococcus bacteria
   c) Neutropenia is a serious blood disorder that can cause sore throat as a symptom
   d) The throat may become sore as a result of irritation by a feeding tube

3) Which of the following customers would NOT require referral?
   a) A 39-year-old woman with a temperature of 99°F
   b) A 22-year-old who says he is HIV-positive
   c) A 45-year-old woman on clozapine
   d) A 55-year-old man who says he is having problems breathing

4) Which of the following is a symptom that should cause concern if it accompanies a sore throat?
   a) Aching muscles
   b) Swollen glands
   c) Headache
   d) Stridor

5) Which of the following is NOT usually recommended as a self help measure for sore throat:
   a) Steam inhalation
   b) Drinking plenty of fluids
   c) Sucking ice cubes
   d) Stopping smoking

6) Which treatment option would be the most sensible course of action for someone suffering from recurrent sore throats?
   a) Tonsillectomy
   b) A delayed prescription for antibiotics
   c) Antiviral tablets
   d) Removal of the larynx

Chris, a man in his 40s, asks whether it is worth seeing the doctor about an antibiotic prescription for his sore throat.

What would you recommend?

For each part of this scenario, think about the decision you would make and, importantly, why you would choose that option. In addition, for each decision that you make, think about how you would talk to the customer and provide the necessary advice, and discuss this with your team and pharmacist.

1) Agree that a visit to the GP is the best course of action.
2) Suggest self care options and recommend an OTC product.
3) Refer to the pharmacist.

What if?

Chris says he is getting on really well with his new arthritis drug.

1) Say that you are pleased to hear that.
2) Recommend gargling with aspirin to top up the pain relief while helping the sore throat.
3) Check what the drug is in case the sore throat is related.

What if?

Chris returns a couple of days later saying he has a prescription for antibiotics from the GP, but has been told to not get it dispensed straightaway.

1) Suggest waiting a couple of days to see if his symptoms improve.
2) Advise getting the prescription dispensed immediately.

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