Coughs

Pretty much everyone will suffer from a cough from time to time, and the condition is one of the most common reasons why people visit a pharmacy. A cough is actually a reflex response that clears the airways of unwanted irritants, and it involves several parts of the body.

Cough receptors are located in the walls of the airways and are triggered by irritants such as smoke, microorganisms or a condition such as asthma. The receptors trigger an impulse that runs along the vagus nerves to the cough centre, which is located in the medulla oblongata of the brain. This in turn sends nerve impulses to the respiratory muscles, causing a sudden inhalation of air. This becomes momentarily trapped in the lungs due to closure of the epiglottis and vocal cords in the throat. The intercostal muscles between the ribs, the abdominal muscles and the diaphragm then contract, forcing the epiglottis and vocal cords to open. The pressure of the air as it leaves the body, hopefully taking with it the original airway irritant, causes the sensation – and characteristic noise – known as a cough.

After studying this module, assistants will:

- Understand how and why a cough occurs
- Recognise the symptoms that might warrant referral
- Know the treatment options available, including self-care measures.
DID YOU KNOW?
A cough is a reflex action that helps to clear the airways of mucus and irritants such as dust or smoke.

Understanding the problem

Coughs are usually classified according to their duration:

1. **Acute** coughs usually last less than three weeks and have a sudden onset, perhaps caused by an upper respiratory tract infection such as a cold or sinusitis; an infection of an area further down the airways (as is the case in pneumonia and bronchitis); inhalation of dust, smoke or another foreign substance; an allergy such as hayfever, or a flare-up of a long-term respiratory condition, such as asthma or chronic obstructive pulmonary disease (COPD).

2. **Subacute** coughs are usually of around three to eight weeks duration. Infections are the usual cause, particularly whooping cough (pertussis) in children.

3. **Chronic** cough sufferers are less likely to be able to put a finger on what has caused their cough, as it usually has a more gradual onset. Examples include a longer-term allergy (e.g. to house dust mites); an undiagnosed respiratory condition such as chronic bronchitis or asthma, or a side effect of smoking or medication, particularly ACE inhibitors. Postnasal drip – mucus dripping from the nose into the throat because of a condition such as sinusitis – is another possible cause, as is irritation of the throat by leaking stomach acid as a consequence of gastro-oesophageal reflux disease (GORD). Persistent coughs can also be a sign of something more serious (e.g. lung cancer, tuberculosis, pulmonary embolism or heart failure), although this is rare.

When to refer
There are certain symptoms that should ring warning bells. Get your pharmacist involved if a customer reports any of the following:

- Unexplained weight loss
- A cough that is worse first thing in the morning, at night or after exercise
- Pain in the chest or shoulder
- A fever that does not respond to medication such as paracetamol
- Breathing problems such as fast or laboured breathing, breathlessness or wheezing
- Coughing up blood
- Vomiting after coughing
- A cough that has persisted for longer than three weeks.

Coughs can also be referred to as chesty or dry. A chesty or productive cough will often make the sufferer feel as if they are trying to bring something up – usually described as mucus or phlegm. On the other hand, a dry, tickly or non-productive cough often starts as a tickle at the back of the throat, which causes the person to cough.
Treatment options

Assuming underlying causes such as asthma and allergy have been eliminated, acute coughs will usually get better on their own. This is because most are due to a viral infection such as a cold, which means antibiotics won’t have any effect.

Self care tips

- Drink plenty of fluids as this will keep the throat lubricated and prevent dehydration if the person’s temperature is raised
- Sucking ice cubes or boiled sweets or sipping hot water containing honey and lemon can help to relieve a tickly cough. Note that honey should not be given to infants under the age of one year
- Simple painkillers such as paracetamol or ibuprofen can help ease discomfort and reduce a fever
- Avoid smoking and smoky environments, we well as any other triggers that may be exacerbating asthma or an allergy.

OTC products

There is no robust evidence supporting the effectiveness of cough products. However, for those wanting to purchase a cough product to relieve their symptoms in the short term, there are plenty of options available OTC.

Cough medicines are generally grouped by the type of cough that they relieve. For example:

1. **Cough suppressants** such as dextromethorphan or pholcodine are thought to work by suppressing the cough reflex in the brain and are therefore most suited to dry or tickly coughs. OTC examples include Benylin Dry Coughs and Robitussin Dry Cough.

2. **Expectorants** such as guaifenesin, ipecacuanha and squill help loosen and clear mucus from the chest and are more suitable for chesty or productive coughs. OTC examples include Covonia Chesty Cough Mixture Mentholated and Veno’s Expectorant.

There is also a newer group of medicines that claim to be suitable for all types of common cough by tackling cough reflex hypersensitivity, which is said to be the underlying driver of all common coughs. Examples include the pharmacy-only medicine Unicough, which contains diphenhydramine, ammonium chloride, levomenthol and highly concentrated natural cocoa flavour, and Bronchostop, a traditional herbal medicinal product that contains thyme and marshmallow root.

The UK medicines regulator recommends that OTC cough and cold medicines should not be given to children under the age of six years at all, and only to children aged six to 12 years on the advice of a doctor or pharmacist. Simple cough syrups that contain glycerol, honey or lemon can be recommended for children, along with self care measures.

SIGNPOSTING

For more information, you can:

- Use your Counter Intelligence Plus training guide
- Visit NHS Choices: www.nhs.uk/conditions/cough
GOOD PRACTICE KNOWLEDGE IS IMPORTANT WHEN ADVISING CUSTOMERS

Questions

1) In which part of the body is the cough centre?
   a) The lungs
   b) The vagus nerves
   c) The medulla oblongata
   d) The epiglottis

2) Which statement is FALSE?
   a) Muscles are involved in coughing
   b) Cough receptors are located in the diaphragm
   c) The cough reflex is triggered by exposure to an irritant
   d) Just before the expiration of air that is a cough, air is momentarily trapped in the lungs

3) Which of the following rarely causes a chronic cough?
   a) A cold
   b) Undiagnosed asthma
   c) House dust mite allergy
   d) GORD

4) Which of the following is a symptom that should cause concern if it accompanies a cough?
   a) Phlegm coming up from the chest
   b) Runny nose
   c) Sore throat
   d) A wheezy chest

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

6) Which of the following statements is TRUE of OTC cough medicines?
   a) They can be freely recommended for children aged six to 12 years
   b) They are not recommended for infants aged six and under
   c) They have been proved over and over again to be highly effective
   d) Pholcodine is a cough expectorant

What would you recommend?

Angela, a woman in her 40s, asks whether it is worth asking the doctor for some antibiotics for the cough left behind from a cold she had a couple of weeks ago.

What if?

Angela says she plans to quit smoking once her cough has got better.

Suggest she quits now as the smoking will be irritating her airways and contributing to her cough.

Go to www.tmmagazine.co.uk to submit your answers to these questions. When you pass, you’ll be able to download a certificate to showcase your learning. You can also add this to your online, personalised learning log.

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Information about this product, including adverse reactions, precautions, contra-indications and method of use can be found at www.medicines.org.uk. *KGS U&A Study 2013

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