

# Cough

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Coughing is an automatic reaction to try to clear your airways. The airway may be partially blocked by mucus, smoke, chemicals that you breathe in or a foreign body. Everyone will cough occasionally to “clear their throat”. But it is important to seek medical attention if you have a cough that lasts for more than three weeks. If you’re short of breath, cough up blood or have unexplained problems like weight loss or a fever, you should see your GP urgently. The most common causes are mentioned below.

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## What is a cough?

A cough is when you have an automatic (reflex) muscle action that forces air up and out of your lower airways (lungs) and upper airways (windpipe, nose and mouth). You may cough to 'clear your throat' if you choke on food and it enters your windpipe instead of going down the food pipe (oesophagus). Or you may need to cough if you breathe in chemicals or smoke that irritate your airways. Doctors call a cough 'short-term' (acute) if it lasts for less than three weeks and 'long-term' (chronic) if it lasts for longer than three weeks.

## Who is affected by cough?

Cough affects us all if we need to clear our airways. Acute cough usually improves after one week. The most common cause is a **viral infection** which causes a runny nose and cough. Viral infections can affect anyone, but young children commonly have 5-6 viral infections a year, especially in the winter months.

Chronic cough affects around 10% of all adults. The most common causes in adults who are otherwise well are as follows:

- Acid from the stomach (**acid reflux**) which spills into the airways, or mucus dripping down the back of the nose into the throat (postnasal drip).
- People who suffer from **allergies** and **hay fever** are more likely to have **asthma** which causes cough and **wheeziness**.
- People who have been in contact with **tuberculosis** (TB) may be at risk of developing the infection.
- Smokers may develop breathlessness and cough as a result of lung disease (**chronic obstructive pulmonary disease** (COPD)). Smokers are also at greater risk of developing **lung cancer**.
- Some people are born with **cystic fibrosis** which is an inherited condition that affects the lungs and causes chronic cough.

## What investigations will be advised?

The doctor will want to know how long your cough has lasted and whether you have any other symptoms. The doctor will particularly ask about symptoms which may suggest an underlying serious condition ('red flags').

**Red flag** symptoms that may suggest serious underlying disease:

- **Coughing up blood**
- **Weight loss**
- **Night sweats**
- **Breathlessness**

Your doctor will want to know:

- Did it start suddenly or develop over time? Did anything trigger it? How long has it lasted?
- When do you cough? Is it worse when you exercise?
- Are you breathless even when you're not coughing.
- Are you coughing up phlegm (mucus)? What colour is it?
- Do you feel ill? Do you have a fever, weight loss or sweats?
- Have you lost weight, coughed up blood, been in contact with anyone with TB or travelled abroad recently?
- Do you smoke?
- What is your occupation?
- Have you started any new medication recently?

These details will help the doctor to make a diagnosis. Your doctor will examine you. He or she will check your throat, lungs and heart. You may be asked to have lung function tests including a **peak flow reading**. You may be sent for a chest **X-ray**. Further tests of your lungs may be necessary.

## What causes cough?

Acute cough can be due to one of the following causes - the most common being a viral infection:

- Upper respiratory tract infections - the most common cause of acute coughs, caused by viral infection; they almost always get better within a week, without specific treatment.
- Lower respiratory tract infections - these are less common; they can lead to more serious lung infection (**pneumonia**). They may be caused by infection with germs (viruses or bacteria). Antibiotics are usually prescribed.
- Asthma - this causes wheeze, breathlessness and cough at night, in cold air and during exercise.
- A foreign body - food can go down the windpipe instead of the food pipe.
- Irritants - smoke or chemical fumes that you breathe in may irritate the airways.

Chronic cough is usually due to one of the following causes:

- Postnasal drip - mucus in the nose drips down the back of the throat when you lie down.
- Acid reflux - acid in the stomach washes up the food pipe and spills into the airways.
- Asthma - undiagnosed or under-treated asthma causes cough. .
- Medication - for example, **angiotensin-converting enzyme (ACE) inhibitor medicines**, which are used to treat **high blood pressure**, can cause cough.
- Lung disease - for example, in COPD, where cough and breathlessness get steadily worse. This affects smokers.
- TB - this may cause red flag symptoms (see above).
- Lung cancer - this is more likely in smokers, and may cause red flag symptoms (see above).
- Other rarer lung conditions - for example, **whooping cough**, cystic fibrosis (an inherited condition), and emphysema.

## What treatments may be offered?

Treatment will depend on the likely cause of your cough.

You will be strongly encouraged to **stop smoking** if you are a smoker. You will be offered **inhalers** if you have asthma. If the cough is due to tablets given for high blood pressure, you can switch to another type. If bacterial infection is likely, you may be prescribed **antibiotics**. A **steroid nasal spray** may help postnasal drip. **Losing weight**, cutting out acid foods and **alcohol** and taking medicine to **stop acid in the stomach** may all help acid reflux.

You may be referred to a lung (respiratory) specialist for further tests. Most cases will be managed by your GP but you may be referred for further investigation and treatment at a hospital.

## What can you do if you develop a cough?

- Try not to panic, if possible.
- Call 999 if the cough is severe and you are fighting for breath
- Use your reliever inhaler as instructed if you have asthma.
- See your GP urgently (within a few days) if you develop red flag symptoms.
- See your GP if your cough lasts more than one week and is not improving.

You should call an ambulance if you experience unexpected and severe cough and difficulty in breathing that lasts for more than a few minutes. Otherwise, you should call your GP if concerned.

## How can I avoid coughing?

You will need to find the underlying cause and try to address it if possible. Don't smoke, or get **help to stop smoking**, because all common serious causes of chronic cough are more likely to affect smokers. Try to avoid dusty or smoky places. Use your asthma medication as advised. Avoid over-the-counter cough medicines. You can take **paracetamol** or **ibuprofen** for fever and sip fluids if your throat feels sore from coughing. Products that contain **codeine** may help to stop you coughing but often have unwanted side-effects like constipation and drowsiness.

## What is the outlook (prognosis)?

This depends on the underlying cause but is generally very good. People with smoking-related diseases who continue to smoke tend to suffer from coughing and breathlessness. Most coughs are due to short-lived viral infections, do not need special treatment and should be better within a week.

## Further reading & references

- **Recommendations for the management of cough in adults**; British Thoracic Society (2006)
- **ERS guidelines on the assessment of cough**, European Respiratory Society (2007)
- **Cough**; NICE CKS, September 2010

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