

Cough

Cough is a common symptom of **upper respiratory tract infection (URTI)** and lung disease. A cough may be **productive**, where the patient coughs up **sputum**, or **non-productive**, where there is no sputum. A productive cough is often described as **loose** and a non-productive cough as **dry**. Sputum (or **phlegm**) may be clear or white (**mucoïd**), yellow due to the presence of pus (**purulent**), or **blood-stained** (as in haemoptysis).

A doctor is examining a patient who is complaining of a cough.

Doctor: How long have you had the cough?

Mr Hamilton: Oh, for years.

Doctor: Do you smoke?

Mr Hamilton: I used to **smoke heavily**, but I **gave up** a year ago.

Doctor: Do you **cough up** any **phlegm**?

Mr Hamilton: Yes.

Doctor: What colour is it?

Mr Hamilton: Usually yellow.

Doctor: Have you ever **noticed** any **blood** in it?

Mr Hamilton: No.

Doctor: Any **problems with your breathing**?

Mr Hamilton: Yes, I get very short of breath. I have to stop halfway up the stairs to **get my breath back**.

The doctor writes in the patient's case notes:

c/o dyspnoea & cough c. purulent sputum for years. No haemoptysis.

Note: The noun **phlegm** is pronounced **/flem/**.

Auscultation

The doctor is examining Mr Hamilton's chest.

“**Take deep breaths in and out** through your mouth. Good. Now **say ‘ninety-nine’**.”

Listening to the chest with a stethoscope may reveal the presence of sounds, apart from the normal **breath sounds**. There are two main kinds of **added sounds**:

- **crackles**, which sound like hairs being rubbed together and suggest the presence of fluid in the lungs
- **wheezes**, which are more musical sounds, like whistling, and indicate narrowing of the airways. The sound of an asthma patient's breathing is also called wheeze.

The sound heard when the pleural surfaces are inflamed, as in pleurisy, is called a **pleural rub**.

The doctor asks Mr Hamilton to say ‘ninety-nine’ to check **vocal resonance**, which may be increased (as in pneumonia), or decreased (as in pneumothorax).

After examining Mr Hamilton, the doctor adds to his notes:

OE Chest: early inspiratory crackles
both lung bases + expiratory
wheeze

Make word combinations using a word from each box.

blood-
breath
pleural
productive
vocal

cough
rub
stained
resonance
sounds

Rewrite the questions, using the words that are better known to patients. Look at the above text to help you (Cough).

- 1 Is your cough productive?
- 2 What colour is the sputum?
- 3 Is it ever purulent?
- 4 Have you ever had haemoptysis?
- 5 Do you suffer from dyspnoea?

Are the following statements true or false? Give reasons for your answers, using your medical knowledge, and from those that are given above (Cough, Auscultation).

- 1 A patient who has a loose cough produces phlegm.
- 2 Crackles are heard when the airways are narrowed.
- 3 A patient who has a non-productive cough produces sputum.
- 4 Wheezes are typical of pleurisy.
- 5 A pleural rub is a sign of asthma.

Express your idea

Use the notes below to write a case report, and add your provisional diagnosis of the case.

Begin: 'A 36-year-old man complained of sudden right-sided chest pain...'

36 yr old ♂
c/o sudden R chest pain with s.o.b. while watching TV.
pain ↑ by deep breaths and coughing
s.o.b persisted over the 4 hours from its onset to his arrival in A & E
sl. non-productive cough
PH & FH nil relevant
3/52 holiday in Australia 3/52 previously
OE T 37.4 C RR 24/min JVP ↑3cm BP 110/64 P128/min
RS chest expansion ↓ because of pain
pleural rub R lower zone posteriorly no other added sounds
Otherwise NAD

What is your diagnosis?