Cough history

بسم الله

اللهم اجعل هذا العمل خالصاً لوجهك نافعاً لأمتك موصلاً إليك لا صارفاً عنك آمين

First :

Introduce yourself to the patient including your name and role.

Confirm the patient's name and date of birth.

Explain that you'd like to take a history from the patient.

Gain consent to proceed with history taking.

Presenting complaint :

Use open questioning to explore the patient's presenting complaint:

- "What's brought you in to see me today?"
- "Tell me about the issues you've been experiencing."

Provide the patient with enough time to answer and avoid interrupting them.

Facilitate the patient to expand on their presenting complaint if required:

- "Ok, can you tell me more about the cough?"

Socrates :

The SOCRATES acronym is a useful tool for exploring each of the patient's presenting symptoms in more detail. It is most commonly used to explore pain but can be applied to other symptoms, although some of the elements of SOCRATES may not be relevant to all symptoms.

Site

The patient may not be aware of where the cough originates, but in some cases, they may be able to localise it:

- "Where do you feel as though the cough is coming from?"

Irritation in the throat suggests an upper respiratory tract infection, laryngitis, GORD, UACS. or ACE-i induced cough.

Cough associated with tightness in the upper chest suggests bronchitis or asthma.

Onset

Clarify when the cough developed:

- "When did the cough start?"
- "How long has the cough been going on for?"

It is important to remember that all coughs have a short history at the outset, but the point at which the patient presents relative to the onset of the cough can help determine the cause:

- Presentation within hours of the onset of cough alone would be unusual, however when cough is accompanied by other alarm symptoms (e.g. pain and/or acute shortness of breath), this would be consistent with inhaled foreign body, pneumothorax, pulmonary embolus, acute asthma or acute pulmonary oedema.
- A cough of less than three weeks (defined as acute in this context) is most likely to suggest an infective cause, including UACS secondary to infective sinusitis. It could also be seen with a pulmonary embolus which was not causing severe pain or shortness of breath.
- A sub-acute cough is one which has lasted for three to eight weeks. The most common cause of this is a post-infectious cough, but it can be seen with Bordetella pertussis infection (whooping cough).

- A chronic cough is one which has persisted for over eight weeks, and at this stage, it is important to consider neoplastic causes (e.g. lung cancer), inflammatory/autoimmune causes, drugs and chronic cardiac failure

Character

Ask about the specific characteristics of the cough:

- "Can you describe the cough?"
- "Is the cough wet (productive of sputum) or dry?"

An acute productive cough suggests an infective cause, particularly bronchitis or pneumonia. Purulent, coloured sputum (yellow, green or brown) may indicate a bacterial infection. In pneumonia caused by Strep. pneumoniae the sputum may be rust-coloured. White or clear sputum is more suggestive of a viral infection.

An acute dry cough is also seen in infections, such as viral upper respiratory tract infections (including COVID-19) and bronchitis. A post-infectious cough is also typically dry.

A chronic productive cough is seen in COPD, bronchiectasis, and pulmonary tuberculosis. In pulmonary oedema, patients may experience a cough productive of frothy white or pink sputum. In ABPA, the cough may be productive of bronchial casts.

A chronic dry cough is seen in smoker's cough, UACS, asthma, GORD, lung cancer, and inflammatory conditions such as sarcoidosis, fibrosis and hypersensitivity pneumonitis. It is also seen with drug-induced coughs and in the early stages of pulmonary tuberculosis.

Directly ask about haemoptysis:

- "Have you coughed up any blood?"

Haemoptysis is seen with upper respiratory tract infections, bronchitis and pneumonia. It is also a red-flag symptom of pulmonary embolism, bronchial carcinoma, bronchiectasis, and pulmonary tuberculosis.

Directly ask about coughing paroxysms:

- Do you get bursts (paroxysms) of coughing?

In the second stage of whooping cough (after the first 1 - 2 weeks of the illness), patients experience paroxysms of coughing, possibly followed by an inspiratory ‘whoop’. However, this is less common in adults than in children.

If the patient is known to have a chronic respiratory condition, such as asthma, COPD or bronchiectasis, it is important not to assume that a new cough is due to an exacerbation of this condition, as doing so could delay the diagnosis of a serious cause (e.g. lung cancer). Therefore, asking them to compare their current cough to their usual experience of an exacerbation is essential:

- Is this cough the same as your usual exacerbations, or is there anything different this time?

If the patient reports a difference, ask them how it differs (e.g. duration, severity, sputum colour or quantity).

Radiation

N/A

Associated symptoms

Ask if there are other symptoms which are associated with the cough

- "Are there any other symptoms associated with the cough?"

Infective causes of cough may be associated with:

- Fever (+/- rigors)
- Shortness of breath
- Nasal blockage/rhinorrhoea and sore throat (upper respiratory tract infection)
- Anosmia (upper respiratory tract infection, particularly COVID-19)
- Tender, enlarged cervical lymph nodes (upper respiratory tract infection)
- Hoarseness (laryngitis)
- Wheeze and chest tightness (bronchitis)
- Pain on coughing (tracheitis)
- Pleuritic chest pain (pneumonia): occasionally, patients with lower lobe pneumonia may also report upper abdominal pain
- Night sweats (pulmonary tuberculosis)
- Weight loss (pulmonary tuberculosis)
- Haemoptysis
- Vomiting after a paroxysm of coughing and/or sweating/facial flushing (whooping cough)

Neoplastic causes of cough may be associated with:

- Weight loss
- Appetite loss
- Fatigue
- Night sweats
- Hoarseness (laryngeal carcinoma or bronchial carcinoma)
- Shortness of breath (bronchial or pleural carcinoma)
- Chest wall pain (bronchial or pleural carcinoma)
- Pain in the shoulder and inner aspect of the arm (known as Pancoast's syndrome and caused by bronchial carcinoma)
- Wheeze (bronchial carcinoma)
- Enlarged cervical or supraclavicular lymph nodes

A pulmonary embolus may be associated with:

- Shortness of breath
- Pleuritic chest pain
- Current or recent symptoms of deep vein thrombosis (unilateral leg pain, swelling and erythema)

Pulmonary oedema may be associated with:

- Shortness of breath
- Bilateral leg oedema
- Orthopnoea

Inflammatory/autoimmune causes may be associated with:

- Nasal obstruction and/or rhinorrhoea/sneezing (UACS)
- Wheeze and chest tightness (asthma, COPD)
- Shortness of breath (asthma, COPD, bronchiectasis, pulmonary fibrosis, sarcoidosis, hypersensitivity pneumonitis, occupational lung disease)
- Dyspepsia (GORD)
- Recurrent pleurisy (bronchiectasis)
- Weight loss (bronchiectasis, sarcoidosis, pulmonary fibrosis, hypersensitivity pneumonitis)
- Fatigue (sarcoidosis, pulmonary fibrosis, hypersensitivity pneumonitis)
- Headache (hypersensitivity pneumonitis)
- Myalgia (hypersensitivity pneumonitis)

Traumatic causes may be associated with:

- Wheeze and/or stridor (inhaled foreign body)
- Shortness of breath and/or pleuritic chest pain (pneumothorax)

A sitagliptin-induced cough may be associated with rhinorrhoea, dyspnoea and fatigue.

Time course

Clarify how the cough changes over time:

- "Is the cough there all the time, or does it come and go?"

Diurnal variation, with symptoms worse at night and in the morning, suggests asthma. A smoking-related cough is typically worse in the mornings.

Paroxysms of coughing in whooping cough are worse at night.

Ask about repeated episodes of cough:

- Have you been experiencing repeated episodes of cough?

A recurrent infective cough may indicate underlying immunosuppression, recurrent aspiration, bronchiectasis, or lung cancer.

Exacerbating or relieving factors

Ask if anything makes the cough worse or better:

- “Does anything make the cough worse?”
- “Does anything make the cough better?”

Positional variation in cough, with symptoms worse when supine, suggests cardiac failure or GORD. In GORD, the cough may worsen after eating or bending forwards. In bronchiectasis, cough may be triggered by a change in posture.

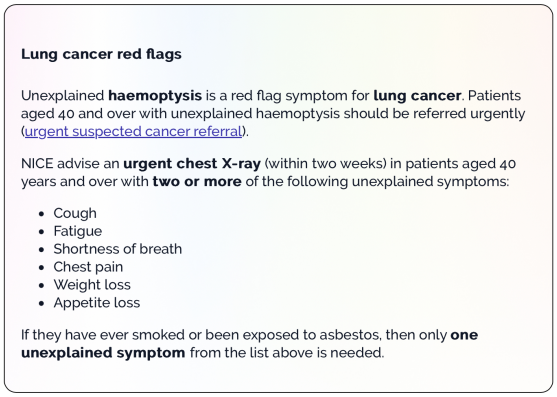
A worsening cough when the patient is in certain places suggests an environmental trigger. For example, the cough associated with occupational lung disease may improve during holidays from work, whilst an asthmatic cough triggered by exposure to animal dander may be worse in the home if the patient has pets.

A recurrent cough whilst eating with repeated episodes of pneumonia may suggest recurrent aspiration pneumonia.

Cough which worsens during exercise may occur in asthma.

Certain medications can worsen cough (see drug history section).

Severity: N/A



Lung cancer red flags

Unexplained **haemoptysis** is a red flag symptom for **lung cancer**. Patients aged 40 and over with unexplained haemoptysis should be referred urgently (urgent suspected cancer referral).

NICE advise an **urgent chest X-ray** (within two weeks) in patients aged 40 years and over with **two or more** of the following unexplained symptoms:

- Cough
- Fatigue
- Shortness of breath
- Chest pain
- Weight loss
- Appetite loss

If they have ever smoked or been exposed to asbestos, then only **one unexplained symptom** from the list above is needed.

Systemic enquiry :

A systemic enquiry involves performing a brief screen for symptoms in other body systems which may or may not be relevant to the primary presenting complaint. A systemic enquiry may also identify symptoms that the patient has forgotten to mention in the presenting complaint.

Deciding on which symptoms to ask about depends on the presenting complaint and your level of experience.

Some examples of symptoms you could screen for in each system include:

- **Systemic: fever, night sweats, unintentional weight loss**
- **Cardiovascular: chest pain, leg swelling**
- **Respiratory: shortness of breath, pleuritic chest pain**
- **Gastrointestinal: dyspepsia**
- **ENT: rhinorrhoea, nasal obstruction, anosmia**
- **Skin: eczema (associated with asthma and allergic rhinitis)**
- **Rheumatological: joint pain/swelling (rheumatoid arthritis is associated with pulmonary fibrosis)**
- **Neurological: dysphagia**

Past medical history :

Ask if the patient has any medical conditions:

- **“Do you have any medical conditions?”**
- **“Are you currently seeing a doctor or specialist regularly?”**

Ask if the patient has previously undergone any surgery (e.g. thoracic surgery, ENT surgery):

- **“Have you ever previously undergone any operations or procedures?”**
- **“When was the operation/procedure, and why was it performed?”**

If the patient does have a medical condition, you should gather more details to assess how well controlled the disease is and what treatment(s) the patient is receiving. It is also important to ask about any complications associated with the condition including hospital admissions.

Examples of relevant medical conditions

Relevant medical conditions in the context of cough include:

For **infective** causes:

- Conditions which cause immunosuppression: diabetes mellitus, HIV, end-stage renal failure, haematological malignancies and malnutrition
- Neurological disorders which cause dysphagia and increase the risk of aspiration pneumonia: Parkinson's disease, stroke and motor neurone disease

For **neoplastic** causes:

- Primary malignancies which metastasise to the lungs: adenocarcinomas of the colon/breast/kidney/testicle, melanoma, thyroid carcinoma, oesophageal cancer and sarcomas

For **vascular** causes:

- Conditions which increase the risk of pulmonary embolus: previous venous thromboembolism, current or recent pregnancy, recent surgery, leg fractures, malignancy, or any condition which has caused significantly reduced mobility
- Conditions which increase the risk of cardiac failure: ischaemic heart disease, atrial fibrillation

For **inflammatory/autoimmune** causes:

- Eczema and allergic rhinitis (associated with asthma)
- Hiatus hernia (associated with GORD)
- Other autoimmune conditions, such as rheumatoid arthritis and systemic lupus erythematosus (SLE)

Allergies

Ask if the patient has any allergies and if so, clarify what kind of reaction they had to the substance (e.g. mild rash vs anaphylaxis)

Drug history:

Ask if the patient is currently taking any prescribed medications or over-the-counter remedies:

- **"Are you currently taking any prescribed medications or over-the-counter treatments?"**

If the patient is taking prescribed or over the counter medications, document the medication name, dose, frequency, form and route.

Ask the patient if they're currently experiencing any side effects from their medication:

- **"Have you noticed any side effects from the medication you currently take?"**
- **"Do you think your cough started after you began taking any of your current medications?"**

Medication examples

ACE inhibitors (e.g. ramipril lisinopril, perindopril and enalapril) cause a dry cough in some patients, which is associated with irritation in the throat. Its onset can be days to months after initiation of the medication. These drugs are commonly prescribed for hypertension, heart failure, and following myocardial infarction.

Sitagliptin, used to treat type II diabetes mellitus, can cause a cough associated with dyspnoea, rhinorrhoea and fatigue.

Beta-blockers, such as propranolol, can precipitate **asthma**, as can **aspirin** and **non-steroidal anti-inflammatory drugs (NSAIDs)**, such as ibuprofen and naproxen.

Drugs which cause **pulmonary fibrosis** include **bleomycin, methotrexate, amiodarone,** and **nitrofurantoin**.

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Family history :

Ask the patient if there is any family history of lung disease, cardiovascular disease, thromboembolic disease, autoimmune disease or malignancy.

- **"Do any of your parents or siblings have any medical conditions?"**

Clarify at what age the disease developed (disease developing at a younger age is more likely to be associated with genetic factors).

If one of the patient's close relatives are deceased, sensitively determine the age at which they died and the cause of death:

- **"I'm really sorry to hear that, do you mind me asking how old your dad was when he died?"**
- **"Do you remember what medical condition was felt to have caused his death?"**

Social history:

General social context

Explore the patient's **general social context** including:

- the type of accommodation they currently reside in (e.g. house, bungalow) and if there are any adaptations to assist them (e.g. stairlift)
- who else the patient lives with and their personal support network
- what tasks they are able to carry out independently and what they require assistance with (e.g. self-hygiene, housework, food shopping)
- if they have any carer input (e.g. twice daily carer visits)

It is important to ask about **exposure to allergens**, such as animal dander or bird feathers, in the home environment, and about passive smoking.

Patients using homeless shelters or hostels are at increased risk of **tuberculosis**.

Smoking

Record the patient's **smoking history**, including the type and amount of tobacco used.

Calculate the number of '**pack-years**' the patient has smoked for to determine their cardiovascular risk profile:

- pack-years = [number of years smoked] x [average number of packs smoked per day]
- one pack is equal to 20 cigarettes

See our smoking cessation guide for more details.

Patients who smoke may have a chronic, persistent cough which is benign and due to **bronchial irritation**. However, smoking is also a **major risk factor** for developing COPD, malignancy and cardiovascular disease.

Alcohol

Record the **frequency**, **type** and **volume** of **alcohol** consumed on a weekly basis.

See our alcohol history taking guide for more information.

Excessive alcohol use is a risk factor for **tuberculosis.**

Recreational drug use

Ask the patient if they use **recreational drugs** and if so, determine the type of drugs used and their frequency of use. Intravenous drug use is a risk factor for **tuberculosis.**

Occupation

A thorough **occupational history** (covering all jobs the patient has done throughout their working life) is essential when taking a history from a patient with **chronic cough**.

Focus particularly on:

- Exposure to allergens, such as animal dander, pollen, dust
- Exposure to asbestos

- Exposure to infectious diseases, such as tuberculosis.

Travel history

If the patient's symptoms suggest an infective aetiology, take a travel history to assess exposure risk.

Ask about whether the patient was born outside of the UK and/or whether they have travelled outside of the UK. Countries such as India, Pakistan, Romania, Bangladesh and Somalia have particularly high rates of tuberculosis. If a patient was born in, or has travelled to, an area of high tuberculosis prevalence, ask about their vaccination status.

Pneumonia due to Legionella can also be associated with foreign travel, as it can be contracted through inhaling bacteria from poorly-maintained plumbing systems, which may be found in hotels.

At the end of history :

Summarise the key points back to the patient.Ask the patient if they have any questions or concerns that have not been addressed.

Thank the patient for their time.