

HISTORY: BREATHLESSNESS

Breathlessness is a very common presentation to the acute medical take and has a wide differential. A focussed history will help to elicit the underlying cause.

History of presenting complaint:

- *How long have you felt breathless? Is the breathlessness getting worse, and over what period of time?*
 - Sudden onset of symptoms points more towards pulmonary embolus, pneumothorax or an acute cardiac cause precipitating sudden pulmonary oedema. These tend to be (but are not always) associated with chest pain
 - Sub-acute progression of symptoms; consider pneumonia, exacerbations of underlying lung disease such as asthma or COPD, fluid overload or arrhythmia e.g. atrial fibrillation with a fast ventricular response. Anaemia would be another cause that might fall into this category.
 - A more insidious onset may indicate underlying malignancy, pleural effusion, neuromuscular disease or undiagnosed lung disease e.g. pulmonary fibrosis.
- *Do you have any associated chest pain?*
 - Is it pleuritic in nature (catching on deep inspiration) or does it sound more cardiac; heavy, crushing and associated with autonomic features (sweating, nausea or vomiting)?
 - Associated palpitations may be suggestive of an underlying tachyarrhythmia.
- *Have you experienced a cough? Is it productive?*
 - A productive cough of yellow/green phlegm points towards infection.
 - Many patients with COPD or suppurative lung disease such as bronchiectasis or cystic fibrosis will have a chronic productive cough. It is important to ask about **change** in the colour or volume of their sputum.
- *Do you cough up any blood?*
 - Fairly common in intercurrent infection but if no infective symptoms consider pulmonary embolism or underlying malignancy.
 - If foreign travel – TB may need to be considered.
- *Have you had any fevers?*
- *Does it get better or worse at any point during the day?*
 - Diurnal variation that may suggest asthma
- *Have you had any travel abroad recently?*
- *Have you had any accidents or falls recently? (trauma is a risk factor for pneumo/haemothorax)*
- *Do you notice any unusual sounds or squeaks when you're breathing? (wheeze)*
 - Common in exacerbations of obstructive airways disease such as asthma and COPD
 - Wheeze may be cardiac secondary to fluid overload/pulmonary oedema

- Ask about response to usual medications; patients will often tell you that they have been using their blue salbutamol inhaler several times a day with no improvement in their symptoms
- *Do you notice that your breathing is worse when you lie flat? Do you wake up at night breathless? (orthopnoea or PND; paroxysmal nocturnal dyspnoea)*
 - How many pillows does the patient sleep with; has this changed? Are they waking up in the night feeling SOB?
 - Ask about peripheral oedema
- *Do you have any cold or flu like symptoms – running nose, running eyes, or aches and pains?*
 - In combination with high fevers; think influenza – this is especially common in winter months and can be life threatening, especially in the presence of superadded bacterial infection
 - Ask patients if they have had their flu vaccines
- *Do you have any pain or swelling in you calves?*
 - New, unilateral symptoms in the calf are relevant if pulmonary embolus is high on your differential list
- *Have you noticed any weight loss?*
 - How much weight and over what time period?
 - Intentional or unintentional?
- *Do you have any difficulty swallowing?*
 - Is the patient known to have an unsafe swallow?
 - Do they feed at risk or are they fed via a PEG?
- *How far can you walk before you have to stop to catch your breath?*
 - Quantify their exercise tolerance; number of steps, metres, flights of stairs etc
- *Have you had any recent changes to your regular medications?*
 - e.g. dose of diuretic in a heart failure patient

OSCE-Aid Tips

Less common causes of breathlessness

- **Neuromuscular** disease with chest wall involvement e.g. myasthenia gravis, MND
- Ascites causing **diaphragmatic splinting**
- Underlying **metabolic acidosis**; patients hyperventilate to “blow off” CO₂ in order to compensate e.g. in diabetic ketoacidosis, salicylate overdose.

Risk factors

Pulmonary embolus

- Recent immobility (>3 days); surgery or long haul flights
- If female; are they taking the oral contraceptive pill or could they be pregnant?
- Personal or family history of deep vein thrombosis or pulmonary embolus
- Underlying malignancy

Fibrotic lung disease

- History of any connective tissue disease e.g. Rheumatoid Arthritis
- Medications; drug induced causes of pulmonary fibrosis include Bleomycin, Busulphan, Cyclophosphamide, Methotrexate, Amiodarone, Nitrofurantoin, Sulfasalazine and Gold
- Occupational exposure to asbestosis, silica
- Exposure to birds, moulds, dust

Cardiac

- Smoking, hypertension, hypercholesterolaemia, T2DM, known coronary artery disease, obesity, family history of ischaemic heart disease
- Are they known to have heart failure?

Malignancy

- Smoking
- Any personal or family history of previous malignancy

Infection

- Immunocompromised or on immunosuppression
- Patients with unsafe swallow are at risk of recurrent aspiration
- Patients with underlying respiratory disease – e.g. cystic fibrosis, bronchiectasis

Past Medical History

For patients with chronic lung diseases such as COPD, it is important to determine their usual baseline. It is important to ask about:

- Baseline exercise tolerance
- Baseline level of function: do they have severe disease and are largely housebound due to their breathlessness, or is their disease mild and they usually function completely independently?
- Do they have home nebulisers or home oxygen therapy?
- How many hospital admissions have they had with SOB in the past 6 months?
- Have they even been to a high dependency ward or intensive care?
- For the COPD patients; have they ever had non-invasive ventilation?
- Have they ever been intubated?
- Recent lung function results (if available) are also helpful

OSCE-Aid Tips

Clarifying a baseline is not only helpful in determining the **severity** of the disease but also helps guide decisions on **ceilings of treatment** and escalation to intensive care.

Don't forget to ask about co-morbidities that may have respiratory manifestations e.g. rheumatoid arthritis and other connective tissue diseases.

Drug History

- For those with known lung disease; what is their usual inhaled therapy?
- Any recent changes to doses of medications
- Any medications recently started; consider drug causes of pulmonary fibrosis (as above)
- Oral contraceptive pill
- Immunosuppressive agents e.g. chemotherapy agents, long term steroids, methotrexate

Family history

Particularly relevant in

- Pulmonary embolus; do they have an inherited coagulopathy such as factor V Leiden
- Acute cardiac breathlessness; is there a strong family history of ischaemic heart disease
- Possibly underlying malignancy

Social history

- **Smoking!!**
- If the patient is still smoking, discuss cessation and referral to appropriate services
- Alcohol intake
- Does the patient live in a house or a flat; can they manage a flight of stairs?
- How does breathlessness impact them on a day to day basis?

Clues to the most common diagnosis:

Diagnosis	Clues!
Pneumonia	Fevers, productive cough yellow/green phlegm, haemoptysis
Pulmonary oedema	Orthopnoea or PND , peripheral oedema, known cardiac disease, if acute may be associated with chest pain
Pleural effusion	Associated infective symptoms i.e. parapneumonic Bilateral effusions in heart failure; history as above Unilateral effusion in the absence of infection is very suspicious of malignancy
Pneumothorax	Sudden onset of symptoms with associated chest pain May be young, tall slim males Also common in those with underlying lung disease
Lung cancer	Insidious onset of symptoms including weight loss, haemoptysis May have evidence of local invasion e.g. Horner's syndrome in apical tumours, or hoarse voice if compression of recurrent laryngeal nerve Smoking is a major risk factor
Acute asthma or COPD	Associated wheeze ; exposure to a known allergen (in asthma) Infective symptoms may or may not be present
Pulmonary embolus	Associated pleuritic chest pain, there may be haemoptysis Consider risk factors as above (as guided by the Well's score)