

Assessment of Breathlessness and Cough for Leeds (ABC Leeds)

This is a guide in the assessment of breathlessness and cough - it does not replace clinical acumen. Chronic breathlessness and cough will often co-exist but either could be the sole symptom. These are defined as chronic if present for more than 6 weeks.

Common causes to consider, especially for breathlessness are:

- Cardiac
- Respiratory
- Mental Illness/addiction
- Fitness/lifestyle
- Anaemia/kidney disease

If the patient already has a diagnosis causing breathlessness, consider at each review (or if symptoms worsening) whether this remains the only diagnosis and whether you need to reconsider the diagnosis.

The aim of the guide is to aid primary care management/diagnosis and point patient to the 'best fit' first referral if required

- Breathlessness is likely to be multi-factorial without a single specific diagnosis.
- If a physical cause is identified, consider whether psychological factors are contributing to or are a consequence of the breathlessness.
- **Order each of the possible contributory factors for chronic breathlessness** - this allows prioritisation of investigations, treatment plans and referrals.
- Revisit relative weighting to each of the possible contributory factors for the breathlessness at each review.

This pathway is not for:

Acute severe breathlessness (<48 hours)

Consider admission if short history of breathlessness

AND

O₂<92% (if new for the patient)

Bradycardia <60bpm

Tachycardia >100bpm

PEF < 33% of best or predicted

RR > 30 breaths/minute.

Initial assessment

The history and examination still constitutes 90% of most diagnoses

History - key features to help differentiate

Breathlessness

- Constant or intermittent
- Exertion only
- Level of exercise tolerance and impact on daily life
- Triggers - physical or emotional event

Cough

- All day, morning, night, after food
- Dry, productive or haemoptysis

- Wheeze time of day
- Chest tightness time of day

Associated symptoms

- Fever/sweats, GORD, Nasal, Throat/voice symptoms

Medication associated

- e.g. Non-selective beta blockers and breathlessness
- e.g. ACE inhibitor and cough (can take 6 months to resolve)

www.pneumotox.com helpful in whether a medication can be implicated in cough

Relevant past history: e.g. Cardiac disease, cancer, stroke - multi-morbidity or co-existent respiratory disease - consider silent or active aspiration

For all

- Smoking history pack years - Tobacco, cannabis, other drugs, e-cig
- Alcohol history and levels of physical exercise
- Occupation - possible exposure?
- Mental Health/Psychological Distress
- Weight change
- Sleep quality
- Consider professional carer support and informal systems around the patient i.e. relatives/neighbours etc.

Examination

BP, Pulse (rate and rhythm), RR, oxygen saturation

BMI - especially changing BMI

Clubbing

Nasal congestion

Cardiac murmur

Respiratory wheeze (insp or exp)

Crackles (fine or coarse)

Ankle oedema

Minimum investigations and management for all

Blood FBC, U&E, LFT, Ca²⁺, TFT

Chest x-ray - if new problem/change in condition

ECG

Smoking cessation

Exercise/weight advice

Features specifically for cough

In the elderly:

- consider the possibility of pneumonia - minimal symptoms and signs
- New onset of acid reflux and epigastric pain requires 2WW

Ask about incontinence - especially urinary

Don't forget about the possibility of cancer

Most likely diagnosis/diagnoses for breathlessness

Common causes of breathlessness	Common features	Next investigation	Next step
Cardiac Failure	Nocturnal SOB Orthopnoea PND Prior cardiac Hx Hypertension Ankle oedema CXR suggestive - cardiomegaly, congestion	Pro-BNP ECG	Refer to cardiology if raised BNP
COPD	Progressive SOB Morning productive cough Exacerbations Wheeze Smoking history CXR suggestive - hyperinflation, 'chronic changes'	Spirometry FEV1/FVC<70% OR FEV1≥80% with suggestive resp symptoms	Use Leeds COPD guidance for management
Asthma	Intermittent SOB Nocturnal wheeze/ cough Atopy CXR normal	Objective measure: Spirometry + reversibility (if obstructed) PEF diary Exhaled nitric oxide if available	Use Leeds Asthma guidance for management
Bronchiectasis	Persistent or intermittent breathlessness Persistent sputum production Patient with airways disease and atypical bugs (including pseudomonas) Coarse crackles	Sputum samples for standard culture and 3xfor AAFB Direct antibiotics for minimum of 2 weeks Total IgE, specific IgE to aspergillus, Immunoglobulins,	If atypical bugs, or regular infections, ensure they have an to confirm the diagnosis and consider referral to respiratory.
Interstitial Lung Disease	Progressive SOB Rheumatoid Arthritis/CTD	Spirometry HRCT	If HRCT suggests ILD, refer into ILD service

	Suggestive occupation Fine crackles CXR - intestinal lines, reduced volume		
Suspected lung cancer	There are few diagnostic features, including haemoptysis		Refer on 2ww if abnormal CXR or high clinical suspicion
Anaemia or kidney disease	Fatigue Non-specific CXR - normal		Refer in as per standard pathways
Unexplained breathlessness despite the above points	No defining features or a mixture of features but concern that this isn't just deconditioning/ Obesity. Possible or other diagnosis CXR - non-specific or normal	Spirometry ECG	Refer in to the respiratory clinic
Consider sole cause or co-existent in all patient:			
Mental Illness and Addiction	PHQ4 (screening for anxiety PHQ2 and depression GAD2) - Assess the extent to which anxiety and/or depression are contributing to the breathlessness, and/or associated distress, and/or ability to self-manage		
Fitness and Lifestyle	Alcohol, dietary advice, exercise advice		

When to refer specific respiratory diagnoses

Common causes of breathlessness	When to refer	Include in the referral
COPD	Doubt over correct diagnosis Leeds COPD guideline	
Asthma	Doubt over correct diagnosis or lack of response (sub/obj) to treatment Symptomatic but normal spirometry/PEF and normal chest x-ray Occupational component suspected Previous severe/life-threatening attack or ICU admission for asthma Marked blood eosinophilia 2+ A&E attendances with asthma in 12 months 3+ prednisolone prescriptions for asthma in 12 months Poor response to medium dose ICS+LABA and montelukast	Confirm inhaler check Confirm prescription filling record (correct both before referral) Confirm medication
Bronchiectasis	Confirm the diagnosis Access to sputum clearance management	
ILD	Unexplained crackles on auscultation Possible occupational disease	Confirmation of HRCT done or requested

Management of Cough

This guide is for persistent cough that is predominantly dry and is the main symptom. It should be used if cancer is not suspected - these patients have a normal clinical examination and normal chest x-ray

Most patients can be advised that the majority of coughs persisting after 3 weeks and before 6-8 weeks will settle without any further necessary treatments or tests - especially if related to COVID-19. However consider the following advice if symptoms persist beyond 6-8 weeks.

Objective assessment of response: At each step reassess the cough severity with a simple visual analogue score (VAS) - How bad is the cough on a scale of 1-10 where 0 is no cough and 10 is the worst cough imaginable? This will introduce some objectivity when deciding on response to trials of therapy. Clinically significant response >2 unit change.

<p>Suspected reflux associated cough</p> <p>Acid and/or pepsin reflux can cause cough with or without a trial of treatment</p>	
<p>If symptomatic <u>with</u> acid reflux, trial Gaviscon advance after meals and at bedtime + Omeprazole 40mg BD for 6 weeks. If improvement shown then provide further 6 weeks of treatment to achieve full response.</p> <p>Advise lifestyle change such as alcohol and caffeine reduction and smoking cessation</p>	<p>If persistent symptomatic reflux or concern about cancer, refer to Upper GI service</p> <p>If resolution of reflux but persistent cough, refer to ENT and Upper airways service</p>
<p>If symptomatic <u>without</u> acid reflux symptoms or <u>controlled</u> acid reflux (e.g. on PPI), ensure they have a trial of Gaviscon advance after meals and at bedtime for 6 weeks.</p>	<p>If not improved, and there are no other factors (see below), refer to Respiratory Clinic with up to date CXR</p> <p>If concern about co-existent respiratory disease, refer to Respiratory with up to date CXR and spirometry</p> <p>If no improvement and there are voice related changes with persistent cough, refer to ENT and Upper airways service</p>
<p>NB if you are going to withdraw PPI, reduce to 20mg BD for a further 6 weeks then 20mg OD/PRN after to avoid rebound acid reflux</p>	
<p>Suspected nasal disease associated cough</p>	
<p>If you see nasal polyps, suspect nasal</p>	<p>If no improvement in symptoms after 6</p>

<p>polyps but can't see them or there is sinus disease or globus, consider:</p> <p>Use saline nasal douches (which include bicarbonate) and treat with a steroid nasal spray. If you can see polyps and pus, or there is chronic rhinosinusitis, consider adding in doxycycline 100mg bd for 1 week.</p> <p>Anything that causes a blocked nose will result in patients breathing through their mouth more (possibly worse at night) which leads to dry mouth and increased sensitivity of pharynx and throat clearing. Most post-nasal drip is an awareness of the patients own saliva and globus, not true PND.</p> <p>Washing with saline douches (which include bicarbonate) is a useful but underused adjunct to steroid nasal therapy as it has an intrinsic anti-inflammatory effect of its own. Guidance is available on NHS choices: http://www.nhs.uk/Conditions/Rhinitis-n-allergic/Pages/Treatment.aspx</p>	<p>weeks:</p> <p>Consider referral to ENT, <u>especially</u> if there is voice change. Start Gaviscon advance after each meal and before bed whilst waiting if not previously trialled.</p>
<p>Interstitial lung disease (and IPF)</p>	
<p>Can cause persistent dry cough. Treat co-existent reflux or nasal disease. Try codeine linctus</p> <p>If a patient has no crackles to auscultation and a normal CXR, unlikely to be ILD</p>	<p>The presence of crackles is abnormal. Check BNP and request HRCT scan - refer to the ILD service if BNP low or index of suspicion for ILD is high</p>
<p>Current smoker</p>	
<p>Ensure that there is nothing to suggest upper airway or lung cancer.</p> <p>Smoking cessation</p>	<p>Refer by standard pathways if cancer suspected.</p> <p>Treat co-existent nasal or GI symptoms and refer to these services as necessary</p> <p>If suspecting COPD/bronchitis, refer as appropriate after spirometry</p>

	<p>If not thought to have COPD, bronchiectasis, asthma, ILD and has normal imaging, unlikely that Respiratory referral will help</p>
<p>Stop medication know to contribute to cough <u>where possible</u></p>	
<p>(more common selection from on-line free access www.pneumotox.com)</p> <p>For example Amiodarone Possibly Angiotensin II receptor blockers Some Angiotensin converting enzyme inhibitors Gliptins</p>	<p>Note that ACE inhibitor associated cough can take up to 6 months to resolve.</p> <p>If there are no other features as above, consider referral into ENT or Respiratory as appropriate</p>

Co-existent or sole problems

Problem	Evidence/Tip
Anxiety and Depression	PHQ4 - consider how anxious or depressed the patient is and aim to find out whether a physical problem is exacerbated by or is the primary cause
Rhinosinusitis	Ensure nasal spray technique is demonstrated and a long enough trial is given. https://www.abrahamthepharmacist.com/blog/how-to-use-nasal-spray-how-to-use-nasal-spray-properly-nasal-spray-technique-2018 . Consider co-prescribing antihistamines - Chlorpheniramine if tolerated or before bed. Sedating types work better if possible but use others if drowsiness is an issue. Always discuss home and work environments e.g. mould & damp conditions, building dust and poor ventilation.
Acid or pepsin Reflux	This can be acid reflux and non-acid reflux. Whilst H2 blockers and PPI will deal with the acid element a raft therapy is required for non-acid or pepsin component. Your patient will need treatment for 2 months to be sure you have treated this potential element of cough.
Ear wax	A small proportion of people with chronic cough have a sensitive ear canal (Arnold's reflex) so clear excessive ear wax.
Urinary incontinence	Refer to community women health physio and/or urogynaecology