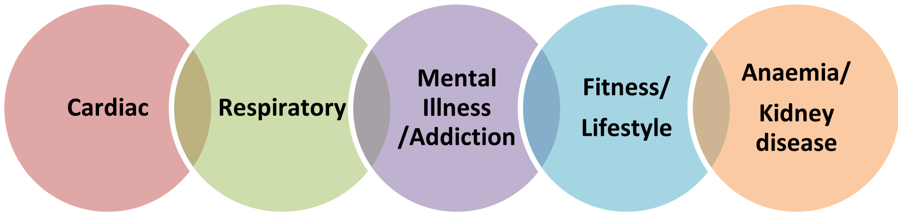
NHS Lambeth Clinical Commissioning Group
NHS Southwark Clinical Commissioning Group

Lambeth and Southwark Adult Breathlessness Assessment Algorithm

Common causes of breathlessness



Everyone who is breathless may have some degree of anxiety

If the patient already has a diagnosis causing breathlessness reassess symptoms at each review and consider other causes if symptoms do not improve.

STEP 1 → The history and examination still constitutes 90% of most diagnoses

HISTORY

- Onset of symptoms and associated features e.g. chest pain, leg swelling, palpitations, wheeze or sputum
- Smoking history including cannabis and other smoked drugs
- Alcohol consumption
- Impact of breathlessness on daily life
- Levels of habitual physical exercise
- Environmental and occupational risk factors
- Co-morbid conditions
- Medications and recent changes in therapy
- Sleep Quality/ Mental Health especially anxiety/ Psychological Distress
- Consider professional carer support and informal systems around the patient i.e. relatives, neighbours or social isolation

EXAMINATION

- Vital signs: BP, Pulse (rate and rhythm), RR, Temperature, oxygen saturation
- Observe breathing pattern (use of accessory muscles)
- Chest and heart auscultation
- Peripheral oedema and JVP
- Deconditioning/loss of quadriceps muscle bulk
- Calf swelling
- BMI, waist circumference, neck circumference
- PEF % predicted (for age, sex and height)
- Expired carbon monoxide (ppm)

STEP 2 → Identify Type of Breathlessness (Code breathlessness using READ code 173)

Acute severe breathlessness (less than 48 hours)
Consider admission (Red Flags: O2<92%, cardiac sounding chest pain at rest, bradycardia <60bpm, tachycardia >100bpm, PEF<33% of best or predicted, RR>30 breath/mn)

OR

Chronic persistent breathlessness (daily for more than 6 weeks)
Continue to follow breathlessness algorithm

Provide patients with chronic persistent breathlessness resources, the breathless factsheet, and/or 'Taking Charge of your Breathlessness' leaflet

STEP 3 → Tier 1 Investigations for presentation of chronic breathlessness

The minimum tests required for **all patients** presenting with chronic breathlessness:

Initial Consultation	NT-ProBNP	Thyroid Function Test	Full Blood Count	Urea & Electrolytes	Liver Function Test
	Albumin/Creatinine Ratio	ECG (scan using "photo" setting)	Chest X-ray (in last 6 months)	Breathlessness Score – MRC Scale	Microspirometry (for case finding) (FEV1)
Subsequent Consultation Holistic Assessment	Screening for anxiety and depression– Assess the extent to which anxiety and/or depression are contributing to the breathlessness, and/or associated distress, and/or ability to self-manage			Peak Flow Diary	Spirometry (Respiratory single point of referral on DXS if not performed in-house)
• **From the tests results identify possible contributory factors to the breathlessness and confirm suspected diagnoses through step 4 investigations**					

STEP 4 → **Tier 2 Investigations for presentation of chronic breathlessness**

Based on history, examination and tier 1 investigations should further tests be carried out to confirm diagnoses or to provide further information? **Only order tests if you would act upon the results.**

Common Causes of Breathlessness	Further Assessment/ Tests	Further Management
Cardiac **Possible diagnosis:** Heart failure Angina/ IHD Valve disease Arrhythmias	• Prior history of myocardial infarction or NT-proBNP > 400 pg/mL • Consider 24/7 Holter or 7 day event recorder if palpitations/falls/dizziness/syncope • Consider stress/exercise echocardiography or coronary CT if history suggestive of angina	• Refer via NHS e-referral to 2 or 6 week Heart Failure Clinic (echo and consultant review). Seen within 2 weeks if NTproBNP >2000 pg/mL or prior MI, seen within 6 weeks if between 400 - 2000 pg/mL • Consider Electrophysiology clinic e-referral • Consider general cardiology e-referral
Respiratory **Possible diagnosis:** Asthma COPD Interstitial lung disease Pleural disease Pulmonary hypertension Neuromuscular weakness	• Ensure all patients have had post bronchodilator spirometry • Use SEL RRP guidelines for Asthma and COPD management (on DXS) • Consider bronchodilator reversibility testing if diagnosis is unclear	• Consider case review in Virtual Clinic • Consider using the respiratory single point of referral for advice and guidance on further investigations and onward management • Refer COPD patients MRC 3 or more to Pulmonary Rehabilitation (if able to walk 10m or more, can be with walking aid) • If considering cross-sectional imaging (CT) please refer to ensure appropriate test
Mental Illness and Addiction **Possible diagnosis:** Depression Anxiety	• GAD 7 and PHQ9 • Addiction assessment • Audit score for alcohol • Smoking assessment including non-tobacco eg cannabis, opiates	• Consider referral for IAPTS • Consider Addictions Team referral • Treat tobacco dependency (consider using respiratory single point of referral for tertiary clinic)
Fitness and Lifestyle **Possible reason for breathlessness:** Low fitness level Obesity Frailty	• Eat Well Plate and Food Diary (template on Southwark Intranet) • Malnutrition Universal Screening Tool (MUST) • If available use 7 day pedometer assessment for patients with MRC 1-3 • Use Short Physical Performance Battery (SPPB), including the 4 Meter Gait Speed Test to assess frailty with patients with MRC 4-5	• Consider referral for Pulmonary Rehabilitation (respiratory diagnosis and MRC 3 or more) • Consider referral to community dietician if MUST > 2
Anaemia/ Kidney Disease/ Malignancy	• Check B12, folate, and alcohol history for macrocytic anaemia • Check ferritin, iron indices, Hb electrophoresis for microcytic anaemia	• Use NHS e-Referral service advice and guidance option to get further opinion from a nephrologist or haematologist before testing or referral • If malignancy is considered refer via appropriate C2WW pathway

STEP 5 → **Consider Contributing Factors to Breathlessness**

- There may be more than one contributing factor to breathlessness.
- Breathlessness is likely to be multi-factorial without a single specific diagnosis. If a physical cause is identified still consider whether psychological factors are contributing to or a consequence of the breathlessness.
- **Order each of the possible contributory factors for the chronic breathlessness** (Cardiac/Respiratory/mental Illness/Fitness and Lifestyle/Anaemia and Kidney Disease) this allows prioritisation of investigations, treatments plans and referrals.
- If there is no obvious cause(s) of breathlessness fitness and lifestyle factors may need to be addressed. It may be beneficial to refer for therapeutic interventions for smoking cessation, alcohol reduction, weight management, physical activity improvement and psychosocial support. Collaboratively agree goals/care plan.

Guideline Adapted from IMPRESS Breathlessness Algorithm http://www.impressresp.com/index.php?option=com_docman&Itemid=82
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