Approach to breathlessness (dyspnoea)
Tūngāngā

The information in this guide is accurate to the best of our knowledge as of June 2023.

Definition

Breathlessness (dyspnoea) is the difference between the demand to breathe and the ability to breathe (Mahler 2017). To observe it, watch how hard a person works to catch their breath (work of breathing) and count the number of breaths per minute. It is a frightening symptom and has a significant impact on how a person feels and functions.

Key points

- People with dyspnoea are more likely to be admitted to hospital than those with other symptoms (Johnson et al 2016).
- Common causes of breathlessness in older adults are (Mahler 2017):
  - respiratory (infection or chronic obstructive pulmonary disease)
  - cardiac (heart failure, myocardial infarction, angina)
  - anaemia
  - psychological (anxiety, panic)
  - imminent end of life (predicted/diagnosed dying).

Why this is important

Breathlessness is a strong predictor of mortality (Mahler 2017). It tends to increase in the last few months of life regardless of condition and is an indicator of worsening health and reduced survival (Johnson et al 2016). It is common in older people and often has cardiac or respiratory causes (van Mourik et al 2014).

Implications for kaumātua*

Breath and breathing are significant in Māori culture. **Te reo Māori** has several words for breath, many of which link breath and breathing to **te taiao** (the natural world) and to Māori creation stories. While these cultural constructs do not change the occurrence, cause or treatment of breathlessness, it is important to understand them because experiencing breathlessness may contribute to anxiety or **wairua** (spiritual) unrest (see the *Guide for health professionals caring for kaumātua | Kupu arataki mō te manaaki kaumātua* guide for more information).

* Kaumātua are individuals and their connection with culture varies. This guide provides a starting point for a conversation about some key cultural concepts with kaumātua and their whānau/family. It is not an exhaustive list; nor does it apply to every person who identifies as Māori. It remains important to avoid assuming all concepts apply to everyone and to allow care to be person and whānau/family led.

Assessment

Use a tool to gather a systematic and structured report of breathlessness. It is helpful to use OLDCARTS-ICE (adapted from Bickley 2017) selectively when exploring breathlessness.

OLDCARTS-ICE

Explore	Questions/actions
Onset	When did it start? *(Be as accurate about date and time as possible.)* Did it start suddenly or gradually? What (if anything) stimulated it? *(What was happening? What was the person doing?)* Has something similar happened in the past? If so, what worked and what happened?
Duration	How long does it last? Is it continuous or intermittent? How often does it occur?
Characteristics	What does it feel like? *(Get a description.)* • 'Hard work to catch breath' is reported in respiratory and cardiac disease. • 'Tight' often refers to constricted airways, more common in asthma than COPD. • 'Can't catch my breath' is more common in COPD.
Associated symptoms	Explore physical signs: • cough, mucus and wheeze • chest pain and palpations • lower leg oedema (or if bed bound, sacral oedema). Explore emotional signs: • anxiety or wairua (spiritual) unrest.
Relieving and aggravating	What makes it better? What makes it worse? • Is it worse when lying flat? • Do you wake at night suddenly short of breath?
Treatment	If chronic, are usual treatments working? • Do you need or are you using more pillows to prop you up at night? • Have you started sleeping in a La-Z-Boy armchair to catch your breath?
Severity	How bad is it? *(Use a scale – see the Medical Research Council dyspnoea scale below.)*
Impact	Have you stopped or started doing something due to SOB?
Coping	Fear and anxiety are common with SOB.
Expectation	Think about goals of care and what treatments are possible in your facility. *(Health professionals, patient and whānau/family differ in their expectations and priorities.)*

COPD = chronic obstructive pulmonary disease SOB = shortness of breath.

Assessment tool for chronic breathlessness specifically

The Medical Research Council dyspnoea scale is a widely used rating scale with five levels (van Mourik et al 2014):

1. breathless with strenuous exercise
2. short of breath when hurrying on the level or up a slight hill
3. walking slower than people of the same age because of breathlessness
4. stopping for breath after walking 100 metres or after a few minutes on the level
5. too breathless to leave the house.

Treatment

Minimise risk of developing breathlessness

- Offer immunisations (influenza, COVID-19, pneumococcal).
- Use infection prevention and control measures (minimise exposure to others with respiratory illness).
- Support safe swallow techniques and positioning (refer for swallow deficits).
- Manage frailty.
- Support correct use of prescribed medications and inhaler technique.

Manage respiratory medication

- For inhaled medication, regularly review patient's technique and equipment.
- For anti-anxiety medication, support its use along with non-pharmacological interventions.
- Discuss with prescriber and patient the use of opioids for managing respiratory drive.
- For diuretic therapy, closely monitor body weight.

Care planning

A patient-centred approach to chronic breathlessness is recommended. Prioritise daily activity. Use the multidisciplinary team and **whānau**/family to address impacts of and impact on breathlessness, including physiological, psychological, whānau/family and spiritual aspects.

Non-pharmacological approaches include:

- listening to the person's concerns
- engaging whānau/family and spiritual support
- encouraging distraction and relaxation through music, reading and diversional therapy
- keeping the person moving at a level appropriate to them (from walking to repositioning in bed)
- supporting them to eat well, as maintaining strength and eating favourite foods improves mood
- supporting sleep
- providing person-specific complementary therapies such as massage, aromatherapy and/or pet therapy.
- providing culturally informed complementary therapies such as **te ao Māori**
- breathing exercises (**Hikitia te Hā**: **www.allright.org.nz/tools/hikitia-te-ha**) and/or **waiata** (singing) to promote breath control
- whānau/family or a cultural advisor may recommend other therapies.

Decision support

Use a structured approach to assess breathlessness
Assess symptoms

- ☐ Onset: when did it start?
- ☐ Duration: how long does it last?
- ☐ Character: what does it feel like?
  '**Tight**' tends to refer to airway constriction (often asthma)
  '**Unable to catch my breath**' is more common in COPD
  '**Hard work to breathe**' is reported in cardiac and respiratory conditions
- ☐ Associated symptoms: explore cough, mucus and pain, anxiety and wairua
- ☐ Relieving or aggravating: Worse during night or day? Lying or sitting?
- ☐ Treatments: are usual treatments working (in chronic issues)?
- ☐ Severity: use disease rating tool for chronic issues

If this is a **significant change from baseline**, call GP/NP – **HIGH RISK**

Medical history: consider pre-existing conditions or risk factors for breathlessness

Consider conditions such as:

- ☐ COPD/asthma
- ☐ Heart failure
- ☐ Anaemia
- ☐ Terminal illness

Consider risk such as:

- ☐ Swallow deficits (aspiration)
- ☐ Immobility (thrombosis)
- ☐ Respiratory infection

Has medication changed in the last 2 weeks?

Consider:

- ☐ Change to routine inhalers?
- ☐ Change to cardiac medication, especially ACE inhibitor or diuretic?
- ☐ Change to anti-thrombotic medication?
- ☐ New medication, or existing medication toxicity?

Complete a physical exam

Inspection

- ☐ Does patient look well/ill?
- ☐ Are they confused?
- ☐ Has consciousness changed?
- ☐ Is skin pale/flushed/cyanotic/mottled?
- ☐ Are they working hard to breathe?
- ☐ Are they tripoding?
- ☐ Are they purse-lipped breathing?
- ☐ Can they speak in full sentences?
- ☐ Are neck veins congested/swollen?

Palpation

- ☐ Pitting oedema lower legs/sacrum?

Percussion

- ☐ Chest dull or resonant?

Auscultation lungs

- ☐ Air moving in and out of all lobes?
- ☐ Wheeze present? Where? Loud? During inspiration or expiration?
- ☐ Crackles? Where? Coarse or fine? During inspiration or expiration?

Measure vital signs

ALERT SIGNS

- ☐ Respiratory rate > 25 bpm
- ☐ Oxygen saturation ≤ 93%
- ☐ Pulse ≥ 100
- ☐ Temperature < 35.5 or > 37.2
- ☐ Systolic blood pressure ≤ 100

Review assessment data and structure for handover to GP or NP

- ☐ **New-onset SOB needs review by GP/NPP**
  Your assessment information is critical for the GP/NP to determine urgency and potential treatment options. **DO NOT DELAY referral to GP/NPP**

Nurse-initiated therapies for comfort

- ☐ PRN respiratory and/or anxiety medication
- ☐ Prescribed oxygen to keep saturation at or above 93%
- ☐ Guided purse-lipped breathing
- ☐ Fresh air/fan
- ☐ Prop patient up to open lungs
- ☐ Reduce exertion
- ☐ Provide reassurance, call whānau/family in to support

Initiate prescribed therapies or if end of life diagnosed, refer to end-of-life pathway

ACE = angiotensin-converting enzyme bpm = breaths per minute COPD = chronic obstructive pulmonary disease
GP = general practitioner NP = nurse practitioner PRN = as needed (pro re nata) SOB = shortness of breath

References | Ngā tohutoro

Bickley LS. 2017. *Bates' Guide to Physical Examination and History Taking* (12th North American edn). URL: **www.amazon.com/Bates-Physical-Examination-History-Taking/dp/146989341X**.

Johnson MJ, Bland JM, Gahbauer EA, et al. 2016. Breathlessness in elderly adults during the last year of life sufficient to restrict activity: prevalence, pattern, and associated factors. *Journal of American Geriatric Society* 64(1): 73–80. DOI: 10.1111/jgs.13865.

Mahler DA. 2017. Evaluation of dyspnea in the elderly. *Clinics in Geriatric Medicine* 33(4): 503–21. DOI: 10.1016/j.cger.2017.06.004.

van Mourik Y, Rutten FH, Moons KGM, et al. 2014. Prevalence and underlying causes of dyspnoea in older people: a systematic review. *Age and Ageing* 43(3): 319–26. DOI: 10.1093/ageing/afu00.