



5 Minute Consult: Dyspnea Daniel Markwalter, MD; Justin Brooten, MD

Assessment

- Note: dyspnea is the subjective sensation of shortness of breath and is independent of oxygen saturation, respiratory rate, or other objective indicators
- Assessment is based on patient's self-report
- If unable to self-report, assess heart rate, respiratory rate, restlessness, abdominal breathing, accessory muscle use, grunting, nasal flaring, look of fear

Management

- Identify/treat reversible causes (pulmonary edema, anemia, bronchospasm, etc.)
- Non-pharmacologic
 - o Patients often naturally lean forward, utilize pursed-lip breathing
 - o Fan to provide air movement across face^{1,2}
 - o Administration of ↑ FiO₂ not shown to be superior to administration of room air in the absence of hypoxia³ – possible subjective benefit for patients/families
 - o Noninvasive or mechanical ventilation, depending on patient's goals of care
 - Consider palliative high-flow nasal canula⁴
 - o Allow for viewing of window or open space
 - o Mindfulness/stress-reduction exercises
- Pharmacologic
 - o Opioids are mainstay
 - No particular opioid better than another
 - Data support oral, intravenous, and subcutaneous use over nebulization
 - Effective for cough as well
 - Mechanisms: (1) alteration of chemoreceptor response to hypercapnia and hypoxia; (2) vasodilation and decreasing of pulmonary vascular congestion; (3) centrally-acting effects to reduce perception of dyspnea
 - **When appropriately dosed, no respiratory depression**
 - o Disease-specific interventions such as beta-agonists, inhaled anti-cholinergics, steroids, diuretics (no evidence for nebulization), antibiotics, etc.

Intervention	Agent	Conclusions
Medical Gas	Oxygen – Hypoxemic	↑
	Oxygen – Normoxemic	↔
	Medical air – Normoxemic	↔ or ↑
Pharmacologic	Opioids – oral/IV	↑
	Opioids - inhaled	↓
	Inhaled furosemide	↔
	Anxiolytics	↔
	Heliox	↔
Non-pharmacologic	Fan	↑
	Pulmonary rehabilitation (in select patients)	↑
Surgical	Pleural catheter	↑
	LVRs (in select patients)	↑
	Bronchial stenting (in select patients)	↑
Complementary	Acupuncture	↔ or ↑

↑ Evidence generally supports use of intervention
 ↓ Current evidence does not support use
 ↔ Further investigation required
 ↔ or ↑ Further investigation is required, but emerging data are compelling to support use

Initial Opioid Dosing for Opioid-Naïve Patients (start conservatively and titrate as needed to higher dosing to obtain effect)		
	Oral (IR)	IV/SC
Morphine	5-10 mg q1-4h	2-4 mg q15-30min
Oxycodone	2.5-5 mg q1-4h	-
Hydromorphone	1-2 mg q1-4h	0.2-0.6 mg q15-30min
Fentanyl	-	25-50 mcg q15-30min

Treatment options for dyspnea⁵

References

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