

Appendix 1 Detailed Search Strategies

Pubmed Search Strategies

- #1 "pulmonary disease, chronic obstructive"[MeSH Terms]
- #2 "chronic obstructive lung disease"[Title/Abstract] OR "chronic obstructive pulmonary diseases"[Title/Abstract] OR "COAD"[Title/Abstract] OR "COPD"[Title/Abstract] OR "chronic obstructive airway disease"[Title/Abstract] OR "chronic obstructive pulmonary disease"[Title/Abstract] OR "airflow obstruction chronic"[Title/Abstract] OR "airflow obstructions chronic"[Title/Abstract] OR "chronic airflow obstructions"[Title/Abstract] OR "chronic airflow obstruction"[Title/Abstract]
- #3 #1 OR #2
- #4 "high flow oxygen"[Title/Abstract] OR "high flow nasal cannula"[Title/Abstract] OR "high flow nasal oxygen therapy"[Title/Abstract] OR "high flow nasal cannula oxygen therapy"[Title/Abstract] OR "high flow oxygen therapy"[Title/Abstract] OR "HFNC"[Title/Abstract] OR "HFOT"[Title/Abstract] OR "HFNOT"[Title/Abstract]
- #5 "random"[Title/Abstract] OR "randomly"[Title/Abstract] OR "randomized"[Title/Abstract]
- #6 #3 AND #4 AND #5

Embase Search Strategies

- #1 'chronic obstructive lung disease'/exp
- #2 'chronic obstructive lung disease':ti,ab,kw OR 'chronic obstructive pulmonary diseases':ti,ab,kw OR coad:ti,ab,kw OR copd:ti,ab,kw OR 'chronic obstructive airway disease':ti,ab,kw OR 'chronic obstructive pulmonary disease':ti,ab,kw OR 'airflow obstruction, chronic':ti,ab,kw OR 'airflow obstructions, chronic':ti,ab,kw OR 'chronic airflow obstructions':ti,ab,kw OR 'chronic airflow obstruction':ti,ab,kw
- #3 #1 OR #2
- #4 'high flow oxygen':ti,ab,kw OR 'high-flow nasal cannula':ti,ab,kw OR 'high-flow nasal oxygen therapy':ti,ab,kw OR 'high-flow nasal cannula oxygen therapy':ti,ab,kw OR 'high flow oxygen therapy':ti,ab,kw OR 'hfnc':ti,ab,kw OR 'hfot':ti,ab,kw OR 'hfnot':ti,ab,kw
- #5 'random':ti,ab,kw OR 'randomly':ti,ab,kw OR 'randomized':ti,ab,kw
- #6 #3 AND #4 AND #5

the Cochrane Library Search Strategies

- #1 Mesh descriptor: [Pulmonary Disease, Chronic Obstructive] explode all trees
- #2 (Chronic Obstructive Lung Disease):ti,ab,kw OR (Chronic Obstructive Pulmonary Diseases):ti,ab,kw OR (COAD):ti,ab,kw OR (COPD):ti,ab,kw OR (Chronic Obstructive Airway Disease):ti,ab,kw OR (Chronic Obstructive Pulmonary Disease):ti,ab,kw OR (Airflow Obstruction, Chronic):ti,ab,kw OR (Airflow Obstructions, Chronic):ti,ab,kw OR (Chronic Airflow Obstructions):ti,ab,kw OR (Chronic Airflow Obstruction):ti,ab,kw
- #3 #1 OR #2
- #4 (High Flow Oxygen):ti,ab,kw OR (High-Flow Nasal Cannula):ti,ab,kw OR (High-flow nasal oxygen therapy):ti,ab,kw OR (High-Flow Nasal Cannula Oxygen Therapy):ti,ab,kw OR (High flow oxygen therapy):ti,ab,kw OR (HFNC):ti,ab,kw OR (HFOT):ti,ab,kw OR (HFNOT):ti,ab,kw
- #5 (random):ti,ab,kw OR (randomly):ti,ab,kw OR (randomized):ti,ab,kw
- #6 #3 AND #4 AND #5

Table s1 Summary of Patient Comfort

Study	Evaluation tools	HFNC group	COT group	P value	Conclusion
Li 2020 ⁴	Subjective discomfort score	2.3±1.1	3.9±1.6	<0.001	Favor HFNC
Longhini 2019 ¹³	Comfort Numeric Rating Scale	9.0 (8.0–10.0)	7.0 (5.0–8.0)	<0.001	Favor HFNC
Xia 2022 ¹⁴	Mouth dryness score	3.0(1.0-4.0)	2.0 (1.0-4.0)	0.717	Similar
	Nasal dryness score	2.0 (1.0-4.0)	2.0 (1.0-4.0)	0.734	Similar
	Throat dryness score	2.0 (1.0-4.0)	2.0 (1.0-4.0)	0.888	Similar

Notes: Data are presented as mean ± standard deviation or median (interquartile range).

Abbreviations: HFNC, high-flow nasal cannula; COT, conventional oxygen therapy.