

Pulmonary rehabilitation compared to usual community care for COPD with recent exacerbation

Bibliography: Puhan M, Scharplatz M, Troosters T, Walters EH, Steurer J. Pulmonary rehabilitation following exacerbations of chronic obstructive pulmonary disease. Cochrane Database Syst Rev 2011;(10):CD005305

Quality assessment							Summary of findings				
Nº of participants (studies) Follow-up	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Overall quality of evidence	Study event rates (%)		Relative effect (95% CI)	Anticipated absolute effects	
							With usual community care	With pulmonary rehabilitation		Risk with usual community care	Risk difference with pulmonary rehabilitation
Hospital admission (follow up: range 3 months to 18 months)											
250 (6 RCTs)	not serious	not serious	not serious	not serious	none	⊕⊕⊕⊕ HIGH	51/126 (40.5%)	20/124 (16.1%)	OR 0.22 (0.08 to 0.58)	Study population	
										405 per 1000	275 fewer per 1000 (353 fewer to 122 fewer)
Mortality (follow up: range 3 months to 8 months)											
118 (3 RCTs) ¹	not serious	not serious	not serious	serious ²	none	⊕⊕⊕ ○ MODERATE	6/60 (10.0%) ¹	8/58 (13.8%)	OR 0.28 (0.10 to 0.84)	Study population	
										100 per 1000 ¹	70 fewer per 1000 (89 fewer to 15 fewer)
										High	
										500 per 1000	281 fewer per 1000 (409 fewer to 43 fewer)
Quality of life (CRQ) dyspnea (follow up: range 12 weeks to 72 weeks; assessed with: CRQ; range of scores: 1–7; better indicated by higher values)³											
258 (5 RCTs)	not serious	not serious	not serious	serious ⁴	none	⊕⊕⊕ ○ MODERATE	130	128	-	The mean quality of life (CRQ) dyspnea was 0	MD 0.97 higher (0.35 higher to 1.58 higher)

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Quality assessment						Summary of findings					
Quality of life (SGRQ) total (follow up: range 12 weeks to 26 weeks; assessed with: SGRQ ;better indicated by lower values; Scale from: 0 to 100)⁵											
127 (3 RCTs)	not serious	not serious	not serious	serious ⁶	none	⊕⊕⊕ ○ MODERATE	64	63	-	The mean quality of life (SGRQ) total was 0 lower	MD 9.88 lower more (5.37 more to 14.4 more)
Ambulation (as measured by 6MWD) (follow up: range 1 weeks to 108 weeks; assessed with: distance in meters; better indicated by higher values)⁷⁸											
299 (6 RCTs)	not serious	not serious ⁹	not serious	serious ⁶	none	⊕⊕⊕ ○ MODERATE	134	165	-	The mean ambulation (as measured by 6MWD) was 0	MD 77.7 higher (12.21 higher to 143.2 higher)
Resource use - not reported											
0 (0 studies)									not estimable	Study population	
										0 per 1000	0 fewer per 1000 (0 fewer to 0 fewer)

CI: Confidence interval; **OR:** Odds ratio; **MD:** Mean difference

- Median of baseline risk in studies used for low-risk estimate. High-risk estimate of 50% based on study with 4 years of follow-up. Control group risk is based on the mean across trials.
- Only 23 events total.
- CRQ: MID 0.5, moderate effect 1.0, large effect 1.5.
- Sample size substantially lower than 400.
- SGRQ: MID 4, moderate effect 8, large effect 12.
- Sample size substantially lower than 400.
- 76 wk, 11 d, 6 wk, and 208 wk, in the four trials, respectively.
- 6MWD: MID is 35 (30–42) m or 10% change of baseline 6MWD.
- Although I square is 89%, this significant heterogeneity is likely due to large differences in baseline severity (baseline 6MWD).