

Appendix 3 (as supplied by the authors): GRADE evidence profile

Quality assessment							No of patients		Effect		Quality*	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Lower V _T	Higher V _T	Relative (95% CI)	Absolute		
Lung injury												
8	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	none	8/441 (1.8%)	24/424 (5.7%)	RR 0.36 (0.17 to 0.78)	36 fewer per 1000 (from 12 fewer to 47 fewer)	⊕⊕⊕○ MODERATE	CRITICAL
								4%		26 fewer per 1000 (from 9 fewer to 33 fewer)		
Pulmonary infection												
7	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	17/425 (4%)	42/408 (10.3%)	RR 0.46 (0.26 to 0.83)	56 fewer per 1000 (from 18 fewer to 76 fewer)	⊕⊕⊕⊕ HIGH	CRITICAL
								8%		43 fewer per 1000 (from 14 fewer to 59 fewer)		
Atelectasis												
7	randomised trials	no serious risk of bias	serious ²	no serious indirectness	serious ³	none	31/352 (8.8%)	56/338 (16.6%)	RR 0.69 (0.35 to 1.38)	51 fewer per 1000 (from 108 fewer to 63 more)	⊕⊕○○ LOW	IMPORTANT
								17%		53 fewer per 1000 (from 111 fewer to 65 more)		
Mortality												
13	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	13/591 (2.2%)	18/572 (3.1%)	RR 0.75 (0.38 to 1.49)	8 fewer per 1000 (from 20 fewer to 15 more)	⊕⊕⊕⊕ HIGH	IMPORTANT
								2%		5 fewer per 1000 (from 12 fewer to 10 more)		

Length of hospital stay (Better indicated by lower values)												
6	randomised trials	no serious risk of bias	serious ⁴	no serious indirectness	no serious imprecision	none	343	343	-	SMD 0.15 lower (0.42 lower to 0.12 higher)	⊕⊕⊕○ MODERATE	NOT IMPORTANT
Length of ICU stay (Better indicated by lower values)												
4	randomised trials	no serious risk of bias	very serious ⁵	no serious indirectness	no serious imprecision	none	322	323	-	SMD 0.06 higher (0.33 lower to 0.45 higher)	⊕⊕○○ LOW	NOT IMPORTANT
PaO ₂ /FiO ₂ (Better indicated by lower values)												
9	randomised trials	serious ⁶	serious ⁷	no serious indirectness	no serious imprecision	none	219	219	-	SMD 0.06 lower (0.39 lower to 0.26 higher)	⊕⊕○○ LOW	IMPORTANT
PaCO ₂ (Better indicated by lower values)												
14	randomised trials	serious ⁶	serious ⁸	no serious indirectness	no serious imprecision	none	366	370	-	SMD 0.49 higher (0.19 to 0.78 higher)	⊕⊕○○ LOW	IMPORTANT

Note: FiO₂ = fraction of inspired oxygen, ICU = intensive care unit, PaCO₂ = arterial partial pressure of carbon dioxide, PaO₂ = arterial partial pressure of oxygen, V_T = tidal volumes.

¹ RR with 95% CI for one trial was 3.06 (0.13-73.35).

² Significant heterogeneity (I₂ = 59%) was found.

³ RR with 95% CI for one trial was 3.00 (0.13-67.51).

⁴ Significant heterogeneity (I₂ = 53%) was found.

⁵ Significant heterogeneity (I₂ = 78%) was found.

⁶ Most trials were judged to be at unclear risk of bias.

⁷ Significant heterogeneity (I₂ = 60%) was found.

⁸ Significant heterogeneity (I₂ = 65%) was found.

*GRADE Working Group grades of evidence: high quality = further research is very unlikely to change our confidence in the estimate of effect; moderate quality = further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate; low quality = further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate; very low quality = we are very uncertain about the estimate.