Table 83: Clinical evidence profile: Comparison 2.1. Strength resistance/ anaerobic training programme versus no exercise programme

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Strength resistance/ anaerobic training programme	No exercise programme	Relative (95% CI)	Absolute	**Quality**	**Importance**
Change in FEV_1 % predicted at hospital discharge - *Supervised programme* (follow-up mean 18.7 days; range of scores: 0-100; Better indicated by higher values)												
1 (Selvadurai 2002)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	22	22	-	MD 5.58 higher (1.34 to 9.82 higher)	LOW	CRITICAL
Change in FEV_1 % predicted - *Unsupervised programme* (follow-up 3 months; range of scores: 0-100; Better indicated by higher values)												
1 (Kriemler 2013)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	11	10	-	MD 11.11 higher (5.16 to 17.06 higher)	LOW	CRITICAL
Change in FEV_1 % predicted - *Unsupervised programme* (follow-up 6 months; range of scores: 0-100; Better indicated by higher values)												
1 (Kriemler 2013)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	11	10	-	MD 19.51 higher (10.57 to 28.45 higher)	LOW	CRITICAL

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Strength resistance/ anaerobic training programme	No exercise programme	Relative (95% CI)	Absolute	Quality	Importance
Change in FVC % predicted at hospital discharge - *Supervised programme* (follow-up mean 18.7 days; range of scores: 0-100; Better indicated by higher values)												
1 (Selvaduraai 2002)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	22	22	-	MD 0.17 higher (2.31 lower to 2.65 higher)	VERY LOW	IMPORTANT
Change in FVC % predicted - *Unsupervised programme* (follow-up 3 months; range of scores: 0-100; Better indicated by higher values)												
1 (Kriemler 2013)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	11	10	-	MD 7.37 higher (1.89 to 12.85 higher)	VERY LOW	IMPORTANT
Change in FVC % predicted - *Unsupervised programme* (follow-up 6 months; range of scores: 0-100; Better indicated by higher values)												
1 (Kriemler 2013)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	11	10	-	MD 14.05 higher (7.16 to 20.94 higher)	LOW	IMPORTANT
Change in FEV_1 peak at hospital discharge - *Supervised programme* (follow-up mean 18.7 days; measured with: ml/min per kg body weight; Better indicated by higher values)												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Strength resistance/ anaerobic training programme	No exercise programme	Relative (95% CI)	Absolute	Quality	Importance
1 (Selvaduraai 2002)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	22	22	-	MD 1.95 higher (1.61 lower to 5.51 higher)	LOW	IMPORTANT
Change in FEV_1 peak – *Pooled results from both supervised and unsupervised programmes* (follow-up 3 months; measured with: ml/min per kg body weight; Better indicated by higher values)												
2 (Kriemler 2013, Klijn 2004)	randomised trials	very serious[6]	no serious inconsistency	no serious indirectness	serious[5]	none	22	19	-	MD 6.36 higher (1.22 to 11.49 higher)	VERY LOW	IMPORTANT
Change in FEV_1 peak - *Unsupervised programme* (follow-up 3 months; measured with: ml/min per kg body weight; Better indicated by higher values)												
1 (Kriemler 2013)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	11	10	-	MD 9.34 higher (1.66 to 17.02 higher)	VERY LOW	IMPORTANT
Change in FEV_1 peak - *Supervised programme* (follow-up 3 months; measured with: ml/min per kg body weight; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Strength resistance/ anaerobic training programme	No exercise programme	Relative (95% CI)	Absolute		
1 (Klijn 2004)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	serious[5]	none	11	9	-	MD 3.95 higher (2.95 lower to 10.85 higher)	LOW	IMPORTANT
Change in FEV_1 peak - *Unsupervised programme* (follow-up 6 months; measured with: ml/min per kg body weight; Better indicated by higher values)												
1 (Kriemler 2013)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	8	10	-	MD 17.7 higher (5.98 to 29.42 higher)	VERY LOW	IMPORTANT
Time to next exacerbation												
No evidence available												
Change in BMI - *Unsupervised programme* (follow-up 3 months; Better indicated by higher values)												
1 (Kriemler 2013)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	15	10	-	MD 0.5 higher (0.07 to 0.93 higher)	VERY LOW	IMPORTANT
Change in BMI - *Unsupervised programme* (follow-up 6 months; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Strength resistance/ anaerobic training programme	No exercise programme	Relative (95% CI)	Absolute		
1 (Kriemler 2013)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	15	10	-	MD 0.7 higher (0.27 to 1.13 higher)	LOW	IMPORTANT
Change in BMI - *Supervised programme*												
No evidence available												
Change in quality of life - *Unsupervised programme*												
No evidence available												
Change in quality of life - *Supervised programme* (follow-up 3 months; measured with: CFQ - physical function domain; range of scores: 0-100; Better indicated by higher values)												
1 (Klijn 2004)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	very serious[8]	none	11	9	-	MD 1.3 higher (11.55 lower to 14.15 higher)	VERY LOW	CRITICAL
Preference for training programme												
No evidence available												
Adverse events												
No evidence available												

Abbreviations: BMI: body mass index; CI: confidence interval; CF: cystic fibrosis; FEV_1: forced expiratory volume in 1 second; FVC: forced vital capacity; kg: kilogrammes MD: mean difference; min: minute; ml: millilitres; FEV_1 max/ peak: maximal oxygen consumption

1 The quality of the evidence was downgraded by 1 because of unclear risk of bias in relation to random sequence generation, blinding of participants and personnel and blinding of outcome assessment.

2 The quality of the evidence was downgraded by 1 because the 95% CI crossed 1 clinical MID

3 The quality of the evidence was downgraded by 2 because of high risk of bias in relation to random sequence generation and allocation concealment, unclear risk of bias in relation to blinding of participants and personnel, and unclear risk of other bias (due to the deterioration of physical health in the control group)
4 The quality of the evidence was downgraded by 2 because the 95% CI crossed 2 default MIDs
5 The quality of the evidence was downgraded by 1 because the 95% CI crossed 1 default MID
6 The quality of the evidence was downgraded by 2 because of: high risk of bias in relation to random sequence generation and allocation concealment, unclear risk of bias in relation to blinding of participants and personnel, and unclear risk of other bias (due to the deterioration of physical health in the control group) in 1 study; unclear risk of bias in relation to random sequence generation, blinding of participants and personnel, blinding of outcome assessment, other bias (exclusion criteria were not reported) in the other study.
7 The quality of the evidence was downgraded by 1 because of unclear risk of bias in relation to random sequence generation (described as randomised but no details given), blinding of participants and personnel, blinding of outcome assessment (the primary researcher was blinded but their role in the study is unclear), other bias (exclusion criteria were not reported)
8 The quality of the evidence was downgraded by 2 because the 95% CI crossed 2 clinical MIDs