Table 84: Clinical evidence profile: Comparison 2.2. Strength/ anaerobic training programme versus aerobic training programme

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Strength/ anaerobic training	Aerobic training	Relative (95% CI)	Absolute		
Change in FEV₁ % 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 3.55 higher (0.94 lower to 8.04 higher)	LOW	CRITICAL
Change in FEV₁ % 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[2]	none	11	14	-	MD 1.7 lower (7.67 lower to 4.27 higher)	VERY LOW	CRITICAL
Change in FEV₁ % predicted– _Unsupervised programme_ (Follow-up: 6 months; range of scores: 0-100; 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/ anaerobic training	Aerobic training	Relative (95% CI)	Absolute		
1 (Kriemler 2013)	randomised trials	very serious [3]	no serious inconsistency	no serious indirectness	very serious[4]	none	11	15	-	MD 2.34 higher (6.33 lower to 11.01 higher)	VERY LOW	CRITICAL
Change in FEV$_1$ % predicted - *Supervised programme* (Follow-up: 6 months; range of scores: 0-100; Better indicated by higher values)												
1 (Orenstein 2004)	randomised trials	very serious [5]	no serious inconsistency	no serious indirectness	very serious[4]	none	30	26	-	MD 1.66 lower (11.24 lower to 7.92 higher)	VERY LOW	CRITICAL
Change in FEV$_1$ % predicted– *Pooled results for supervised and unsupervised* (Follow-up: 6 months; range of scores: 0-100; Better indicated by higher values)												
2 (Kriemler 2013, Orenstein 2004)	randomised trials	very serious [6]	no serious inconsistency	no serious indirectness	very serious[4]	none	41	41	-	MD 0.54 higher (5.89 lower to 6.97 higher)	VERY LOW	CRITICAL
Change in FEV$_1$ % predicted - *Supervised programme* (Follow-up: 12 months; range of scores: 0-100; Better indicated by higher values)												
1 (Orenstein 2004)	randomised trials	very serious [5]	no serious inconsistency	no serious indirectness	very serious[4]	none	28	25	-	MD 0.3 higher (9.21 lower to	VERY LOW	CRITICAL

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Strength/ anaerobic training	Aerobic training	Relative (95% CI)	Absolute	Quality	Importance
										9.81 higher)		
Change in FVC % predicted - _Supervised programme_ (Follow-up: at hospital discharge, 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	very serious[7]	none	22	22	-	MD 0.11 higher (2.49 lower to 2.71 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[8]	none	11	14	-	MD 1.87 lower (7.33 lower to 3.59 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	very serious[7]	none	11	15	-	MD 1.54 higher (5.12 lower to 8.2 higher)	VERY LOW	IMPORTANT
Change in FEV$_1$ peak - Supervised programme (Follow-up: at hospital discharge, mean 18.7 days 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/ anaerobic training	Aerobic training	Relative (95% CI)	Absolute		
1 (Selvadurai 2002)	randomised trials	serious [1]	no serious inconsistency	no serious indirectness	serious [8]	none	22	22	-	MD 6.58 lower (10.18 to 2.98 lower)	LOW	IMPORTANT
Change in FEV_1 peak - *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	very serious [7]	none	11	15	-	MD 0.24 higher (6.1 lower to 6.58 higher)	VERY LOW	IMPORTANT
Change in FEV_1 max - *Unsupervised programme* (Follow-up: 6 months; Better indicated by higher values)												
1 (Kriemler 2013)	randomised trials	very serious [3]	no serious inconsistency	no serious indirectness	very serious [7]	none	11	15	-	MD 0.63 lower (10.94 lower to 9.68 higher)	VERY LOW	IMPORTANT
Change in FEV_1 max - *Supervised programme* (Follow-up: 6 months; Better indicated by higher values)												
1 (Orenstein 2004)	randomised trials	very serious [5]	no serious inconsistency	no serious indirectness	serious [8]	none	30	26	-	MD 0.25 lower (3.35 lower to 2.85 higher)	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Strength/ anaerobic training	Aerobic training	Relative (95% CI)	Absolute		
Change in FEV$_1$ max – *Pooled results for supervised and unsupervised programmes* (Follow-up: 6 months; Better indicated by higher values)												
2 (Kriemler 2013, Orenstein 2004)	randomised trials	very serious [6]	no serious inconsistency	no serious indirectness	no serious imprecision	none	41	41		MD 0.28 lower (3.25 lower to 2.69 higher)	LOW	IMPORTANT
Change in FEV$_1$ max - *Supervised programme* (Follow-up: 12 months; Better indicated by higher values)												
1 (Orenstein 2004)	randomised trials	very serious [5]	no serious inconsistency	no serious indirectness	serious [8]	none	28	25	-	MD 0.82 lower (4.32 lower to 2.68 higher)	VERY LOW	IMPORTANT
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 [8]	none	15	15	-	MD 0.2 higher (0.23 lower to 0.63 higher)	VERY LOW	IMPORTANT
Change in BMI - *Unsupervised programme* (Follow-up: 6 months; Better indicated by higher values)												
1 (Kriemler 2013)	randomised trials	very serious [3]	no serious inconsistency	no serious indirectness	serious [8]	none	15	15	-	MD 0.3 higher (0.1 lower to 0.7 higher)	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Strength/ anaerobic training	Aerobic training	Relative (95% CI)	Absolute		
Change in BMI - Supervised programme												
No evidence available												
Quality of life												
No evidence available												
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 clinical MIDs
5 The quality of the evidence was downgraded by 2 due to high risk of bias in relation to blinding of participants and personnel and unclear risk of bias in relation to random sequence generation and allocation concealment.
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 in 1 study, and unclear risk of bias in relation to the same domains in the other study; high risk of bias in relation to blinding of participants and personnel in 1 study and unclear risk of bias in relation to the same domains in the other study; and unclear risk of other bias in 1 study (due to the deterioration of physical health in the control group).
7 The quality of the evidence was downgraded by 2 because the 95% CI crossed 2 default MIDs
8 The quality of the evidence was downgraded by 1 because the 95% CI crossed 1 default MID