

## ONLINE SUPPLEMENT

**Figure S1:** Medline search strategy

Database(s): **Medline** 1946 - present

Search Strategy:

#	Searches
1	"Activities of Daily Living"/
2	activities of daily living.tw.
3	physical activit*.mp.
4	exercise/ or exp running/ or swimming/ or walking/ or stair climbing/
5	(cycl* or walk* or runn* or interval train* or resistance train* or exercis* or intensity train* or weight bearing or hiit or aerobic train*).tw.
6	circuit-based exercise/ or endurance training/ or high-intensity interval training/ or plyometric exercise/ or resistance training/
7	1 or 2 or 3 or 4 or 5 or 6
8	Asthma/
9	asthma*.tw.
10	8 or 9
11	pilot stud*.mp.
12	clinical trial/
13	Randomized Controlled Trial/
14	(random* or trial or group or intervention* or observational or case-control or longitudinal or pre-post or crossover).tw.
15	11 or 12 or 13 or 14
16	7 and 10 and 15
17	animals/ not humans/
18	16 not 17

**Figure S2: CINAHL search strategy**

#	Query	Limiters/Expanders	Last Run Via	Results
S21	S19 NOT S18	Limiters - Human Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S20	S19 NOT S18	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S19	S8 AND S12 AND S17	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S18	(MH "Animal Studies")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S17	S13 or S14 or S15 or S16	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S16	AB "pilot stud" or "randomised controlled trial" or "randomized controlled trial" or group or intervention" or observational or longitudinal or pre-post or crossover	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S15	TI "pilot stud" or "randomised controlled trial" or "randomized controlled trial" or group or intervention" or observational or longitudinal or pre-post or crossover	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S14	(MH "Pilot Studies") OR (MH "Cross Sectional Studies")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S13	(MH "Randomized Controlled Trials") OR (MH "Clinical Trials")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S12	S9 or S10 or S11	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S11	AB asthma" or "severe asthma" or "moderate-severe asthma" or "disease refractory asthma" or "treatment resistant asthma" or "difficult to treat asthma" or therapy-resistant asthma" or "steroid-dependent asthma" or "brittle asthma"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S10	TI asthma" or "severe asthma" or "moderate-severe asthma" or "disease refractory asthma" or "treatment resistant asthma" or "difficult to treat asthma" or therapy-resistant asthma" or "steroid-dependent asthma" or "brittle asthma"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S9	(MH "Asthma")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S8	S1 or s2 or s3 or s4 or s5 or s6 or s7	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	Display

		Search modes - Boolean/Phrase	Database - CINAHL Complete	
S7	AB "resistance train"" or "strength train"" or "weight train"" or "resistance exercis"" or "aerobic train"" or "intensity train"" or "endurance train"" or hilt or walk" or runn" or jog" or sprint" or exercis" or "activities of daily living" or "physical activit"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S6	TI "resistance train"" or "strength train"" or "weight train"" or "resistance exercis"" or "aerobic train"" or "intensity train"" or "endurance train"" or hilt or walk" or runn" or jog" or sprint" or exercis" or "activities of daily living" or "physical activit"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S5	(MH "Walking")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S4	(MH "Jogging") OR (MH "Sprinting") OR (MH "Running") OR "running or jogging or run or jog"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S3	(MH "Exercise") OR (MH "Resistance Training") OR (MH "Group Exercise")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S2	(MH "Physical Activity") OR (MH "Exercise")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display
S1	(MH "Activities of Daily Living")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Complete	Display

**Figure S3 – EMBASE search strategy**

1	daily life activity/
2	"activities of daily living".mp.
3	"daily life activity".tw.
4	physical activity/ or "physical activity, capacity and performance"/ or climbing/ or cycling/ or jogging/ or jumping/ or lifting effort/ or running/ or swimming/ or walking/ or weight bearing/ or weight lifting/
5	(physical activit* or climb* or walk* or cycl* or jogg* or swimm* or weight bearing or weight lifting or interval train* or resistance train* or hiit or aerobic train* or endurance train*).tw.
6	high intensity interval training/ or exercise/
7	aerobic exercise/ or aquatic exercise/ or arm exercise/ or breathing exercise/ or circuit training/ or dynamic exercise/ or endurance training/ or high intensity interval training/ or isokinetic exercise/ or leg exercise/ or pilates/ or plyometrics/ or resistance training/ or static exercise/
8	1 or 2 or 3 or 4 or 5 or 6 or 7
9	asthma/ or severe persistent asthma/
10	asthma*.tw.
11	9 or 10
12	randomized controlled trial/
13	pilot study/
14	clinical trial/
15	case control study/
16	(random* or trial or intervention* or observational or case-control or longitudinal or pre-post or crossover).tw.
17	12 or 13 or 14 or 15 or 16
18	8 and 11 and 17
19	animals/ not humans/
20	18 not 19
21	limit 20 to english language

**Figure S4** – Pubmed (non-medline) search terms

((((((((((((((((((((((("activities of daily living"[All Fields]) OR ("physical activity"[All Fields])) OR ("exercise"[All Fields])) OR ("running"[All Fields])) OR ("jogging"[All Fields])) OR ("cycling"[All Fields])) OR ("climbing"[All Fields])) OR ("walking"[All Fields])) OR ("interval training"[All Fields])) OR ("resistance training"[All Fields])) OR ("high intensity training"[All Fields])) OR ("weight bearing exercise"[All Fields])) OR ("hiit"[All Fields])) OR ("aerobic training"[All Fields])) OR ("circuit training"[All Fields])) OR ("endurance training"[All Fields])) OR ("endurance exercise"[All Fields])) AND ("asthma"[All Fields])) OR ("severe asthma"[All Fields])) OR ("difficult asthma"[All Fields])) OR ("treatment resistant asthma"[All Fields])) OR ("brittle asthma"[All Fields])) AND ("randomized controlled trial"[All Fields])) OR ("clinical trial"[All Fields])) OR ("pre post trial"[All Fields])) OR ("observational study"[All Fields]))

**Figure S5** – Informit (health collection) search strategy



## Search History

Set	Search Terms	Limits
3	("activities of daily living" OR "physical activit*" OR exercis* OR runn* OR jogg* OR cycling OR climb* OR walk* OR "interval train*" OR "resistance train*" OR "intensity train*" OR "weight bearing" OR hiit OR "aerobic train*" OR "circuit-based exercise" OR "endurance train*" OR "high-intensity interval train*" OR "resistance train*") AND (asthma* OR "severe asthma" OR "disease refractory asthma" OR "treatment resistant asthma" OR "difficult to treat asthma" OR "therapy-resistant asthma" OR "steroid-dependent asthma" OR "brittle asthma")	
2	("activities of daily living" OR "physical activit*" OR exercis* OR runn* OR jogg* OR cycling OR climb* OR walk* OR "interval train*" OR "resistance train*" OR "intensity train*" OR "weight bearing" OR hiit OR "aerobic train*" OR "circuit-based exercise" OR "endurance train*" OR "high-intensity interval train*" OR "resistance train*") AND (asthma* OR "severe asthma" OR "disease refractory asthma" OR "treatment resistant asthma" OR "difficult to treat asthma" OR "therapy-resistant asthma" OR "steroid-dependent asthma" OR "brittle asthma") AND ("randomi?ed controlled trial" OR "pilot stud*" OR "clinical trial" OR "trial" OR intervention*)	
1	"exercis*" AND ("severe asthma")	

**Figure S6 – SPORTDiscus search strategy**

#	Query	Limiters/Expanders	Last Run Via
S1	( "activities of daily living" OR " physical activit*" OR exercis* OR runn* OR jogg* OR cycling OR climb* OR walk* OR "interval train*" OR "resistance train*" OR "intensity train*" OR "weight bearing" OR hiit OR "aerobic train*" OR "circuit-based exercise" OR "endurance train*" OR OR "high-intensity interval train*" OR "resistance train*" ) AND ( asthma* OR "severe asthma" OR "disease refractory asthma" OR "treatment resistant asthma" OR "difficult to treat asthma" OR "therapy-resistant asthma" OR "steroid- dependent asthma" OR "brittle asthma" ) AND ( "randomi?ed controlled trial" OR random* OR group OR observational OR "pilot stud*" OR "clinical trial" OR "trial" OR intervention* OR crossover OR "pre-post" OR longitudinal )	Limiters - Published Date: 19790101- 20200931; Language: English Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SPORTDiscus with Full Text

**Table-S1: Summary of physical activity outcomes reported in included studies**

Study		N	Baseline	Post-intervention	Change	Included in meta-analysis	ROB
Daily step count (steps/day)							
Freitas, 2017/18	IG: CG:	26 25	7306 ± 2304 7764 ± 2176	10000.2 ± 3492.4 <sup>a</sup> 8493.4 ± 2474.0	3274 ± 2693 <sup>b</sup> 729 ± 1145	Yes – Figure 2	Some concerns
Coelho, 2018	IG CG:	20 17	7295 ± 3241 6998 ± 3490	8853 ± 3320 <sup>c</sup> 6248 ± 2030	-	Yes – Figure 2	High
Evaristo, 2020	IG: CG:	29 25	9186 (7926, 10446)* 8809 (7428, 10189)*	11 192 (9649, 12 735)* 10 976 (9298, 12 293)*	-	Yes – Figure 2	Some concerns
Turk, 2020	IG1: IG2: CG:	14 7 10	5997 (4024, 8048) 5616 (4306, 6080) 7413 (2962, 8155)	-	1008 (70, 2994) 3097 (1785, 4740) 1281 (-65, 4036)	No – post-intervention data not available	-
Light-intensity physical activity (minutes/day)							
Freitas, 2018	IG: CG:	26 25	340.9 ± 71.4 369.4 ± 63.7	395.7 ± 72.5 <sup>d</sup> 366.6 ± 67.5	54.8 -2.8 <sup>e</sup>	No – insufficient studies	-
Moderate to vigorous physical activity (minutes/day)							
Freitas, 2018	IG: CG:	26 25	25.3 ± 14.5 26.3 ± 16.9	43.5 ± 22.2 <sup>a</sup> 34.2 ± 19.9 <sup>d</sup>	18.2 ± 17.9 <sup>b</sup> 7.9 ± 13.8	No – insufficient studies	-
Sedentary time (minutes/day)							
Freitas, 2018	IG: CG:	26 25	488.9 ± 84.2 489.5 ± 143.4	477.3 ± 86.1 497.0 ± 104.4	-11.6 <sup>e</sup> 7.5 <sup>e</sup>	No – insufficient studies	
Physical activity level (PAL)							
Turk, 2020	IG1: IG2: CG:	14 7 10	1.48 ± 0.16 1.43 ± 0.09 1.47 ± 0.14	-	0.00 ± 0.18 0.11 ± 0.08 <sup>d</sup> 0.04 ± 0.08	No – insufficient studies	-

Data reported as mean ± SD or median (interquartile range; IQR), unless otherwise stated. \*mean (95% confidence interval; CI),

<sup>a</sup>p<0.001 versus baseline, <sup>b</sup>p<0.001 versus control, <sup>c</sup>p<0.05 versus control post-intervention, <sup>d</sup>p<0.05 versus baseline. <sup>e</sup>mean change calculated from baseline and post-intervention data, insufficient information to calculate SD of mean change.



**Table-S2: Summary of asthma-related outcomes reported in included studies**

Study		N	Baseline	Post-intervention	Change	Included in meta-analysis	ROB
Health-related quality of life (AQLQ)							
Freitas, 2017	IG: CG:	26 25	3.7 ± 1.1 3.6 ± 0.9	4.9 ± 1.3 <sup>a</sup> 4.0 ± 1.0 <sup>b</sup>	-	Yes – Figure 3a	Some concerns
Coelho, 2018	IG CG:	20 17	4.5 ± 1.4 4.2 ± 1.3	4.9 ± 1.6 4.3 ± 1.6	-	Yes – Figure 3a	Some concerns
Evaristo, 2020	IG: CG:	29 25	3.9 ± 1.1 4.2 ± 1.0	4.7 ± 1.0 <sup>d</sup> 4.5 ± 1.3	-	Yes – Figure 3a	Some concerns
Turk, 2020	IG1: IG2: CG:	14 7 10	4.77 (4.33, 5.43) 4.40 (4.13, 5.33) 4.47 (3.47, 5.00)	-	0.2 (-0.33, 0.84) 1.47 (-0.4, 1.74) 0.12 (-0.26, 0.62)	No – post-intervention data not available	-
Asthma control (ACQ)							
Freitas, 2017 (ACQ-7)	IG: CG:	26 25	2.0 ± 0.9 2.0 ± 0.7	1.1 ± 0.7 <sup>a</sup> 1.8 ± 0.5	-	Yes – Figure 3b	Some concerns
Coelho, 2018 (ACQ-7)	IG CG:	20 17	1.7 ± 1.4 1.8 ± 0.8	1.5 ± 1.2 1.9 ± 1.1	-	Yes – Figure 3b	Some concerns
Evaristo, 2020 (ACQ-6)	IG: CG:	29 25	2.0 (1.6-6.3)* 1.7 (1.2–2.0)*	1.3 (0.9-1.6) <sup>a*</sup> 1.5 (1.0-1.8)*	-	No – data non-parametric (median 95% CI)	-
Turk, 2020	IG1: IG2: CG:	14 7 10	2.17 (1.46, 2.50) 1.67 (1.17, 1.83) 2.09 (1.50, 2.68)	-	-0.67 (-1.42, 0.00) -0.66 (-0.17, -0.33) -0.25 (-0.66, 0.63)	No – post-intervention data not available	-

Data reported as mean ± SD or median (IQR), unless otherwise stated. \*median (95% CI). <sup>a</sup>p<0.001 versus baseline, <sup>b</sup>p<0.05 versus baseline, <sup>c</sup>p<0.05 versus control post-intervention, <sup>d</sup>p<0.001 time effect

**Table-S2 continued: Summary of asthma-related outcomes reported in included studies**

Study		N	Baseline	Post-intervention	Change	Included in meta-analysis	ROB
Asthma control (asthma symptom-free days)							
Freitas, 2018	IG:	26	6.5 ± 7.6	21.3 ± 7.9	14.5 ± 9.6	Yes – Figure 3c	Some concerns
	CG:	25	5.2 ± 5.3	12.2 ± 8.7	8.6 ± 11.4		
Evaristo, 2020	IG:	29	6 (2.7, 9.7)*	12 (8.4, 15.6)*	-	Yes – Figure 3c	Some concerns
	CG:	25	8 (3.8, 11.7)*	11 (6.6, 14.6)*			
Airway inflammation							
Freitas, 2017 (FeNO)	IG:	26	24.7 (15.3, 33.7)	-	-6.8 (-14.6, 0.7) <sup>a</sup>	No	-
	CG:	25	22.3 (16.2, 32.6)		-0.2 (3.9, 1.6)		
Turk, 2020 (FeNO)	IG1:	14	18.0 (10.5, 25.0)	-	-0.5 (-3.3, 3.3)	No	
	IG2:	7	17. (16.0, 25.0)		0.5 (-7.3, 6.5)		
	CG:	10	17.0 (8.5, 26.0)		-0.5 (-14.8, 4.0)		
Turk, 2020 (sputum neutrophils %)	IG1:	14	37.2 (28.4, 51.0)	-	-3.6 (-33.5, 35.9)	No	-
	IG2:	7	29.6 (23.4, 57.9)		15.1 (-9.8, 22.4)		
	CG:	10	49.4 (39.6, 57.2)		-7.2 (-49.1, -7.2)		
Turk, 2020 (sputum eosinophil %)	IG1:	14	0.65 (0.05, 4.30)	-	-0.15 (-2.40, 1.13)	No	-
	IG2:	7	0.90 (0.23, 4.05)		0.00 (-0.83, 1.05)		
	CG:	10	0.65 (0.50, 2.90)		1.20 (0.25, 3.05)		

Data reported as mean ± SD or median (IQR), unless otherwise stated. \*mean (95% CI). <sup>a</sup>p<0.001 versus baseline, <sup>b</sup>p<0.05 versus baseline, <sup>c</sup>p<0.05 versus control post-intervention, <sup>d</sup>p<0.001 time effect

**Table-S3: Summary of health-related outcomes reported in included studies**

Study		N	Baseline	Post-intervention	Change	Included in meta-analysis	ROB
Weight							
Freitas, 2017	IG: CG:	26 25	91.1 (86.3, 99.8) 88.6 (84.4, 94.4)	-	-6.1 (-7.4, -4.2) <sup>a</sup> -2.9 (-3.9, -1.4) <sup>a</sup>	No	-
Turk, 2020	IG1: IG2: CG:	14 7 10	103.3 ± 17.76 106.3 ± 10.87 100.7 ± 17.56	-	-4.9 ± 4.9 <sup>b</sup> -10.9 ± 8.4 <sup>b</sup> -0.1 ± 1.7	No	-
Body mass index							
Freitas, 2017	IG: CG:	26 25	37.7 (35.4, 40.1) 37.4 (35.2, 38.7)	-	-2.7 (-3.3, -1.8) <sup>a</sup> -1.1 (-1.8, -0.4) <sup>a</sup>	No	-
Turk, 2020	IG1: IG2: CG:	14 7 10	36.7 ± 4.8 36.8 ± 5.0 35.2 ± 3.9	-	-1.81 ± 1.79 <sup>b,d</sup> -3.62 ± 2.73 <sup>b</sup> 0.25 ± 0.65	No	-
Waist circumference							
Freitas, 2017	IG: CG:	26 25	111.0 (106.0, 118.0) 112.0 (106.1, 117.2)	-	-6.2 (-11.0, -3.0) <sup>a</sup> -4.0 (-6.0, -0.9) <sup>a</sup>	No	-
Turk, 2020	IG1: IG2: CG:	14 7 10	109.7 ± 13.7 114.3 ± 8.8 107.0 ± 10.5	-	-3.68 ± 7.23 -12.14 ± 9.84 4.67 ± 11.96	No	-
Fat mass %							
Turk, 2020	IG1: IG2: CG:	14 7 10	44.7 ± 5.9 39.6 ± 11.8 44.1 ± 4.5	-	-1.41 ± 1.36 <sup>b,d</sup> -2.01 ± 3.86 <sup>b</sup> -0.33 ± 1.75	No	-

Data reported as mean ± SD or median (IQR), unless otherwise stated. <sup>a</sup>p<0.001 versus baseline, <sup>b</sup>p<0.05 versus baseline, <sup>c</sup>p<0.01 versus baseline, <sup>d</sup>p<0.05 versus control post-intervention, <sup>e</sup>p<0.001 time effect, <sup>f</sup>p<0.05 group x time, <sup>g</sup>p<0.01 time effect

**Table-S3 continued: Summary of health-related outcomes reported in included studies**

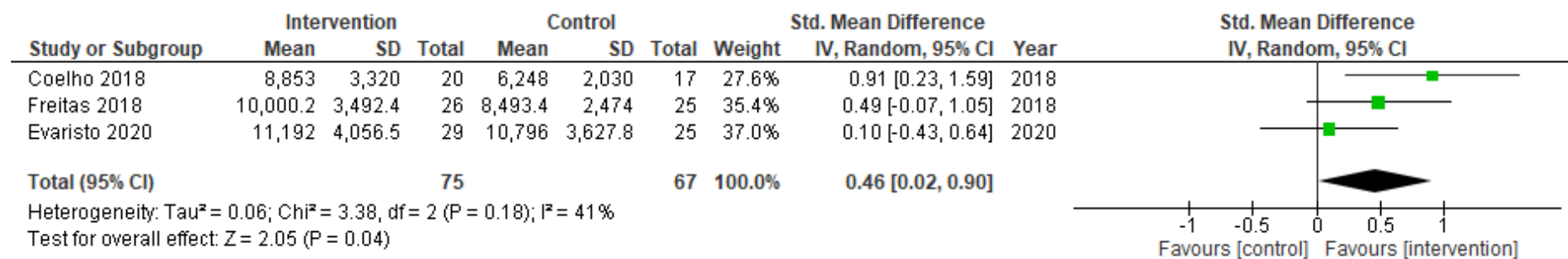
Study		N	Baseline	Post-intervention	Change	Included in meta-analysis	- ROB
<b>Exercise capacity</b>							
Freitas, 2017 (VO2)	IG: CG:	26 25	1423 (1321, 1591) 1291 (1178, 1475)	-	156 (91.4, 229.3) <sup>a</sup> 8.4 (-95.4, 75.6)	Yes – Figure 3d	Some concerns
Freitas, 2017 (work rate)	IG: CG:	26 25	91.5 (83.0, 103.0) 85.0 (69.0, 98.7)	-	26.0 (22.0, 39.0) <sup>a</sup> 12.0 (-2.2, 20.5) <sup>c</sup>	No	-
Coelho, 2018 (6MWT- m)	IG: CG:	20 17	535.5 ± 41.5 522.7 ± 76.4	549.7 ± 46.1 <sup>d</sup> 515.5 ± 75.6	-	No	
Evaristo, 2020 (ISWT)	IG: CG:	29 25	342 (302-382)* 360 (not reported)	429 (389-470) <sup>fg*</sup> 412 (369-456)*	-	No	-
Turk, 2020 (VO2 max %)	IG1: IG2: CG:	14 7 10	51.1 ± 17.7 60.6 ± 11.3 56.5 ± 11.3	-	13.2 ± 9.2 <sup>h</sup> 11.2 ± 13.5 -0.1 ± 10.5	Yes – Figure 3d	Some concerns
Turk, 2020 (6MWT - m)	IG1: IG2: CG:	14 7 10	578 ± 76 606 ± 56 587 ± 73	-	52 ± 40 <sup>h</sup> 63 ± 40 <sup>b</sup> -14 ± 51	No	-
<b>Anxiety score</b>							
Coelho, 2018	IG: CG:	20 17	9.4 ± 5.6 11.1 ± 5.3	8.3 ± 5.9 10.1 ± 4.8	-	Yes – Figure 3e	Some concerns
Evaristo, 2020	IG: CG:	29 25	8.7 ± 3.9 8.6 ± 4.6	7.7 ± 3.6 <sup>e</sup> 7.2 ± 4.4	-	Yes – Figure 3e	Some concerns
<b>Depression score</b>							
Coelho, 2018	IG: CG:	20 17	7.2 ± 4.6 8.1 ± 4.2	5.8 ± 4.9 7.6 ± 4.6	-	Yes – Figure 3f	Some concerns
Evaristo, 2020	IG: CG:	29 25	7.2 ± 3.8 8.3 ± 4.4	5.7 ± 4.3 <sup>e</sup> 6.2 ± 3.9	-	Yes – Figure 3f	Some concerns

Data reported as mean ± SD or median (IQR), unless otherwise stated. \*mean (95% CI). <sup>a</sup>p<0.001 versus baseline, <sup>b</sup>p<0.05 versus baseline, <sup>c</sup>p<0.01 versus baseline, <sup>d</sup>p<0.05 versus control post-intervention, <sup>e</sup>p<0.001 time effect, <sup>f</sup>p<0.05 group x time, <sup>g</sup>p<0.01 time effect

**Table S4: Sensitivity analysis**

<i>Outcome</i>	Random-effects analysis				Fixed-effects analysis	
	Studies (n)	Participants (n)	Effect estimate	I <sup>2</sup>	Effect estimate	I <sup>2</sup>
<i>Steps/day</i>	3	IG: 75, CG: 67	MD [95% CI]: 1588.58 [399.15, 2778.00]	23%	MD [95% CI]: 1609.86 [573.28, 2646.45]	23%
<i>AQLQ</i>	3	IG: 75, CG: 67	MD [95% CI]: 0.56 [0.10, 1.01]	16%	MD [95% CI]: 0.55 [0.14, 0.96]	16%
<i>ACQ</i>	2	IG: 46, CG: 42	MD [95% CI]: -0.65 [-0.95, -0.35]	0%	MD [95% CI]: -0.65 [-0.95, -0.35]	0%
<i>Asthma symptom-free days</i>	2	IG: 55, CG: 50	MD [95% CI]: 5.14 [-2.80, 13.08]	81%	MD [95% CI]: 5.53 [2.11, 8.94]	81%
<i>Exercise capacity (VO2)*</i>	2	IG: 40, CG: 35	SMD [95% CI]: 1.32 [0.81, 1.82]	0%	SMD [95% CI]: 1.32 [0.81, 1.82]	0%
<i>Anxiety score (HADS-A)</i>	2	IG: 49, CG: 42	MD [95% CI]: -0.24 [-2.35, 1.87]	18%	MD [95% CI]: -0.15 [-1.98, 1.68]	18%
<i>Depression score (HADS-D)</i>	2	IG: 49, CG: 42	MD [95% CI]: -1.13 [-3.04, 0.78]	0%	MD [95% CI]: -1.13 [-3.04, 0.78]	0%

AQLQ, asthma quality of life questionnaire; ACQ, asthma control questionnaire; VO2, maximum oxygen consumption; HADS-A, anxiety subscale of the hospital anxiety and depression scale; HADS-D, depression subscale of the hospital anxiety and depression scale; IG, intervention group; CG, control group; MD, mean difference; CI, confidence interval; SMD, standardised mean difference. \*change from baseline data analysed.



**Figure S7.** Random effects meta-analysis of randomised controlled trials examining the effect of physical activity interventions versus control on steps per day (post-intervention).